Assessment of the COMCEC Real Estate Securities Markets and Regulatory Landscapes

This report was prepared under the "Assessment of COMCEC Real Estate Securities Markets and Regulatory Landscapes for Strengthening Capital Markets (2018-TURFINAN-596)" project funded by the COMCEC.

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TABLE OF CONTENTS

TABLE OF CONTENTS i

LIST OF TABLES v

LIST OF FIGURES vii

LIST OF ABBREVIATIONS viii

NOMENCLATURE xi

EXECUTIVE SUMMARY 1

INTRODUCTION 3

1. CURRENT SITUATION IN THE ECONOMY, FINANCIAL SECTOR AND REAL ESTATE MARKETS 10

1.1. Market Fact Sheet 10

1.1.1. Arab Group 10

1.1.1.1. Saudi Arabia 10

1.1.1.2. Egypt 12

1.1.1.3. Kuwait 13

1.1.1.4. Morocco 15

1.1.1.5. Tunisia 16

1.1.1.6. Bahrain 18

1.1.1.7. Palestine 19

1.1.1.8. Djibouti 21

1.1.2. African Group 23

1.1.2.1. Nigeria 23

1.1.2.2. Senegal 24

1.1.2.3. Gabon 26

1.1.2.4. Gambia 28

1.1.3. Asian Group 29

1.1.3.1. Indonesia 29

1.1.3.2. Turkey 30

1.1.3.3. Iran 31

1.1.3.4. Malaysia 33

1.1.3.5. Pakistan 34

1.1.3.6. Azerbaijan 35

1.1.3.7. Brunei Darussalam 36

1.1.3.8. Maldives 38

1.2. Market Diversity 39

1.2.1. Economic Variables 40

1.2.1.1. Gross Domestic Product 40

1.2.1.2. Credit Ratings 41

1.2.1.3. Competitiveness 41

1.2.1.4. Currency 43

1.2.1.5. Financial Development 45

1.2.1.6. Real Estate and Construction 48

1.2.2. Non-economic Variables 50

1.2.2.1. Language 50
1.2.2.2. Demographics 51
1.2.2.3. Time Zones 53
Evaluative Summary 54

2. LEGAL AND INSTITUTIONAL FRAMEWORKS REGARDING REAL ESTATE SECURITIES MARKETS 55
2.1. Legal and Institutional Framework 56
2.1.1. Regulation on Real Estate Securities 56
2.1.1.1. Real Estate Securities 56
2.1.1.2. Issuers 64
2.1.1.3. Responsible Parties 65
2.1.2. Regulation on Collective Investment Schemes 66
2.1.3. Regulatory Oversight and Investor Protection 69
2.1.3.1. Authorized Bodies 69
2.1.3.2. Investor Protection 69
2.1.3.3. Listing and Trading Requirements 71
2.1.3.4. Credit Rating 76
2.2. Secondary Market Potentials for Real Estate Securities 77
2.2.1. Arab Group 84
2.2.1.1. Saudi Arabia 84
2.2.1.2. Egypt 86
2.2.1.3. Kuwait 87
2.2.1.4. Morocco 89
2.2.1.5. Tunisia 89
2.2.1.6. Bahrain 90
2.2.1.7. Palestine 91
2.2.2. African Group 92
2.2.2.1. Nigeria 92
2.2.3. Asian Group 93
2.2.3.1. Indonesia 93
2.2.3.2. Turkey 95
2.2.3.3. Iran 96
2.2.3.4. Malaysia 97
2.2.3.5. Pakistan 98
2.2.3.6. Azerbaijan 99
2.2.3.7. Maldives 100
Evaluative Summary 101

3. INTEGRATED MARKET SPECIFICATIONS FOR REAL ESTATE SECURITIES. 102
3.1. National Experience on Electronic Trading 106
3.1.1. Arab Group 108
3.1.1.1. Saudi Arabia 108
3.1.1.2. Egypt 108
3.1.1.3. Kuwait 109
3.1.1.4. Morocco 109
3.1.1.5. Tunisia 110
3.1.1.6. Bahrain 110
3.1.1.7. Palestine 110
3.1.2. African Group 110
3.1.2.1. Nigeria 110

3.1.3. Asian Group 111
3.1.3.1. Indonesia 111
3.1.3.2. Turkey 112
3.1.3.3. Iran 112
3.1.3.4. Malaysia 112
3.1.3.5. Pakistan 113
3.1.3.6. Azerbaijan 114
3.2. International Experience on Electronic Trading 114
3.2.1 Exchange-Based Trading Venues 116
3.2.1.1. NASDAQ Dubai 116
3.2.1.2. Bursa Malaysia-i 117
3.2.1.3. Labuan International Financial Exchange 119
3.2.1.4. Bourse Régionale des Valeurs Mobilière 119
3.2.2. Platform-Based Trading Venues 120
3.2.2.1. Alternative Trading Systems 120
3.2.2.2. Multilateral Trading Facilities 122
3.2.2.3. ASEAN Trading Link 125
3.2.2.4. Latin American Integrated Market 130
3.2.2.5. Stock Connect & Bond Connect 131
3.2.2.6. The Central and Eastern Europe Stock Exchange Group 136
3.2.2.7. The South Eastern Europe Link 137
3.2.2.8. The African Exchanges Linkage Project 139
Evaluative Summary 141

4. A COMMON TRADING LINK FOR CONNECTIVITY: A FEASIBILITY STUDY .. 142
4.1. SWOT Analysis 143
4.1.1. Strengths 144
4.1.1.1. Portfolio Diversification 144
4.1.1.2. Cost Reduction 144
4.1.1.3. Lower Latency 145
4.1.1.4. Liquidity Improvement 146
4.1.1.5. Mutual Recognition 147
4.1.2. Weaknesses 148
4.1.2.1. Inadequate Financial Markets 148
4.1.2.2. Technological Coherence 148
4.1.2.3. Inability to Make a Difference 149
4.1.2.4. Lack of Human Capital 150
4.1.2.5. Real Estate Security Characteristics 150
4.1.2.6. Lacking Centralized Post-Trade Services 151
4.1.3. Opportunities 153
4.1.3.1. Financial Integration, Development and More Visibility 153
4.1.3.2. Investor Appetite 154
4.1.3.3. FinTech Developments 154
4.1.3.4. Room for Harmonization 156
4.1.4. Threats 157
4.1.4.1. Development Costs 157
4.1.4.2. Lack of Demand 158
4.1.4.3. Off-Venue Trading 158
4.1.4.4. Small Market Fears 159
4.1.4.5. Political Uncertainty 160
4.2. Building Ecosystem 160

4.2.1. Pre-Trade Facilities 168
4.2.2. Trade Facilities 169
4.2.2.1. Equity Products 170
4.2.2.2. Debt Products 170
4.2.3. Post-Trade Facilities 173
4.2.3.1. Transparency 173
4.2.3.2. Clearing 173
4.2.3.3. Settlement 173
4.2.3.4. Custody 174
4.2.4. Platform Requirements 174
4.2.4.1. Equal Treatment 174
4.2.4.2. Method of Access 175
4.2.4.3. Alignment of trading structures 175
4.2.4.4. Eligibility criteria for stock exchanges, members, and real estate securities 175
4.2.4.5. Operational considerations 176
Evaluative Summary 177
5. WORKSHOP AND POLICY BUILDING 178
5.1. Policy Questions and Draft Recommendations 178
5.2. Workshop Activity 181
6. POLICY RECOMMENDATIONS 184
CONCLUSION 187
REFERENCES 189

LIST OF TABLES

Table 1: Selected Countries (Income Classification) 7
Table 2: Selected Countries (Market Classification) 8
Table 3: Macroeconomic indicators for Saudi Arabia 11
Table 4: Macroeconomic indicators for Egypt 12
Table 5: Macroeconomic indicators for Kuwait 14
Table 6: Macroeconomic indicators for Morocco 15
Table 7: Macroeconomic indicators for Tunisia 16
Table 8: Macroeconomic indicators for Bahrain 18
Table 9: Macroeconomic indicators for Palestine 19
Table 10: Macroeconomic indicators for Djibouti 21
Table 11: Macroeconomic indicators for Nigeria 23
Table 12: Macroeconomic indicators for Senegal 25
Table 13: Macroeconomic indicators for Gabon 26
Table 14: Macroeconomic indicators for Gambia 28
Table 15: Macroeconomic indicators for Indonesia 29
Table 16: Macroeconomic indicators for Turkey 30
Table 17: Macroeconomic indicators for Iran 31
Table 18: Macroeconomic indicators for Malaysia 33
Table 19: Macroeconomic indicators for Pakistan 34
Table 20: Macroeconomic indicators for Azerbaijan 36
Table 21: Macroeconomic indicators for Brunei Darussalam 37
Table 22: Macroeconomic indicators for Maldives 38
Table 23: GDP data 40
Table 24: Sovereign credit ratings of COMCEC member countries 41
Table 25: Economic complexity index score 43
Table 26: Exchange rates 44
Table 27: Financial Market Development (2018-2019) 45
Table 28: Quality of markets assessments matrix 47
Table 29: Physical property rights (2018) 49
Table 30: Ease of doing business 50
Table 31: Language spoken 50
Table 32: Population and age (2019) 52
Table 33: Time Zones 53
Table 34: Regulatory Situation Regarding Real Estate Securities 57
Table 35: Real Estate Securities in the COMCEC member country markets 59
Table 36: Sukuk types in the COMCEC member country markets 60
Table 37: Secondary market trading for real estate securities 62
Table 38: Derivative instruments 63
Table 39: Issuers of Real Estate Securities in the COMCEC member country markets 64
Table 40: Secondary market access for issuers 65
Table 41: Parties involved in secondary market transactions for real estate securities 66
Table 42: Regulatory Situation Regarding CIS/Real Estate CIS 67
Table 43: CIS/Real Estate CIS in the COMCEC member country markets 68
Table 44: Regulatory bodies in the COMCEC member countries 69

Table 45: Investor protection for real estate securities 70
Table 46: Admission and disclosure requirements 71
Table 47: Credit rating required.. 76
Table 48: Stock exchanges in the COMCEC member countries... 84
Table 49: Euro MTF 125
Table 50: Mechanics of the ASEAN Trading Link.. 127
Table 51: Bilateral Agreements Between Qualified Brokers in MILA 130
Table 52: ETP types.. 169

LIST OF FIGURES

Figure 1: Nomenclature schema xii
Figure 2: Mapping of the COMCEC member countries 6
Figure 3: Global competitiveness index (2018) 42
Figure 4: Financial development index (2016) 46
Figure 5: Construction, share in total value added percentage (2017) 48
Figure 6: Population growth, annual percentage (2017) 51
Figure 7: Number of households/Population, percentage (2017) 53
Figure 8: Potential means of developing real estate securities markets 78
Figure 9: Potential types of real estate securities 79
Figure 10: Possible benefits of a common trading venue for real estate securities 79
Figure 11: Public awareness 80
Figure 12: Potential vulnerabilities in a common trading venue for real estate securities. 80
Figure 13: Means of improving liquidity and volume 81
Figure 14: Eligibility criteria for real estate securities 82
Figure 15: Structure for a common trading venue for real estate securities 83
Figure 16: Types of trading 104
Figure 17: Taxonomy of trading styles, platforms and protocols 104
Figure 18: Trading scheme 105
Figure 19: Electronic trading innovation pyramid 107
Figure 20: ETP facilities 115
Figure 21: Real estate securities industry value chain 116
Figure 22: Shariah investing landscape on Bursa Malaysia-i 118
Figure 23: Number of listings in Euro MTF 125
Figure 24: Workflow of ASEAN Trading Link 128
Figure 25: Stock traded data of the Link 128
Figure 26: Overview of northbound trading and clearing in Stock Connect 132
Figure 27: Overview of northbound trading and clearing in Bond Connect 135
Figure 28: SEE Link Model 138
Figure 29: An incremental development strategy 162
Figure 30: Operational flow of original cross-border trading 163
Figure 31: Operational flow of the CRESCENT Link (Phase 1) 164
Figure 32: Financial integration with the CRESCENT Link (Phase 1) 166
Figure 33: Operational flow of the CRESCENT Link (Phase 2) 167
Figure 34: Operational flow of the CRESCENT Link (Phase 3) 168
Figure 35: Where the debt market is going 171
Figure 36-a: Order-driven equity product market trading structure 172
Figure 36-b: Quote-driven debt product market trading structure 172

LIST OF ABBREVIATIONS

ABS	:	Asset-Backed Securities
ACB	:	Asset Covered Bonds
AEC	:	ASEAN Economic Community
AMBD	:	Central Bank of Brunei Darussalam
AMMC	:	Morocco Financial Services Authority
ASEA	:	African Securities Exchanges Association
ATS	:	Alternative Trading Systems
ASEAN	:	Association of Southeast Asian Nations
BCEAO	:	Central Bank of West African States
BEAC	:	Bank of Central African States
BHB	:	Bahrain Stock Exchange
BIS	:	Bank for International Settlements
BNM	:	Bank Negara Malaysia
BRVM	:	Bourse Régionale des Valeurs Mobilières
BVMAC	:	Central Africa Regional Stock Exchange
BVMT	:	Tunis Stock Exchange
CBB	:	Central Bank of Bahrain
CBE	:	Central Bank of Egypt
CBI	:	Central Bank of Iran
CBN	:	Central Bank of Nigeria
CBT	:	Central Bank of Tunisia
CCP	:	Central Counterparty
CFETS	:	China Foreign Exchange Trading System
ChinaClear	:	China Securities Depository and Clearing Corporation Limited
CIBM	:	China Interbank Bond Market
CIS	:	Collective Investment Scheme
CLOB	:	Central Limit Order Book
CMB	:	Capital Markets Board of Turkey
CMDA	:	Capital Market Development Authority of Maldives
CMF	:	Financial Market Council of Tunisia
CMU	:	Hong Kong Central Moneymarket Unit
COMCEC	:	The Standing Committee for Economic and Commercial Cooperation
COMCEC CMR Forum	:	COMCEC Capital Market Regulators Forum
CRA	:	Credit Rating Agency
CRESCENT Link	:	**C**OMCEC **R**eal **E**state **S**ecurities **CEN**tralized **T**rading Link
CSD	:	Central Securities Depository
CSE	:	Casablanca Stock Exchange
CTT	:	Click-to-trade
DFSA	:	Dubai Financial Services Authority
DMA	:	Direct Market Access
DvP	:	Delivery Versus Payment
EBRD	:	European Bank for Reconstruction and Development
ECN	:	Electronic Communication Network
EGX	:	The Egyptian Exchange
ETF	:	Exchange Traded Funds
ETP	:	Electronic Trading Platform

FDI	:	Foreign Direct Investment
FIMSA	:	Financial Market Supervisory Authority of Azerbaijan
FIX	:	Financial Information Exchange
FRAE	:	Financial Regulatory Authority of Egypt
FSAI	:	Financial Services Authority of Indonesia (OJK)
GCC	:	Gulf Cooperation Council
GDP	:	Gross Domestic Product
HFT	:	High Frequency Trading
HKEx	:	Hong Kong Exchanges and Clearing Limited
HKSCC	:	Hong Kong Securities Clearing Company Limited
IFB	:	Iran Fara Bourse
ICT	:	Information and Communication Technologies
IMF	:	International Monetary Fund
KCC	:	Kuwait Clearing Company
KCMA	:	Kuwait Capital Market Authority
KPEI	:	Indonesian Clearing and Guarantee Corporation
KSEI	:	Indonesian Central Securities Depository
LuxSE	:	Luxembourg Stock Exchange
MBS	:	Mortgage-Backed Securities
MCB	:	Mortgage Covered Bonds
MiFID	:	Markets in Financial Instruments Directive
MSC	:	Malaysia Securities Commission
MTF	:	Multilateral Trading Facility
NASD	:	National Association of Securities Dealers
NMRC	:	Nigerian Mortgage Refinance Company
OIC	:	Organization of Islamic Cooperation
OTC	:	Over-the-counter
PCMA	:	Palestine Capital Market Authority
PEX	:	The Palestine Exchange
PMA	:	Palestine Monetary Authority
PPP	:	Public Private Partnerships
PRC	:	People's Republic of China
Project	:	The COMCEC-funded project titled "Assessment of COMCEC Real Estate Securities Markets and Regulatory Landscapes for Strengthening Capital Markets"
PSX	:	Pakistan Stock Exchange
REIFs	:	Real Estate Investment Funds
REITs	:	Real Estate Investment Trusts
RFQ	:	Request-for-quote
RvP	:	Receipt versus Payment
SAMA	:	Saudi Arabian Monetary Authority
SCMA	:	Saudi Capital Market Authority
SEC	:	Securities and Exchange Commission
SECN	:	Securities and Exchange Commission of Nigeria
SECP	:	Securities and Exchange Commission of Pakistan
SEHK	:	Hong Kong Stock Exchange
SEO	:	Securities and Exchange Organization of Iran
SESRIC	:	Statistical, Economic and Social Research and Training Centre for Islamic Countries

SME	:	Small and Medium Sized Enterprise
SSE	:	Shanghai Stock Exchange
SWOT	:	Strengths, Weaknesses, Opportunities, Threats
SZSE	:	Shenzhen Stock Exchange
UAE	:	United Arab Emirates
WACMIC	:	West African Capital Markets Integration Council
WAEMU	:	West African Economic and Monetary Union
XKUW	:	The Boursa Kuwait

NOMENCLATURE

Real Estate

In legal terms, real estate can be defined as the things that are immovable such as land and improvements permanently attached to the land (Brueggeman & Fisher, 2011). In business, however, it refers to the activities concerned with ownership and use transfers of the real estate (Friedman, Harris, & Lindeman, 2008). This is because investment in real estate also enables the investors to obtain a bundle of rights, such as the right to control, occupy, develop, improve, exploit, pledge, rent, lease, exclude, and sell the real estate, in relation to obtaining the physical property. In this regard, real estate is often associated with "physical property", while ownership rights are about "real property". But since both terms are generally used interchangeably, this report prefers to use the term "real estate" for practical reasons.

Real Estate Securities

Real estate security in the scope of this report is any transferable security that is backed by; based on or related to real estate such as property interests or development projects *(e.g. Sukuks, Real Estate Investment Trust shares, Real Estate Investment Fund units)*.

Real Estate Financial Arrangements

This term refers to any type of contract that is associated with financing real estate such as property interests or development projects *(e.g. bank loans, Islamic financial contracts)*.

Collective Investment Schemes (CIS)

Collective investment schemes are entities those are entitled to invest in financial instruments in line with portfolio management rules and principles *(e.g. Investment Trusts, Investment Funds)*. CIS those are entitled to issue real estate securities *(e.g. Real Estate Investment Trusts, Real Estate Investment Funds)* are defined as real estate CIS.

Islamic Real Estate Securities/CIS

Islamic real estate securities are the financial products related to real estate in a Shariah-compliant context.

Conventional Real Estate Securities/CIS

As opposed to Islamic real estate securities, conventional real estate securities are non Shariah-compliant financial products related to real estate.

Primary Market

The market where real estate financial arrangements are originated.

Secondary Market

Any market *(e.g. exchange, platform, over-the counter market)* where real estate securities are traded.

Full-fledged Services

Islamic financial services provided on a fully Shariah-compliant basis.

Window Services

Islamic financial services provided other than on a full-fledged basis.

Electronic Trading Platform

A platform where an electronic system is used in executing a trade to transfer ownership of real estate securities and match buy and sell orders.

The nomenclature used in this report can be schematized as in Figure 1. It is clear that secondary market transactions for real estate securities are derived from real estate financial arrangements on immovable real estates in the primary market, which are transformed into tradable assets. These assets can be structured using conventional methods of finance as well as in a manner that complies with the requirements of Shariah law, thus making it Islamic in nature. Product differentiation in the market in turn leads the way for portfolio diversification opportunities for the investor community.

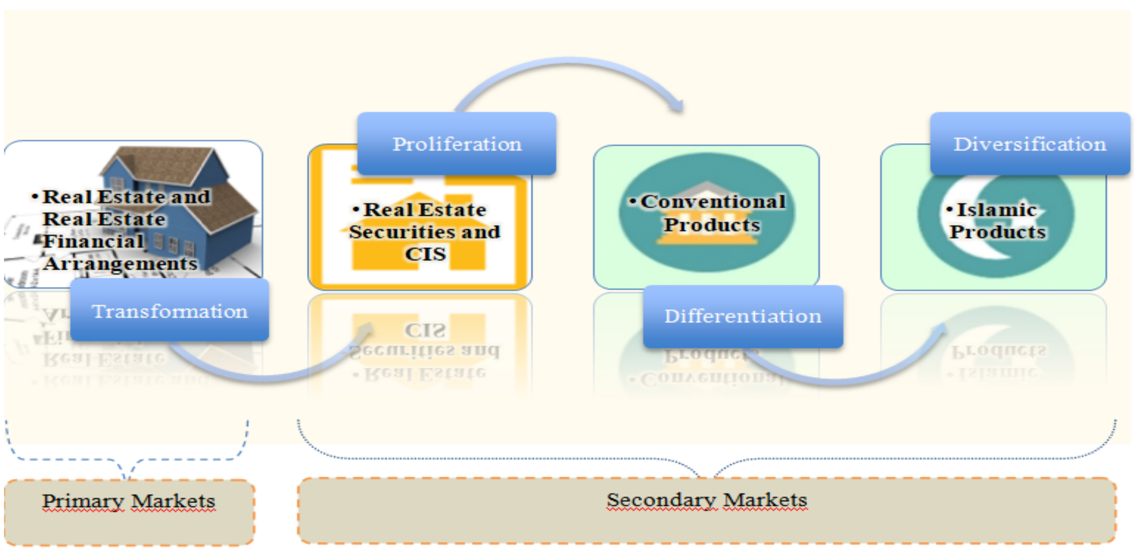


Figure 1: Nomenclature schema
Source: *Author*

EXECUTIVE SUMMARY

Real estate has often been considered as an alternative to traditional investment assets such as stocks or bonds due to its unique characteristics as a portfolio diversifier dignified by its long-term investment horizon, low correlations and distinctive risk/return structure. Accordingly, real estate investment is becoming progressively international today. In an intriguing, complicated and interconnected marketplace, deregulation and integration of financial markets, development of emerging market economies, population trends in advanced countries and geopolitical and socio-cultural changes throughout the world present new possibilities for international real estate investors. Moreover, as complementary to the typical investment in direct real estate, investors have opportunities to invest in a widening range of real estate related products, such as CIS units or shares, bonds and Sukuks in both conventional and Islamic finance context. These indirect investment products are advantageous to direct real estate investments, since the latter is more prone to illiquidity, low information efficiency, inefficient market transparency and high transaction costs.

The COMCEC has already acknowledged the fact that real estate industry is crucial for development and real estate securities markets would provide a means for financial cooperation to enhance capital influx and to deepen capital markets. Following the deliberations of the COMCEC conferences in 2014 and 2015, the real estate industry was deemed to represent a fresh value for harnessing via capital markets through a joint real estate securities exchange initiative.

In this regard, this report, as mandated by the Project, analyses the prevailing legislative and institutional framework in the COMCEC member countries' real estate securities markets so as to establish the footprint of a possible cooperative work for strengthening and deepening capital markets. Based on a comprehensive survey that collects primary data from countries of interest and on a thorough desk research carried out upon secondary data, findings demonstrate that there is a great deal of diversity among the COMCEC member countries, each being at different levels of market progress.

First of all, there are remarkable differences in national economies in terms of economic, financial sector and real estate market development in the COMCEC member countries. In many of the countries, the overall financial system is relatively underdeveloped. Mainly relying on banks, existing real estate finance schemes might not be sufficient as expected to provide affordable funds to the society in the primary market. Although Islamic finance is getting its share in the financial system with rapid growth rates, it is still modest in size relative to conventional finance schemes.

Such differences are reflected in the countries' legal and institutional frameworks regarding real estate securities as well. For instance, there is a broad discrepancy in REITs and Sukuks regimes in terms of legislative, tax and governance issues. Besides, real estate securities market possesses different levels of development and in great majority of the cases it is still a niche market representing a minor segment of the whole capital markets. When Sukuks are considered, for instance, while some markets are matured or advanced, lack of secondary market trading due to ineffective and inefficient platforms is an important issue and challenge in developing or nascent markets. More specifically, secondary markets are in the early stage and have limited number of listed companies both with a narrow investor base and lacking institutional investors, especially CIS, which result in a limited, ready pool of assets, and a lack of liquidity and volume in the market.

Thus, secondary market for real estate securities would be a desirable development for these countries in promoting real estate investments provided that each country adopt a viable framework and roadmap to progressively develop its domicile real estate securities markets. Due to the fact that real estate securities markets are currently underpenetrated, a common COMCEC-wide secondary market would be a major milestone in achieving the high potential for such a development.

This report emphasizes this potential and proposes a common electronic trading platform for cross-border investors that allows investors to trade in real estate securities through a trading link, namely the CRESCENT Link[4]. Diversity would help investors find different levels of risk and return, matching their risk tolerance with a financial instrument *(e.g. a real estate security)*. Hence, diversity may support for the attractiveness of a common trading venue initiative revealing the different contribution levels of the member countries at different levels of development.

Traditionally, when regulated exchanges are considered, trading a specific security in a single venue generates economies of scale and network externalities. Technological developments have challenged this, however; in particular, ICT that makes the geographical location of a trading venue less significant and that has dramatically reduced the expenses and time needed to process and disseminate big quantities of data, such as orders and quotes. Now, electronic trading platforms capture significant market share from existing securities exchanges.

Given these recent developments in trading infrastructures alongside legal, institutional and market diversities existing among the COMCEC member countries, the proposed trading link concept would provide simultaneous and real-time remote access or connectivity to a variety of real estate securities already listed and traded in member country markets. This link would be a simple, but more importantly, a legally and economically feasible way to attract local and global investors by providing them easy access to real estate securities in the COMCEC member country secondary markets.

If designed properly, it would have several benefits for a successful financial integration among the COMCEC member countries and would possess the potentials of lighting the flame of more integrated capital markets with strengthened legislative, technological and institutional framework. The infrastructure would help reduce transactional costs and enhance further the relevant market's attractiveness as an investment destination globally through the establishment of an open, transparent and predictable investment regime, which are critical metrics for investors. It would not only accelerate the development of capital markets of countries but also relieve the impediments that might arise from the discrepancy in the development or size of the capital markets, since diversification opportunities with various real estate securities instruments would enhance market deepening. This development, hopefully, would enhance capital flows, deepen capital markets and strengthen financial cooperation and, eventually, pave the way for further integration of capital markets under more harmonized regulations to achieve the COMCEC member markets' potentials in the future.

[4] The CRESCENT Link stands for the **C**OMCEC **R**eal **E**state **S**ecurities **CEN**tralized **T**rading Link.

INTRODUCTION

Along with the globalization of portfolio investments seeking for maximizing returns and minimizing risks by means of diversification, the level of financial integration in the international arena has been increasing markedly over the last decades. In many countries around the world, governments embarked on market-oriented programs to attract foreign retail and institutional investors by allowing less restriction and more deregulation in their financial markets (Agenor, 2001). Among the most acknowledged benefits of financial integration is that it allows for a more efficient allocation of capital with decreasing transaction costs and improves risk-sharing opportunities across countries, which in turn leads to a support in times of crises (Colacito & M. Croce, 2010; Thapa & Poshakwale, 2010; Asness, Israelov, & Liew, 2011). Would it also be possible for investors to reap these benefits in an integrated real estate securities market?

Motivational Background

Real estate and real estate securities have emerged as an alternative investment option particularly for cross-border portfolio considerations: Historically, investors have used real estate to accomplish a number of results, ranging from general exposure to asset class to meeting particular features of portfolio return such as hedging inflation, diversification, and generating tax-efficient revenue. Yet, given the fact that real estate is an illiquid asset, it is usually more difficult to find counterparties to trade with at reasonable prices. Therefore, the costs associated with transactions in real estate can become large. Legal impediments also make it sometimes impossible to trade in a timely manner at all. Fortunately, it can be transformed into securities in different forms with different levels of risk and liquidity. Commonly utilized real estate securities such as REITs, MBS[5], MCB[6], and Sukuks allow investors to engage in real estate regardless of its location without having to buy land and/or buildings. Due to the improving ability of the market to transform immovable physical products into fungible financial instruments, it is reasonable to expect that increasing integration of financial activities will inevitably affect real estate securities investors and markets as well. This is indeed corollary of the fact that financial integration is a phenomenon in which newly engineered financial instruments become the subjects of cross-border investing and lead to capital influx (Milcheva & Zhu, 2018).

Return on investment in real estate and real estate securities are not generated regardless of risk exposure: On one side, international portfolio decisions have been being made easier than before thanks to freer information, which is relevant for both real estate and real estate securities (Bardhan, Edelstein, & Tsang, 2008). However, real estate securities offer investors the advantages of enhanced liquidity and transparency through public markets compared to illiquid real estate investments in the private market. On the other side, upon the close link between economic activity and financial markets in a more integrated business environment, economic shocks may have severe spill-over effects on other markets. The recent financial turmoil in which real estate and real estate securities played a critical role because

[5] An MBS is a security that is secured by a pool of mortgages. These securities are combined to obtain an investment grade from a CRA, and typically pay regular payments comparable to coupon payments. In addition, the underlying mortgage must come from a regulated financial institution.
[6] A MCB is a debt security issued by a credit institution that is backed by a ring-fenced dynamic cover pool of eligible assets. Investors have dual protection in that in case of default they are entitled to recourse to the issuer and to the cover pool. MCB are mostly issued under a specific legal framework and by regulated financial institutions.

their risks were not adequately priced, illustrates a good example. This has indeed been a scholarly-investigated issue even before the crisis, for instance, by Bond, Dungey, & Fry (2006) and Wilson & Zurbruegg (2004), who found evidence of interactive contagion effects among the real estate markets of various countries. Therefore, a prudent infrastructure for real estate and real estate securities markets is of importance in order to avoid potential spill-over risks due to ongoing integration throughout the world.

The COMCEC has already acknowledged the fact that real estate industry is crucial for development and real estate securities markets would provide a means for financial cooperation to enhance capital influx and to deepen capital markets: As evidence suggests, real estate markets are one of the most important economies that stand at the focal point of financial integration and the issue of integration of real estate markets is one that has both theoretical and practical significance. It deserves attention also for the COMCEC, since the COMCEC sees powerful and stable capital flows as a main contributor to economic development, and seeks to improve access to capital at competitive prices, diversified portfolios and increased investment opportunities among the member states. As part of its financial cooperation mandate, the COMCEC aims to encourage the removal of institutional and regulatory obstacles in order to further improve the flow of capital to and between the COMCEC member nations (COMCEC Coordination Office, 2013).

In order to harvest the full advantages of such a cooperation, prevailing legislative and institutional framework in the COMCEC member countries' markets and recent developments in other areas should be analyzed in depth: Real estate securities would provide the means for the COMCEC to achieve its strategy in that respect. However, acknowledging that international investors are increasingly looking beyond their own domestic markets for investment opportunities with the trend towards global investment portfolios intensifying, there would be a number of structural challenges the national exchanges of the COMCEC member countries need to overcome to take advantage of investors' interest in real estate securities. First, the promising economic fundamentals and potential for growth may be hampered by legal and institutional diversity, underdeveloped secondary markets and lack of integration between the COMCEC member countries regarding real estate securities. Second, their financial markets may face competition not only from stronger neighbouring markets, but also from global brokers seeking to deliver liquidity off-exchange by internalizing their own order flow.

This report, as mandated by the Project, aims at establishing the footprint of a possible cooperative work among the COMCEC member countries by proposing a common electronic trading platform for cross-border investors that allows investors to trade in real estate securities through a trading link, namely the CRESCENT Link: In this framework, this report is a part of the activity-based Project funded by the COMCEC and administered by CMB, as the Chair of the COMCEC CMR Forum, Capacity Building Task Force, in order to better understand market structures and regulatory features of real estate securities markets in member countries and to search for the possibility of a real estate securities trading venue among the COMCEC member countries. Having built on a comprehensive review, firstly, a Preliminary Report has set up the infrastructure for a simple ETP where real estate securities listed in the COMCEC member countries' markets are traded via a trading link named as the CRESCENT Link. Then, the Preliminary Report has evolved into this final report, which sets out policy recommendations on enhancing capital flows, deepening capital markets and strengthening financial cooperation. These policy recommendations have been developed upon valuable contributions of COMCEC member country representatives who have participated the "Workshop on Assessment of Market and Regulatory Aspects of the COMCEC Real Estate Securities Market" (Workshop) held in Istanbul on September 24-25th, 2019. The event was designed as a collaborative activity in which real estate securities in the COMCEC member countries in terms of availability of instruments, trading infrastructures, and regulatory and institutional capacity were discussed.

The Project is a natural extension of discussions held in previous COMCEC conferences and explorative studies in which a common trading venue option to connect various real estate securities markets has gained general acceptance: The idea of such a single common marketplace for real estate securities is not new. Following the deliberations of the COMCEC conferences in 2014 and 2015, the real estate industry was deemed to represent a fresh value for harnessing via capital markets through a joint real estate securities exchange initiative. In this respect, the COMCEC CMR Forum conducted a survey for the COMCEC member countries to develop the present market and regulatory landscape and elaborate on the readiness of the COMCEC member authorities to pursue a joint initiative on a real estate securities exchange. In terms of determining a proper trading venue, within the context of the advantages and disadvantages discussed, establishing an ETP was suggested as a convenient type of venue for practical reasons (COMCEC CMR Forum Real Estate Working Group, 2016).

The CRESCENT Link, if designed properly, would have several benefits for a successful financial integration among the COMCEC member countries and would possess the potentials of lighting the flame of more integrated capital markets with strengthened legislative, technological and institutional infrastructure: The rationale behind linking exchanges is that it would enable a supranational critical mass. Individual exchanges that are currently limited by their size would be able to benefit from a much-expanded total market place. The logic is that the combined market, with its exponential potential, would be more attractive to investors from both within the COMCEC members and from the rest of the world, especially those who currently prefer to keep their operations on larger markets. Such a trading platform between the COMCEC member states could not only reduce the transaction costs of cross-border trading on real estate securities but also provide greater market access to a large retail base, a wider product selection across markets and allow the COMCEC a stronger market presence in the global arena. Eventually, the COMCEC real estate securities would be an investible asset class and would have a bigger investor base, which is significant as it could deepen the markets and lead to improved liquidity and improved price discovery. In turn, the cost of raising funds would go down which would benefit listed companies. Increased competition would challenge participants to carry out product innovation and diversification to tap the collective savings pool of the members. This could be funnelled to infrastructure, a key growth driver for the members' economies that is in great need of funding for real estate projects.

Research Design and Methodology

The aim of the report falls into a number of following broad groupings in terms of research design: (a) to gain familiarity with the real estate securities markets in the COMCEC member countries and to achieve new insights into them *(exploratory research design)*, (b) to portray accurately the characteristics of each market practice *(descriptive research design)*, and (c) to determine the frequency with which real estate securities transactions occur and evaluate its association with possible trading venue alternatives *(diagnostic research design)*.

In this regard, the exploratory work is employed by means of literature and legislation reviews regarding real estate securities and markets. Then the research deals with describing the features of each market practice. It has a diagnostic essence as well, since the potential impact of regulations on the trading venue alternatives is described and analysed. This multi-dimensional research design is facilitated by using a two-folded approach.

Firstly, alongside a variety of information retrieved from secondary sources such as academic journals or publicly available materials from websites and data terminals such as Bloomberg, ***a comprehensive survey*** is undertaken that utilizes both quantitative and qualitative data on real estate securities and markets collected from primary sources. Based on the survey, a more thorough review and ***a gap analysis*** are conducted on the legislative and institutional frameworks, main stakeholders regulating real estate securities markets and alignment of country practices with certain established global real estate securities frameworks. The survey encompasses 10 COMCEC Member States, while 20 countries are considered as relevant for the objectives of the report. These countries are listed as follows:

Malaysia (Respondent)	Maldives (Respondent)	Morocco
Egypt (Respondent)	Azerbaijan (Respondent)	Pakistan
Kuwait (Respondent)	Brunei Darussalam (Respondent)	Bahrain
Turkey (Respondent)	Indonesia	Senegal
Tunisia (Respondent)	Djibouti	Gabon
Iran (Respondent)	Nigeria	Gambia
Palestine (Respondent)	Saudi Arabia	

Countries are mapped with respect to their geographical locations in Figure 2.

	Middle East & North Africa		**Sub-Saharan Africa**		**Europe & Central Asia**		**East Asia & Pacific**		**South Asia**

Figure 2: Mapping of the COMCEC member countries
Source: *https://mapchart.net/world.html*

Countries are selected primarily due to their market sizes, maturity of their real estate securities markets and their familiarity with the real estate securities exchange initiative of the COMCEC CMR Forum cooperation work. These countries also cut across the four World Bank income groups, namely low income, lower-middle income, upper-middle income and high income and across the OIC's three official regional groups, namely the Arab Group, the African Group and the Asian Group, as displayed in Table 1.

Table 1: Selected Countries (Income Classification)

Group /Income	Low Income	Lower-Middle Income	Upper-Middle Income	High Income
Arab Group		Egypt Tunisia Morocco Djibouti Palestine		Kuwait Saudi Arabia Bahrain
African Group	Gambia	Nigeria Senegal	Gabon	
Asian Group		Indonesia Pakistan	Maldives Malaysia Turkey Azerbaijan Iran	Brunei Darusssalam

Source: *Worldbank*[7]

As to the income classification, Table 1 shows that a great majority of countries considered in this report are below the high income level, Gambia being at the lowest and Kuwait being at the highest post. Another classification would also be relevant for countries selected in the light of investment purposes. From an investor standpoint, thereby, major index providers *(namely MSCI and FTSE-Russell)* have attempts on formalizing the categorisation of markets, based on a range of economic and market-specific factors. Their classification is given in Table 2[8].

[7] Please refer to https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups for detailed information.
[8] Brunei Darussalam and Maldives are not included under either indices.

Table 2: Selected Countries (Market Classification)

	FTSE Russell				MSCI			
Group /Class	**Advanced Emerging**	**Secondary Emerging**	**Frontier**	**Unclassified**	**Emerging**	**Frontier**	**Standalone**	**Unclassified**
Arab Group		Egypt[1] Saudi Arabia Kuwait	Morocco[1] Palestine Tunisia Bahrain	Djibouti	Egypt Saudi Arabia	Morocco Tunisia Bahrain Kuwait	Palestine	Djibouti
African Group			Nigeria	Senegal Gambia Gabon		Nigeria		Senegal Gambia Gabon
Asian Group	Malaysia Turkey	Indonesia Pakistan		Iran Azerbaijan	Malaysia Turkey Indonesia Pakistan			Iran Azerbaijan

Source: *(FTSE Russell, 2019), MSCI*[9]

Note: *[1] Egypt and Morocco are considered as African countries in both of these classifications, however for the sake of consistency they are reported under the Arab Group in the table.*

[9] Please refer to https://www.msci.com/market-classification for detailed information.

What Table 2 suggests is that the common denominator of selected countries is their development status since all of them can be treated as developing countries.

Secondly, ***a SWOT analysis*** is employed as a useful technique for understanding Strengths and Weaknesses, and for uncovering both the Opportunities open to a feasible real estate securities trading venue and the Threats it face. In each component, existing real estate securities market products are reviewed and relevant market infrastructures are evaluated in order to sort out common denominators. Based on the SWOT analysis, a set of guidelines, which are intended to provide a framework for developing a real estate securities market infrastructure between countries for further financial market integration is, proposed.

The study is composed of five chapters:

- Chapter 1 provides information regarding the current situation in the economy, financial sector, and real estate market of the relevant COMCEC member country market and portrays major issues of diversity among these markets in order to infer about the potential of integrating different markets with each other.

- Chapter 2 gives an overview of the prevailing legislation regarding real estate securities in the COMCEC member countries and discusses secondary market facilities for real estate securities in these countries in a comparative manner.

- Chapter 3 sets the stage for an electronic trading platform by looking at the familiarity of the COMCEC member country markets with electronic trading and by introducing some selected worldwide experiences on integration effects of electronic trading.

- Chapter 4 presents a comprehensive SWOT analysis to assess the feasibility of establishing an electronically integrated marketplace for trading real estate securities among the COMCEC member countries and builds the technical infrastructure of the envisaged trading venue, i.e. the CRESCENT Link.

- Chapter 5 outlines the policy questions and draft policy recommendations discussed in the Workshop and briefly summarizes the agenda and the proceedings of the Workshop activity .

- Chapter 6 sets out the final policy recommendations.

1. CURRENT SITUATION IN THE ECONOMY, FINANCIAL SECTOR AND REAL ESTATE MARKETS

"The economic outlook for the construction sector in 2019 is dimming to varying degrees around the world against a backdrop of slowing global economic growth. The global setting, featuring a trade war and higher production costs due in particular to forecast price increases for certain metals and lumber, will present additional difficulties for companies in the sector. However, the prospects are expected to improve and will continue to be supported by global population growth and thus sustained structural housing demand, as part of an international trend towards increased urbanization. Major infrastructure projects will also play a significant role in the global economy." (COFACE, 2019)

In this global texture, though demand in the real estate sector might be depressed by a slowdown in the global economy in the short-term, it is expected that the growing need for housing and infrastructure projects would continue to support the demand in the sector in the longer term. Demand is important, because it can be safely said that the demand for real estate finance is a derived demand, or is determined by the demand for real estate (Brueggeman & Fisher, 2011). Due to the demand-driven nature of real estate and its funding, it is essential to infer a theme for *"demand"* from the story pertaining to the current situation in the economy, financial sector, and real estate market of each COMCEC member country.

This chapter, thus, provides information regarding the recent developments affecting demand in the relevant market based on this three-lagged stool framework. In the first part, market fact sheets are presented briefly and in the second part, major differences among the markets are emphasized.

1.1. Market Fact Sheet

Each fact sheet in this section presents concise information on the current situation of the economy, financial sector and real estate market[10] in a given COMCEC member country. The data included are as up to date as possible, but mostly as of 2018 fiscal year-end otherwise stated. Countries in each group are ordered by their respective GDPs in a descending manner.

1.1.1. Arab Group

1.1.1.1. Saudi Arabia

<u>Economy</u>

The country experienced growth in 2018 and it continues to grow in 2019 as well thanks to the expected increase in energy prices and rise in oil production. Privatizations across non-oil sectors such as food, schools, healthcare and desalination could attract new investments in the economy. But this would depend on the input costs, which would be triggered by a possible increase in inflation.

[10] Only primary market is considered; secondary market is discussed in Chapter 2.

Table 3: Macroeconomic indicators for Saudi Arabia

Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	1,7	-0,7	2,2	1,7
Inflation (yearly average, %)	2,0	-0,9	2,5	1,0
Budget balance (% GDP)	-12,9	-9,2	-4,6	-5,2
Current account balance (% GDP)	-3,7	1,5	8,4	6,9
Public debt (% GDP)	13,1	17,2	19,4	20,4

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

The negative budget balance of the country would be reduced by oil price increases provided that subsequent public expenditures that might be induced by oil revenues are curbed. The current account surplus would continue to increase as a consequence of increased oil revenues. The country would be in pursuit of FDI to support the construction of its megaprojects such as the NEOM mega-city project, which has been titled as the World's Most Ambitious Project.

Financial Sector

The banking sector is generally well-capitalized and healthy[11] and it is subject to a transparent and internationally compatible legal and institutional framework of SAMA, one of the few BIS member central banks[12] in the Middle East.

The country liberalized its criteria for licensing financial services foreign investment. Moreover, over the past several years, it has permitted enhanced foreign involvement in its banking sector. Both the public and entities have easy access to credit institutions on market terms. The largest Shariah-compliant bank in the world, i.e. Al Rajhi Bank, is located in Saudi Arabia.

In the capital markets, the country also retains an efficient regulatory regime. The Capital Markets Law of 2003 regulates brokerage firms, asset management companies, and other non-bank financial intermediaries. SCMA was established in 2004, and the stock exchange (Tadawul) was opened in 2007. Tadawul provides a platform for the listing and trading of a variety of securities such as equities, REITs, ETFs, corporate and government bonds and Sukuks.

In March 2018, Tadawul was included in FTSE Russell's index and as a result the inflow of foreign capital to the exchange increased. SCMA regulations allowed for the listing and trading of corporate and government debt instruments on the exchange in 2017 and 2018, respectively. Other key developments have been announcement of CCP and a derivatives market, as well as the implementation of new investment fund regulations, which require domestic asset managers to appoint third party custodians. Approximate market cap of Tadawul is USD 529 bn with 185 listed companies trading on.

[11] One of the world's lowest non-performing loan ratios is in the Saudi banking industry.
[12] Others are the central banks of Israel and United Arab Emirates https://www.bis.org/.

Real Estate Markets

Although growth in the real estate sector has softened since 2016, government-led projects to improve access to affordable housing would have a major effect on advancement in relation to broader financial diversification schemes centred on tourism and industrial production. Government's white land tax of 2,5% of the assessed value on vacant lands in urban centres was introduced in 2017 as a reform encouraging greater access to land for mixed-use real estate development. Furthermore, SAMA raised the maximum loan-to-value ratio for first-time homebuyers to 90% by 85%[13] in January 2018 in an attempt to improve the country's access to finance and to boost mortgage and housing markets. Recent government and funding initiatives in the home loans sector aim at increasing home ownership (Oxford Business Group, 2019).

The country's legal system protects and facilitates all types of property transactions in line with Islamic practice. Foreign companies are permitted to buy property in Saudi Arabia under the foreign investment code. Mortgages are available in the market. Saudi Arabia has a registration scheme of property interests, and has plans upgrade its system.

1.1.1.2. Egypt

Economy

In addition to exports, investment, especially in the gas extractives, tourism, manufacturing, construction and ICT sectors were the main drivers of economic growth in the country in 2018. The growth would continue in 2019 as well since tourism, export and public and private investment activities are expected to be strong. Budget balance would pick up under the recent IMF programme. The current account balance has considerably improved.

Table 4: Macroeconomic indicators for Egypt

Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	4,3	4,2	5,3	5,5
Inflation (yearly average, %)	10,2	23,3	21,6	14,5
Budget balance (% GDP)	-12,5	-10,9	-9,7	-8,6
Current account balance (% GDP)	-6,0	-6,1	-2,4	-2,5
Public debt (% GDP)	96,6	98,4	88,7	87,9

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

In many fields of the economy and with a priority access to finances, land and procurement, Egypt's government has implemented several significant legislative reforms for a progressive business climate.

[13] This was yet another liberalization with strict down-payment obligations that remained until 2016, when the maximum loan-to-value ratio raised from 70% to 85%.

Financial Sector

The Egyptian banking system is formed by 40 banks classified as commercial and non-commercial public and private. In practical terms, the vast majority of these banks work as commercial banks even if some specialized banks exist *(i.e. agriculture and real estate)*. Large public banks such as the National Bank of Egypt, Bank Misr and Banque Du Caire take the lion's share of the market, while Commercial International Bank is the leading private sector bank. Egyptian banks are supervised by the CBE. Islamic financial services are not provided in the country yet.

The Egyptian equity capital markets, under the supervision of FRAE, are generally healthy, benefiting from the overall increased attractiveness of investment in Egypt following the decision to float the Egyptian pound in November 2016. The main recognised exchange is the EGX. The exchange's market cap reached USD 42 bn and the number of listed companies is 220. The Nile Exchange is also available, but is suitable for SMEs only and is significantly less liquid than EGX. It has currently 32 listed companies.

Real Estate Markets

Real estate and construction industries continue to be critical sectors. Combined the two make up the strongest sector in the country, constituting 17% of the total GDP; real estate alone contributes 7%. Egypt is considered as an alternative place for capital investment in the Middle East region. Government's target is to increase the country's inhabited land from the current 7% to 12% to accommodate the growing population, which is currently rising by 2,5% annually and could reach 150-160 million by 2052. With a population approaching 20 million, the country's capital, Cairo, is already the most populated metropolitan city in the region. The growth witnessed by the residential and commercial real estate markets is driven by multiple factors, including the ambitious plans of the government to tackle the growing needs of the population as well as supporting entrepreneurial projects as a main driving force of the economy. As a result, the country is engaged with national projects that are under way as well as in the building of new cities, which will help create jobs and attract investment. As the population swells, the domestic demand for real estate grows, as does the demand from regional and international businesses looking to tap into a large pool of young, motivated people as both employees and consumers.

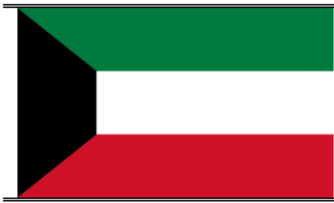
As of 2018, USD 123 mn of loans were originated in which the proportion of the ones associated with residential properties was about 92%. This constitutes a significant increase with respect to the amount *(USD 85 mn)* originated in 2017. Appraisal is required for the assets underlying these loans in the country while they are not subject to insurance. There is one investment fund that invests in real estate securities, which has a market value of USD 4,8 mn corresponding only a 0,18% of total market value of CIS in the market.

1.1.1.3. Kuwait

Economy

Economic growth would accelerate with the expected rise in the price of oil, which is the main GDP contributing industry in the country. Low inflation environment would facilitate real estate investments by means of affordable mortgage loans. The external position remains strong thanks to higher oil prices. Yet, fiscal deficit[14] remained large at close to 9% of GDP in 2017.

Table 5: Macroeconomic indicators for Kuwait



Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	2,9	-3,5	1,5	1,6
Inflation (yearly average, %)	3,2	1,6	0,6	1,0
Budget balance (% GDP)	-13,9	-9,0	-1,6	-3,4
Current account balance (% GDP)	-4,6	5,9	10,4	7,6
Public debt (% GDP)	10,3	19,1	21,9	26,6

Source: *COFACE*
Note: *(e): Estimate; (f): Forecast*

Capital influx backed by higher oil prices would be allocated to public expenditures primarily for PPP infrastructure projects that worth more than USD 30 bn. Construction of the new international airport, which is one of these projects, has recently started and is expected to cost more than USD 1 bn. This is component of the Northern Gulf Gateway project aimed at linking Kuwait and its hinterland nations with China's Belt and Road Initiative.

Financial Sector

Kuwait hosts 23 banks, which operate in a dual-banking environment.

The government's approach welcomes foreign portfolio investment as justified by the operations of foreign financial investment companies in the country. There is an effective regulatory mechanism that promotes and facilitates portfolio investment. The privatized stock exchange, named Boursa Kuwait *(formerly known as Kuwait Stock Exchange)*, lists 183 companies with a market cap of KWD 27 bn. Kuwait met the T+3 settlement and clearing schedule of FTSE Russell in May 2017 and was thus eligible for a Secondary Emerging Market status upgrade, announced by FTSE Russell in September 2017.

Although there is little development in the debt market, local banks can fulfil domestic demand. Foreign investors are able to obtain local credit on market terms in line with the collateral supplied and intended use of funding. A variety of credit instruments is easily accessible by the private sector.

Real Estate Markets

Heavy construction is ongoing in the country where bridges, roads, homes, the region's largest refinery, an expanded airport terminal and a new port are built. These are only some of the significant initiatives that are being finalized in the light of the New Kuwait 2035 vision. This trend is almost completely driven by public expenditure and components of the Kuwait National Development Plan 2015-20. Completing major infrastructure improvements would serve as a catalyst for major changes in the economic landscape of Kuwait (Oxford Business Group, 2018).

[14] But note that the deficit excludes investment revenues and oil income transfers to the sovereign wealth fund.

World Bank ranked the country 69 out of 190 in its in "Ease of Registering a Property" category (World Bank, 2019).

1.1.1.4. Morocco

Economy

The country has had a stable growth throughout years. The economic activity is led by agricultural production, automotive industry and construction activities. Public investment in major projects is likely to continue. The deficit on external accounts would be reduced in 2019.

Table 6: Macroeconomic indicators for Morocco

Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	1,1	4,1	3,0	2,9
Inflation (yearly average, %)	1,6	0,7	1,7	1,7
Budget balance (% GDP)	-4,3	-3,6	-3,6	-3,7
Current account balance (% GDP)	-4,2	-3,6	-4,3	-4,0
Public debt (% GDP)	81,6	82,0	82,6	82,9

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

Economic performance is anticipated to enhance over the medium term thanks to sound fiscal and monetary policies, more coherent industry strategies, and an enhanced investment climate.

Financial Sector

The country has a well-developed banking sector that includes some of the biggest African banks, which have become significant players on the continent. Banks, possessing a total asset amount of corresponding to 140% of GDP, constitute approximately half of the financial system. There are 19 banks, 6 off-shore institutions, 33 finance companies, 13 micro-credit associations, and 10 intermediary firms operating in transfer of funds in the market. Among the 19 banks, the top 3 hold over two-thirds of the banking system's assets and deposits[15]. Foreign *(mainly French)* financial institutions are majority stakeholders in 7 banks and 9 finance companies.

The securities market authority is AMMC. Originally founded in 1929 and privatized in 1993, CSE is one of the few exchanges in the region with no foreign involvement constraints. With a market cap of USD 61 bn and 75 listed companies, CSE follows Johannesburg Stock Exchange in Africa. Institutional investors are the dominant type of investors in the market.

Real Estate Markets

The nation allows ownership of property by foreign persons and businesses provided it is not agricultural. However, in order to undertake an investment or other economic project, which is not of an agricultural nature, foreigners may obtain agricultural land provided that a certificate of non-agricultural use is received from relevant authorities. The country ranked 86 out of 190 countries

[15] The top eight banks comprise 90% of the system's assets.

worldwide with respect to the "Registering Property" category in 2019, which stands for an improvement compared to 2018 (World Bank, 2019). Banks are subject to a fierce competition in marketing specialized mortgage products to overseas citizens residing in countries such as France and Belgium.

1.1.1.5. Tunisia

Economy

In 2017, GDP grew by 2% up from about 1% in 2016 and it was strengthened in 2018 either. Large twin deficits and high debt are considered as the main problems faced. Financial consolidation undertaken with IMF support, coupled with the upturn in activity, has recently paved the way for a reduction in budgetary deficit. Moreover, the current account deficit decreased slightly in 2018, while its size is still relatively big. Nevertheless, its external accounts deserve attention as the country is a net importer of oil. Although increases in tourism and export *(mainly to Euro area)* revenues *(e.g. electrical and mechanical industries)* should reduce the current account deficit, the external accounts might be fragile due to high crude prices and rising import prices. The external debt ratio is close to 90% of GDP, which would be the main reason for the deterioration in public debt arising from dinar depreciation.

Table 7: Macroeconomic indicators for Tunisia

Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	1,0	2,0	2,5	2,7
Inflation (yearly average, %)	3,7	5,3	7,5	7,4
Budget balance (% GDP)	-6,2	-5,9	-4,6	-3,6
Current account balance (% GDP)	-8,8	-10,6	-11,2	-10,0
Public debt (% GDP)	62,3	70,3	78,5	83,3

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

New pro-business policies would be put in place to complete the Investment Promotion Act reforms, which include reducing the corporate tax rate from 25% to 13,5% and doubling the budget assigned to the fund established to promote export. The government also intends to raise the share of infrastructure investment in its budget. Several projects are under development, including the Bizerte Bridge, three new dams in Satta, Khalled and Raghay, Tunis Sports City, Tunis Financial Harbor, Tunis Telecom City and Tunisia Economic City.

Financial Sector

A well-developed financial system exists under CBT's supervision. The banking sector, which is built on a dual-banking system, dominates the system with 30 banks accounting for roughly 90% of conventional and Islamic financing. According to the IMF *Financial System Stability Assessment*, loan quality, solvency, and profitability in the sector have deteriorated in recent years. While SMEs and individuals often have had trouble with obtaining credit due to high collateral *(mainly real estate)* requirements, the country has improved in "Ease of Access to Credit" from 105 in 2018 to 99 in 2019 (World Bank, 2019).

Country's capital market provides 6-7% of corporate financing. Created in 1969, BVMT listed 82 companies. Capitalization of these companies is valued around USD 10 bn, which corresponds to a 11,5 % rise compared to that of 2017. Foreign share/market cap has stabilized at 25%. Investment services *(e.g. reception, transmission, order execution, and portfolio management)* are performed in the capital market. BVMT is supervised and regulated by CMF in line with globally accepted standards. Companies that make a public offering of 30% deserves a 5-year tax reduction on profits. Furthermore, individual investors receive tax deductions in respect of equity investments. When the investor keeps capital gains for 2 years, it is tax-free.

There are other financing mechanisms, such as private equity and micro finance, that have potential to contribute to the overall economy as well.

Real Estate Markets

Because of its effects on employment and supply chains, the country's real estate and construction sector have always been a central component of the economy. The challenging macroeconomic environment has had a toll on public and private spending, but a return to more stable levels is expected to come through government-backed infrastructure development plans that will mobilise state investments and attract international firms to key projects in transport *(such as road expansions, port developments, urban railroad projects)*, energy and water *(such as wind and solar electricity plants, desalination plants)* and health and housing *(such as hospitals, urban renovation, affordable housing)*. Financing is generally based on loans granted by international organizations such as African Development Bank, EBRD, and Japan International Cooperation Agency (Oxford Business Group, 2018).

Specifically, housing is one of the largest expense items for Tunisian citizens. Today, most of the households are homeowners proving that it is more affordable to own a house in the country when compared with other countries in the region. However, self-finance has been more prevalent as economic conditions have affected the ability to obtain mortgage finance. There is a high market potential for mortgage finance given the increase in housing demand and supply and low level of penetration[16]. In this regard, government intends to set policies for affordable housing.

A large number of banks are offering various loan products, including state-subsidized loans[17], for housing tailored to various income categories of clients. For instance, "Maskan Al Baraka" offers a Shariah-compliant housing loan to its clients upon their savings accounts in which funds have been accumulated for a minimum of 4 years.

In early 2017, the government introduced the "programme premier logement" *("first housing" programme)* for middle income families that intend to own their first ever home. The programme finances their down payment up to 20% of the value of the property available in a state-led list of houses.

[16] The ratio of mortgage lending to GDP is about 8,6% and 4,1% of households have access to housing loans.

[17] For example, the National Fund for Housing Improvement finances loans and grants for home improvements for low income families. The Housing Land Agency also provides land subsidies aimed at benefiting families wishing to obtain affordable housing. However, the government also offers subsidized finance for residential property developers (CAHF, 2018).

There is a safe recording system for mortgages and liens. There are two land registration systems; one is mandatory, gratis, and state-administrated and the other is based on voluntary applications by landowners. Any type of land can be leased by foreign and/or non-resident investors, but acquisition is restricted to non-agricultural land only. Legally acquired properties must be properly registered to guarantee that they continue to be the property of their actual owners even if they are long unoccupied. World Bank reports that registration of a property in the country takes 4 steps, lasts 39 days, and costs around 6,1% of the total cost of the property (World Bank, 2019).

1.1.1.6. Bahrain

<u>Economy</u>

The country is projected to growth at 2% in 2018, with relatively powerful downstream energy investments and activity *(oil refining and aluminium)* offsetting the capacity-bound crude oil sector. It is estimated that non-oil growth would decline to 2,5%, driven by slowdowns in the retail, hospitality, and financial services industry. Higher food and transport prices resulted in rising inflation. While improved, twin deficits still remain high.

Table 8: Macroeconomic indicators for Bahrain

Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	3,5	3,8	2,0	2,0
Inflation (yearly average, %)	2,8	1,4	2,1	3,3
Budget balance (% GDP)	-17,6	-14,2	-11,7	-8,4
Current account balance (% GDP)	-4,6	-4,5	-5,8	-3,9
Public debt (% GDP)	81,3	88,5	88,4	91,7

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

Investments in the country has been supported by international collaboration, where GCC countries have been the main partners in that respect. Recently, a pipeline that transports oil from Saudi Arabia to Bahrain has been completed as a result of such supportive activities. It is expected that the country would continue to megaproject investments alike *(e.g. mixed-use developments, resort development, infrastructure investments, and real estate technology companies etc.)*, which would have growth effects.

<u>Financial Sector</u>

The legislative infrastructure of the financial system is transparent and consistent with international norms. The banking sector, regulated by the CBB, includes both conventional and Islamic lenders. The country is one of the Middle East's main financial hubs, though it has to be in a heavy competition with the United Arab Emirates *(mainly Dubai)*. Citibank, J.P. Morgan, and American Express are some of the international financial institutions in the market. The government has sizeable investments in the financial technology sector. In 2017, it introduced "Bahrain FinTech Bay," Middle East and Africa's biggest FinTech hub, to strengthen its role as a regional financial hub.

CBB's Capital Markets Supervision Directorate is mandated to supervise and regulate the country's capital markets. Bahrain Bourse was launched as a private company in 2010 to replace the old Bahrain Stock Exchange of 1987. As of 2019, the bourse has grown in the number of listed securities with 44 equities at a USD 21,75 bn market capitalization, 21 bonds *(both conventional and Islamic)* and treasury bills and 17 mutual funds currently listed. Daily trading is carried out through the automated trading system by means of 11 active brokerage firms.

Real Estate Markets

Bahrain's real estate market has risen in recent years. Alleviating constraints on residence and ownership have made property more appealing in the country. Today, a foreign individual or legal entity can own real estate or land in certain designated areas where foreign ownership is permissible. The government is working to provide 40.000 units of accommodation to be constructed in multiple locations. 70% of these units would be constructed by the government, while the remaining 30% by the private sector. Over the last decade, the retail industry has experienced a strong development primarily driven by high population growth and the income expansion, along with increasing demand from the GCC countries. Mortgages are available to individuals. There are a number of banks and finance companies who provide funds for the local and foreign acquisition of real estate. The launch of the Real Estate Regulatory Authority[18] in 2018 provided further stability in the market, raising confidence among real estate investors. The authority works closely with government and business stakeholders to monitor the development of a National Real Estate Policy backed by a national five-year sector strategy and plan to strengthen the real estate industry, improve consumer protection and streamline real estate services.

1.1.1.7. Palestine

Economy

The Palestinian economy is currently split into two zones, i.e. West Bank and Gaza Strip, with contrasting dynamics. West Bank is growing, while the Gaza Strip continues its recession, largely caused by the economic blockade imposed on the region. Private consumption *(90% of GDP)* is expected to be the main economic driver in both cases.

Table 9: Macroeconomic indicators for Palestine

Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	4,7	3,1	0,0	0,5
Inflation (yearly average, %)	-1,0	0,0	-0,2	0,0
Budget balance (% GDP)	-2,5	-3,2	-5,2	-6,5
Current account balance (% GDP)	-13,9	-10,6	-12,2	-10,3
Public debt (% GDP)	18,5	17,5	18,6	20,9

Source: *COFACE*
Note: *(e): Estimate; (f): Forecast*

[18] Please refer to https://www.rera.gov.bh/en/ for detailed information.

The Gaza Strip will continue to rely heavily on public spending, which is equivalent to more than 40% of GDP, or twice as much as in the West Bank, and the projected decline in foreign aid in 2019 will be detrimental to the Palestinian Authority's economy. Productive investment, which is scarce in both areas, notably because of the unfavourable business environment and unstable situation arising from the continuation of the Israeli restrictive regime and the persistence of the internal divide between the West Bank and Gaza, will stabilise at 0.5% of GDP in Gaza and 6% in the West Bank *(or 4% and 26% of GDP respectively if construction investment is added)*.

Financial Sector

The banking sector is supervised by PMA. There are 15 banks *(7 Palestinian, 7 Jordanian, and 1 Egyptian)* in the two districts of the country. Since, no national currency exists; there are no restrictions on foreign currency accounts. Though the banks are liquid enough, credit is limited due to political and economic uncertainty and due to non-registration of most West Bank land that hinders collateralization of real estate. Despite these challenges, the sector's loan growth is remarkable. Moreover, a recent regulation that allowed for collateralizing moveable assets led to a substantial improvement in the Getting Credit ranking of World Bank, from 118 in 2017 to 22 in 2019 (World Bank, 2019).

In 2004, PCMA was created to regulate and supervise capital markets. PEX, which had been launched in 1995 as a private shareholding company, was transformed into a publicly traded company in 2010. At that time, PEX was the first fully automated stock exchange in the Arab world, and the only Arab exchange that is publicly traded. As of 2018, PEX has 48 listed companies and a market capitalization of about USD 3,8 bn (PSE, 2018).

Real Estate Markets

Foreigners are able to purchase real estate in the country with respect to their classifications. In concrete terms, foreign investors fall into three categories. In the first category, individuals who formerly possessed Palestinian or Jordanian passports are entitled to make construction in free terms. In the second category, the ones who hold other Arab passports have more restricted rights in that they may own real estate for only living or business purposes. The third category belongs to other foreigners, including Jerusalem ID holders, who have to obtain permission from the government to own real estate in the country.

In order to purchase real estate, an should be made for land registration available in various cities. The majority of the land has not been registered; even where it is registered, titles are often more than a generation old, with unresolved rights to numerous inheritors, which affects the mortgage market. Since land registry systems are prone bureaucracy and restrictions, the World Bank ranking on registering property is 84 out of 190 (World Bank, 2019).

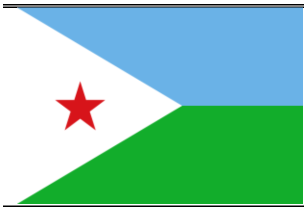
Total amount of conventional real estate financial arrangements originated in the country has been in steady increase for the last three years and amounted to USD 1,6 bn as of 2018. Appraisal of the relevant real estate is mandatory for such arrangements.

1.1.1.8. Djibouti

<u>Economy</u>

Djibouti, as a country in the Horn of Africa, is strategically located where the Red Sea and the Gulf Aden are met. Since this is Ethiopia's only access to sea as its main import-export port, the strategic partnership between the two allows not only 90% of Ethiopian exports transit the country but also more than 80% of its revenue is composed of military base rental income and port service supplies. Given these facts, the country's economy is based on transportation and logistics services.

Table 10: Macroeconomic indicators for Djibouti



Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	9,1	4,1	6,0	7,0
Inflation (yearly average, %)	2,5	0,6	-0,1	2,0
Budget balance (% GDP)	-15,0	-4,9	-4,3	-2,0
Current account balance (% GDP)	-18,2	-17,5	-15,4	-11,1
Public debt (% GDP)	75,5	85,2	85,1	81,9

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

The country has been experiencing a remarkable GDP growth. Growth is expected to continue backed by ambitious infrastructure investments *(25% of GDP)* led by foreign capital *(mainly Chinese)*. The financing of infrastructure projects *(such as the finalization of the electric railway connecting Djibouti with Ethiopia, a water pipeline and a multipurpose port)* has had a big impact on the public accounts. Budget balance, including non-concessional debt from EximBank China, would remain at an excessively high level, and debt service would weigh heavily on the public accounts. The large external accounts, which are composed of FDI-related projects, primarily in the tourism and residential industry and into the new International Free Trade Zone, would shrink in 2019.

<u>Financial Sector</u>

Of the 12 banks operating in the country, the banking sector is currently dominated by three major banks, i.e. Bank of Africa, Bank for Commerce and Industry – Mer Rouge, and EXIM Bank. In 2011, banking law was changed to include financial auxiliaries in the sector, such as money transfer agencies and Islamic financial institutions.

The country's central bank is in charge of implementing the monetary policy and supervising the banking sector. Generally, access to finance in the country is a huge difficulty for companies, and only well-established businesses obtain bank credit, as the cost of credit is high. Indeed, World Bank ranked the country 161 out of 190 countries in respect of the "Access to Credit" category in its report (World Bank, 2019).

Djibouti neither has its own stock market nor has an active debt market and, for many years, the country could not have managed to obtain sovereign credit rating. Hence, portfolio investment is primarily done through private equity. Investments in Djibouti are therefore inherently illiquid, and the acquisition or disposition of any significant investment affects the market accordingly.

In recent years, Djibouti has had a high dependence on and the government has been open and receptive to foreign investment. Some publicly traded multinational firms have investments in the country.

Real Estate Markets

As Djibouti establishes itself as a leading centre of international logistics, large investments volumes have been stimulating construction activity, notably in transportation and energy *(power plants mostly based on renewable energy generation)*. In particular, port expansion, road development and the establishment of new power stations are expected to drive industrial growth and support the development of the overall economy. The completion of the Free Trade Zone, which is regarded as the largest investment of its kind in Africa, is among the major ongoing infrastructure projects. In addition, the need to improve living conditions for the country's population is providing motivation for a range of urban projects. Housing construction, as well as the expansion of electricity and water links across some of the country's larger urban areas, is helping to bridge the gap between segments of the population (Oxford Business Group, 2018). The government has significantly prioritized social housing and has called for assistance from domestic and foreign partners mainly from China *(e.g. China Merchants Group)* and Saudi Arabia *(e.g. Saudi Fund for Development, Arab Fund for Economic and Social Development)*. It is expected that more expatriates would enter in Djibouti, triggering the housing demand and in turn housing developers would enjoy to invest.

Djibouti's legal system officially protects all property rights. Mortgages are typically guaranteed by the employer, who signs a form stating the status and wage of the relevant employee. The employer is then required to tell the bank if the employee leaves the business. Generally, the government originally owns and sells the vacant land, which is a situation in contrast to other countries in Africa and is a significant advantage in property development terms. Investors or developers can receive a land allocation once the relevant development project has been officially approved. There are no particular land ownership limitations. All owners of properties legally acquired are recorded. Even if the land is unoccupied, it is owned by the proprietor who bought it in legal terms. The country is ranked 110 out of 189 as to the "Registering Property" facility due to the fact that the process of receving the final title is expensive *(fees for the name change, registration fees, stamp duty, transfer duty etc.)* and sometimes too long for individuals. In concrete terms, registering a property in Djibouti costs around 5,7% of the total property cost (World Bank, 2019). But, previous figures were 168 and 12,7% in 2018, which shows a considerable sign of improvement.

Due to high urbanization rates in the country, demand exceeds supply by far. But, most residents do not have access to affordable housing and budgetary constraints severely impedes the government's ability to finance affordable housing. In this regard, the government embarked required regulatory reforms to urge potential investors and developers to allocate their funds to the real estate sector. The country's newly established National Housing Strategy, which requires a funding of more than USD 294 mn, focuses of four major areas (CAHF, 2018):

"

1) *increasing the supply of affordable plots of land for the majority of households,*

2) *developing the production of affordable housing units,*

3) *stimulating the housing rehabilitation programme in precarious existing neighbourhoods, and*

4) *developing further banking mechanisms and microfinance systems for low income groups"*

"

Thanks to these major developments, the country has showed the most notable improvement in 2019 (World Bank, 2019).

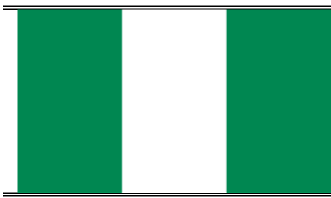
1.1.2. African Group

1.1.2.1. Nigeria

<u>Economy</u>

Nigeria represents for about the half of the population of West Africa, and has one of the world's biggest youth populations. Nigeria is a multi-ethnic and culturally varied society, a federation made up of 36 independent states.

Table 11: Macroeconomic indicators for Nigeria



Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	-1,6	0,8	1,9	2,1
Inflation (yearly average, %)	15,7	16,5	12,1	11,9
Budget balance (% GDP)	-3,8	-3,9	-4,3	-4,3
Current account balance (% GDP)	0,7	2,8	1,3	1,9
Public debt (% GDP)	17,2	19,0	21,6	23,8

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

Nigeria emerged from recession in 2017, with a growth rate of 0.8%, driven mainly by the oil sector. Growth in the key non-oil industry sub-sectors strengthened, e.g. construction to 2,3% from 1,0% in 2017. The construction industry benefited from a notable increase in road and rail construction across the country during the year. Moreover, the current account balance is expected to be positive as low investment continues to subdue import demand and the fiscal deficits will be sustained.

Financial Sector

CBN is the regulatory and supervisory body for the banking sector. In 2013, the CBN introduced the concept of "Systemically Important Banks" for the country's top eight banks[19], given they are too-big-to-fail insomuch that they account for more than 70% of the industry's total assets, loans and deposits, and their failure or collapse could disrupt the entire financial system and the country's real economy. Some banks have established Islamic windows, which is supported by CBN. There are five licensed merchant banks.

NSE is a favourable investment option for investors in the country. NSE claimed over 142 bonds, 168 listed companies and 9 ETFs with a total market capitalization of USD 31,4 bn. On the other hand, the debt market is actively utilized. The government employs debt instruments for restructuring term-to-maturities of its debt portfolio. Some states have issued bonds to finance their development projects, while some local banks have used the bond market to raise additional capital.

Real Estate Markets

There are 30 mortgage banks, 21 commercial banks, and 7 microfinance banks that offer housing finance.

Nigeria has a low homeownership rate, due to restrictions associated with the high price of acquiring a property and its title and insufficient access to finance. Mortgage finance industry is still in a nascent stage, concentrating heavily on high-income households.

As a recent attempt to fund infrastructure projects, the country issued diaspora bonds, which are like other kinds of bonds, but are targeted at citizens abroad, in 2017. It raised USD 300 mn for investment in a range of infrastructure projects from Nigerians overseas and oversubscribed by 130%. Diaspora bonds are getting popular as their investors are generally motivated by more than risk and return properties of the bond. They often want to help improve the socio-economic conditions in their home countries, making them willing to accept below market returns as known as "patriot discount".

1.1.2.2. Senegal

Economy

The growth rate of GDP is on the rise mainly driven by investments in infrastructure and energy. Implementation of the Emerging Senegal Plan, which is set to enter its second phase, would continue to support the public components of investment and consumption. Given the opportunities for exploiting hydrocarbon reserves off the Senegalese shore, gross capital formation is anticipated to benefit the construction, transport, agri-food and energy industries in particular. The new city of Diamniadio and the Taiba Ndiaye wind farm project would be on the agenda in 2019. Specifically, Diamniadio, as a special economic zone, is a major project to solve the housing problem by 2035.

[19] These banks are First Bank of Nigeria, United Bank for Africa, Zenith Bank, Access Bank, Ecobank Nigeria, Guaranty Trust Bank, Skye Bank, and Diamond Bank.

Table 12: Macroeconomic indicators for Senegal

Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	6,2	7,2	6,6	6,8
Inflation (yearly average, %)	0,8	1,3	0,7	1,3
Budget balance (% GDP)	-3,3	-3,0	-3,5	-3,0
Current account balance (% GDP)	-4,1	-7,3	-7,2	-7,5
Public debt (% GDP)	47,8	60,6	64,4	61,7

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

Despite the widening in budget deficit, a careful debt management is employed maintaining the country's the debt ratio below WAEMU threshold of 70%. The increase in public spending is mainly attributed to expenditures for promising infrastructure developments that have been implemented in recent years. The external accounts are expected to remain large in 2019 due to high oil prices. While agricultural and fisheries export volumes are set to continue increasing, imports of capital goods would weigh on the trade balance.

Financial Sector

The country has a growing and dynamic financial system. Its banking sector is supervised by the BCEAO, the regional central bank, and the WAEMU, the regional banking commission and is generally sound with 25 commercial banks, primarily based in France, Nigeria, Morocco, and Togo. Banks follow generally conservative lending guidelines, with collateral requirements that most potential borrowers could not meet, even most of the population has no bank accounts. Few firms are eligible for long-term loans, and SMEs have little access to credit. Despite the fact that access to finance is low by global standards, it is among the highest in the region.

In general, portfolio investment has a good perspective from the Senegalese authorities. The government relies on a smoothly functioning debt market to handle its finances, frequently issuing local currency denominated debt instruments on the regional market. The government also issues debt instruments denominated in USD, as with its 2014 and 2011 Eurobond offerings. A few companies have listings on the BRVM, headquartered in Abidjan, Ivory Coast. The government does not restrict payments for current international transactions.

The microfinance sector dynamically provides financial services for all local clients at various income levels in both the urban and rural areas.

Real Estate Markets

Housing demand has been continuously increasing, but affordable housing has been a major concern in the country. The government intends to improve the business environment by supporting private and foreign investments. New legal frameworks and other incentives are set to accelerate development of affordable houses and to stimulate the formalisation of the real estate market by means of reducing production costs, regulating control, promoting innovation and the utilization of local resources, and increasing employment and wealth.

Senegal has been one of the most active countries within WAEMU in granting housing loans to the market. Banque de l'Habitat du Senegal, which has evolved from a short-term credit entity to a long-term maturity mortgage bank, had the biggest share in that respect. According to World Bank, for "Ease of Getting Credit", Senegal ranks 144 out of 190 countries (World Bank, 2019).

The country's real estate sector is in the phase of a dynamic growth thanks to its demographics, economic stability, and the government's infrastructure development programmes targeting the establishment of new urban zones in addition to Dakar and mass production of houses. As mentioned earlier, Diamniadio is a new project that involves major amenities not only for social housing but also a modern life.

The Senegalese Civil Code offers a framework for enforcing private property rights against foreign-owned companies in the context of equality of treatment and non-discrimination. The country has property title and land ownership registration schemes. The country is streamlining its property registration processes and procedures. The government has conducted several reforms to facilitate property acquisition and registration by investors. It has streamlined property registration processes and lowered related expenses. Senegal ranked 118 out of 190 countries for "Registering Property" in 2019 (World Bank, 2019).

1.1.2.3. Gabon

<u>Economy</u>

As a significant producer of oil, timber, and other minerals such as manganese and uranium, Gabon is in a leading position in the exploitation and exploration of natural resources in Africa. In it efforts of economic diversification, the country allocates more funds for investments in agricultural facilities and the tourism sector.

Table 13: Macroeconomic indicators for Gabon

Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	2,1	0,4	1,2	2,5
Inflation (yearly average, %)	2,1	2,7	2,8	2,5
Budget balance (% GDP)	-6,6	-3,4	-2,3	-1,4
Current account balance (% GDP)	-10,2	-2,8	-1,2	-1,0
Public debt (% GDP)	64,2	62,7	58,7	57,0

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

The country has been in a very close relationship with France in doing business for years, however it has recently been cooperating with other global investors showing interest in its natural resources and infrastructure projects. Both the budget and current account deficits are expected to decline further in 2019.

Financial Sector

The government is the major player in the financial system. The banking sector is composed of 18 commercial banks and is receptive to foreign institutions. For instance, Citigroup is one of the foreign banks operating in the country. The sector is dominated by 3 major banks representing approximately 80% of all industry's assets and deposits. Gabon's banking sector is subject to a common central banking *(i.e. Bank of Central African States)* system in the region.

Domestic credit is limited and costly. Despite they are highly liquid, banks, are extremely prudent in offering credit in the market. The majority of the population, especially low income earners, lacks access to credit. Gabon lately endorsed the creation of a development and growth fund for SMEs in its attempts to improve access to finance and the establishment of a specialized organization to support for private equity. Foreign investors are allowed to obtain credit on the local market and have free access to all the range of loan products provided by the local banks.

The Gabonese government encourages and supports foreign portfolio investment, but Gabon's capital markets are poorly developed. Gabon, on the other hand, hosts the BVMAC.

The microfinance industry is just beginning to emerge in the country with few licensed microfinance institutions, providing support for a restricted part of the population.

Real Estate Markets

The country's real estate market is relatively underdeveloped despite the fact that there has been a rapid increase in its urban population and there is a growing need of affordable housing. Government has initiated new programmes to facilitate and stimulate real estate investment by means of relieving the burden of administrative and regulatory obstacles and development and growth funds destined to SMEs as well as the creation of specialised housing agencies. The government has also founded a housing bank to supply credit at all phases of building and selling processes. These institutional reforms are all set to build a formal real estate market where all development projects are planned and overseen, the national land registry is maintained and extended, and the real estate acquisition and disposition are facilitated.

One of the ongoing projects, in this respect, is the new urbanization project known as Angondje Development District, which is being constructed by means of Chinese investment. However, most of such development projects have financially suffered recently, since the government could not provide sufficient funds for these projects due to the drop in oil prices.

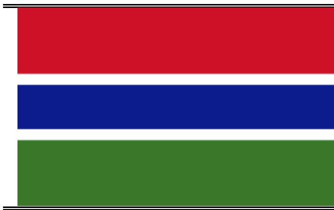
World Bank reports that, there are 6 steps and it takes 102 days to complete property registration, justifying the country's ranking of 178 with respect to the "Ease of Registering Property" (World Bank, 2019).

1.1.2.4. Gambia

Economy

The country's economy relies mainly on services as the primary accelerator of growth, and agriculture sector that is exposed to drought and volatility. GDP growth increased, reflecting a strong recovery in tourism, trade, construction, and electricity provision. Credit growth in tourism, construction and trade grew faster than overall private sector credit by end-December 2018. The external current account deficit deteriorated in 2018 since strong tourism receipts and remittances were not enough to compensate for higher goods imports and lower goods exports. Moreover, budget support declined from 3.7 % of GDP in 2017 to 0.7 % in 2018 due to delays in planned disbursements. FDI inflows financed most of the current account deficit.

Table 14: Macroeconomic indicators for Gambia



Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	0,4	4,6	6,6	5,4
Inflation (yearly average, %)	7,2	8,0	6,2	5,3
Budget balance (% GDP)	-6,5	-5,4	-6,6	-0,4
Current account balance (% GDP)	-9,4	-7,1	-11,3	-10,1
Public debt (% GDP)	82,3	87,9	83,2	78,7

Source: *World Bank*
Note: *(e): Estimate; (f): Forecast*

The National Development Plan 2018-2021 was launched in early 2018, which has 7 key objectives to *"deliver good governance and accountability, social cohesion, and national reconciliation, and a revitalized and transformed economy for the well-being of all Gambians"*.

Financial Sector

The financial system is comprised of 12 banks subject to a central banking system. The banking sector has experienced rapid growth over the past few years, driven by important FDI inflows encouraged by the government and intensified competition. This growth has helped deepen financial intermediation. However, the overall banking and financial system remains underdeveloped. The World Bank ranks the country 134 out of 190 economies for getting credit (World Bank, 2019). Foreign banks or branches are allowed to establish operations subject to the banking regulations of the Gambia. Foreign investors are able to get credit on the local market since the majority of the banks are already mostly foreign-owned.

A stock market does not exist in the Gambia. There is no effective legislative scheme to encourage and promote portfolio investment. There is not enough liquidity in the markets to enter and exit significant positions. While there are no existing policies that facilitate the free flow of capital, there are no policies in place that hinder such activity.

The microfinance sector, however, has gained traction for the past few years. Currently, licensed credit unions, microfinance companies and "Village Savings and Credits Associations" reach about 90% of households in the country.

Real Estate Markets

Social housing is a big concern in the Gambia and the demand for housing exceeds supply by far. Currently, Home Finance Company Limited is the only institution that offers mortgages to customers. But, it remains negligible compared to total assets in the banking sector and is constrained by non-performing loans. Given this situation, the mortgage market is extremely small.

The Gambia's pension sector effectively promotes development of housing. The Social Security and Housing Finance Corporation is aimed at providing employees with appropriate social protection for workers and facilitating sustainable social shelter delivery.

The legal system fully protects all property rights. However, registering property is complicated in that the process involves 5 procedures, which last 66 days and cost 7.6% of the property price, which makes the country ranked 132 out of 190 economies for registering property (World Bank, 2019).

1.1.3. Asian Group

1.1.3.1. Indonesia

Economy

Growth is expected to continue in 2019. Investment growth would hold steady thanks to government support for infrastructure projects. Through the infrastructure development program launched in 2016 *(225 priority infrastructure projects)*, projects are financed both publically and via PPP, attracting foreign investors.

Table 15: Macroeconomic indicators for Indonesia

Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	5,0	5,1	5,3	5,2
Inflation (yearly average, %)	3,5	3,8	3,5	3,8
Budget balance (% GDP)	-2,5	-1,7	-2,5	-2,7
Current account balance (% GDP)	-1,8	-1,7	-2,3	-2,1
Public debt (% GDP)	27,9	28,8	30,0	30,0

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

The current account deficit, however, would remain high because of debt interest payments and the repatriation of dividends.

Financial Sector

Banking sector is generally considered sound, with the largest banks had USD 326,4 bn in total assets as of 2017.

Foreigners have convenient access and are a major source of capital markets. IDX has 565 listed companies and reached a capitalization of USD 446,24 bn. As of 2017, domestic entities conducted more than half of total IDX stock trades *(61%)*. Islamic finance is also a very important mode of investment in capital markets. IDX launched the first index of Shariah-compliant companies *(Indonesian Sharia Stock Index - ISSI)* and the first online Shariah stock trading platform in 2011 and 2017, respectively. With respect to debt instruments, primarily government bonds, treasury bills and Sukuks are traded in the market.

Real Estate Markets

The country is going through a rapid urbanization adding to real estate demand. Thus, government invests heavily in big infrastructure projects in quickly developing hubs like Jakarta. Some of the new projects in Jakarta include the new Jakarta MRT and LRT projects, the Jakarta to Bandung High-Speed Rail, and the Ring Roads. The new MRT and LRT lines would revamp the current real estate landscape. Given the traffic congestion in the country, people would like to buy flats and houses further away from the main regions, where many expats and local professionals reside.

1.1.3.2. Turkey

Economy

In recent years, the Turkish Lira's depreciation have had negative consequences on the country's economic performance. Lira's weakness has considerably increased the cost of production and deteriorated pricing habits. Real wages are anticipated to stay under pressure on the household consumption front, as salary increases are expected to remain largely below annual inflation. This would have an impact on industries that rely on consumption, such as retail, construction, and electronics. There is no doubt that higher interest rates would decrease the pace of domestic demand growth.

Table 16: Macroeconomic indicators for Turkey

Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	3,2	7,4	2,6	1,0
Inflation (yearly average, %)	7,8	11,1	16,3	18,0
Budget balance (% GDP)	-1,4	-1,8	-2,7	-3,8
Current account balance (% GDP)	-3,8	-5,6	-3,6	-2,7
Public debt (% GDP)	28,3	28,3	32,7	33,6

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

Capital investments, social security, and purchases of goods and services would be subject to public savings, as the New Economic Plan 2019/21 suggests. On the other hand, the exports would be increasing, which have already been grasping the fruits of European growth, Turkey's primary trade counterparty. As Turkey has become a more convenient destination for global visitors, tourism revenues are set to rise. Import demand would be moderated by lowered private consumption and investment as well as production slowdown. Therefore, the twin deficits are anticipated to contract in 2019. Private sector external debt would represent an issue. As of the second quarter of 2018, total external debt was reported as 52% of GDP.

Financial Sector

The Turkish banking sector is a central bank system, which is monitored and supervised by Banking and Regulation Supervision Agency, is relatively healthy. Foreign banks are allowed to establish operations in the country as well. Bank deposits are protected by State Deposit Insurance Fund. Due to historically high local borrowing expenses and short repayment periods, foreign and local companies often seek credit from international markets to fund their operations. Foreign investors are able to get credit on the local market.

The government highly promotes and provides an effective regulatory system to encourage portfolio investment. Market liquidity is adequate to enter and exit significant positions. Existing policies welcome the free flow of capital into the factor markets. Borsa Istanbul is the only stock exchange in the country having 427 listed companies and a market cap of USD 226 bn for equities and USD 156 bn for debt securities.

Real Estate Markets

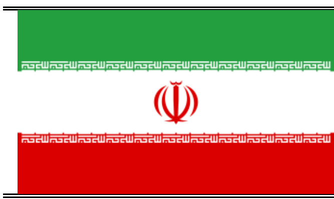
There is a reliable legal system for protecting, facilitating and recording acquisition and disposal of property rights in Turkey. Previous requirement that foreigners that would like to purchase real estate had to be in partnership with a local partner that owns at least a 50% share in the property has recently been repealed, meaning that foreigners can now own their own land. The new legal framework also increased the upper limit on real estate purchases.

1.1.3.3. Iran

Economy

Due to the volatile economic situation under the pressure of various external measures, both the oil and non-oil economy is expected to suffer from declining trade and investment. The country's currency have severely depreciated, driving up the prices of imported goods. Inflation is expected to rise, hurting businesses and households alike.

Table 17: Macroeconomic indicators for Iran



Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	13,4	3,8	-1,6	-3,8
Inflation (yearly average, %)	9,0	9,6	29,9	39,2
Budget balance (% GDP)	-1,9	-1,8	-4,8	-5,4
Current account balance (% GDP)	3,9	3,5	0,5	0,0
Public debt (% GDP)	49,0	38,2	42,4	44,8

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

The budget balance is expected to widen in 2019 due to declining budgetary revenues. In response external measures and restrictions, the government has been considering to support the private sector. The current economic situation is also likely to impact the financial system. In 2016, the country embarked on an IMF programme to align its banking system with globally accepted standards.

Financial Sector

The government plays a significant role in the banking sector, which is regulated by CBI. The sector has been subject to sanctions and limitations over the past decade. As a result, for the government and many companies, large funds remain unavailable, and while they are eager to purchase, doing company with Iranian businesses is still hard because of the absence of foreign currency. Currently the country is using its banking connection with neighbouring countries in order to import basic goods and materials to Iran.

CBI has in recent months started implementing a series of measures in the country's payment systems to better manage the monetary and foreign currency markets. One of these initiatives is to introduce advanced blockchain technology in the banks and also in the financial institutions.

From the viewpoint of capital markets, however, the country is developing a range of new financial products, from Sukuks to warrants and insurance-linked securities, in an effort to give local firms more funding options as sanctions put pressure on the economy.

Real Estate Markets

Housing market is one of the most important industries in the economy so its prosperity leads to a stronger business situation in the housing market's downstream segments such as steel and cement.

However, financing is a major problem for real estate's potential buyers. The banking system in Iran is struggling these years with a broad array of challenges, making it difficult for individuals to obtain credit from banks. There is a dedicated bank for housing named as Bank Maskan, a state-run agent bank of the housing sector, and home loans are mainly offered by this bank[20]. Leasing companies could not take part in the market because of their low financial strength. In addition, mortgage facilities have not been used widely in Iran's debt market. These factors restrict loan applicants and provoke recession in housing market.

Total amount of conventional real estate financial arrangements originated in the country has been in steady increase for the last three years and amounted to USD 1,6 bn as of 2018. Appraisal of and insurance for the relevant real estate is mandatory for such arrangements.

As of 2018, there are 210 mutual funds and 29 ETFs in the market, which are permitted to invest a specific portion of their assets in fixed income securities including real estate securities. Pension funds also can invest in real estates related securities. Furthermore, there are 13 investment companies in the form of closed-ended funds and 5 construction and project funds[21] active in real estate investments. Total market value of the CIS industry as a whole is about USD 36,1 bn, and a considerable of portion of this belongs to the ones that invests in real estate, while construction and project funds have a value of USD 25 mn.

[20] The bank granted total of 228,949 home loans worth USD 775 mn in the last Iranian year that ended on March 20, 2019.

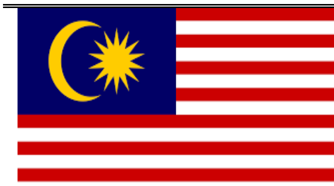
[21] These funds were established by cooperating with the Ministry of Roads and Urban Developments to boost the housing market. The objective of these funds is to collect macro and micro savings, devote them to build specified construction projects, sell the construction and eventually distribute obtained benefits among investors (Farahabadi, 2012).

1.1.3.4. Malaysia

Economy

Economic growth is expected to maintain its pace in 2019. There would be an increasing consumption pattern among the households due to rising urbanisation. Moreover, investments by the private sector would continue to grow given the country's increasing integration with other markets in the region.

Table 18: Macroeconomic indicators for Malaysia



Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	4,2	5,9	5,3	5,0
Inflation (yearly average, %)	2,1	3,8	1,0	2,3
Budget balance (% GDP)	-3,0	-3,0	-3,2	-3,0
Current account balance (% GDP)	2,4	3,0	2,8	2,5
Public debt (% GDP)	56,2	54,1	55,1	54,2

Source: *COFACE*
Note: *(e): Estimate; (f): Forecast*

Budget balance would stay at high levels, while it would be reduced in 2019. The external accounts would continue to decline as long as imports grow faster than exports.

Financial Sector

The country's banking sector is generally regarded as dynamic and well regulated. Even though private banks are competitive with state-owned banks, the market is dominated by the latter. An approximately 75% of industry assets and deposits are made by the 5 major banks, i.e. Maybank, CIMB, Public Bank, RHB, and Ambank. Malaysia has effectively created a mature and robust regulatory structure for Islamic finance and has introduced the dual banking system in which both Islamic and conventional financial systems co-exist within a single legislative scheme.

Malaysia's stock market, i.e. Bursa Malaysia, is open to foreign involvement. The country also houses one of Asia's largest corporate bond markets, and is the largest sukuk market in East Asia. Malaysia remains the primary and exceptional driver of Sukuk issuances. The country also launched the world's first issuance of Green Sustainable and Responsible Investment (SRI) Sukuk in July 2017. Several issuances of this kind are anticipated in 2019, especially for large-scale solar photovoltaic projects. In addition, SRI Sukuk Grant Scheme has been introduced to reduce the additional cost of certifying a debt instrument of meeting the green criteria.

Real Estate Markets

Land administration is shared among federal, state, and local government. State governments have their own rules about land ownership, including foreign ownership. Malaysian law affords strong protections to real property owners. In the case of a loan default, foreign and domestic lenders can record and carry out the foreclosure process with relevant competent authorities. Malaysia ranks 29th in "Ease of Registering Property" in World Bank reports (World Bank, 2019).

Total amount of Islamic real estate financial arrangements originated in the context of infrastructure financing was USD 3,14 bn in 2018. Appraisal of and insurance for the relevant real estate is mandatory for real estate financial arrangements.

As of 2018, there are 19 REITs, 10 ETFs, 650 Unit Trust Funds, 307 Wholesale Funds, 56 Private Retirement Funds, and 1 Closed-End Fund (company structure) that can invest in real estate securities in the market. While market value of all CIS amounts to USD 129,97 bn, this figure is USD 10,10 bn for real estate CIS.

1.1.3.5. Pakistan

Economy

Pakistan is the 6th largest country in the world by population and the 40th largest economy. Pakistan's economy continued to grow in 2018, reaching 5,8%. Growth was driven by higher consumption demand, fuelled by accommodative fiscal and monetary policies; resulting in widening macroeconomic imbalances.

Table 19: Macroeconomic indicators for Pakistan

Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	4,5	5,4	5,8	0,0
Inflation (yearly average, %)	2,9	4,1	3,9	7,0
Budget balance (% GDP)	-4,4	-5,7	-6,5	-6,5
Current account balance (% GDP)	-1,7	-4,1	-6,0	-5,0
Public debt (% GDP)	67,6	67,0	70,0	73,0

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

Fiscal situation deteriorated due to a less sustained increase in budgetary revenues combined with an increase in public expenditure. Public debt has risen markedly and would continue to depend on the central bank and other banks, to the detriment of private companies' credit. The deficit in external accounts would decrease with the recovery of exports, in line with the devaluation of the rupee and better electricity supply, and with lower imports provided that oil prices do not decrease. The trade deficit would remain the main contributor to the imbalance.

Financial Sector

The financial sector has been experiencing a transitory stage in the country in that new groups are buying out Pakistan operations of foreign banks and the number of listed banks is also increasing. Under the control of State Bank of Pakistan, the country's banking sector consists of 26 commercial banks, 6 development finance institutions, and 11 micro-finance banks.

Once, the country had three stock exchanges. Pakistan Stock Exchange, the first one, was established in 1947 and was formally incorporated in 1949 under the name of "Karachi Stock

Exchange". The second one was established in Lahore in 1970 to meet the stock trading needs of the provincial metropolis. The third one, Islamabad Stock Exchange, was established in 1989 to cater to the investors of the northern parts of the country. Since these exchanges had major differences in their infrastructures and modes of doing business, the promulgation of Stock Exchanges Act, 2012 enabled the their integration as of 2016 under the new name 'Pakistan Stock Exchange Limited' *(PSX)*. PSX has 558 companies listed in the bourse with a market capitalization of USD 93,99 bn. The listed companies are distributed amongst 35 sectors/ groups of industries. PSX is regulated by SECP.

Real Estate Markets

Pakistan's real estate market has evolved into a vital source of economic growth in the country. The combined direct contribution of construction and housing sectors to the country's GDP has been consistently higher than 9% over the past decade. The real estate sector not only generates high level of direct employment, it also stimulates demand in more than 250 ancillary sectors, such as cement, steel, brick, paint and other building materials. A number of reforms have been introduced in recent years to regulate the real estate market. Most of these measures aim to increase transparency and government tax revenues, as well as prevent speculative buying in the real estate market.

Pakistan's housing deficit is estimated at around 10 million units, which means that more than a third of the 32 million households in the country are not provided with adequate housing. There are multiple reasons for Pakistan's housing problems. These include: non-availability of a common record of land and entitlement; stringent regulations for site development; limited financing has priced out lower-to-middle income segments; and reluctance of banks to expand their mortgage portfolio due to weak contract enforcement and uncertainty of title deeds. In an effort to address the housing crisis, Naya Pakistan Housing Programme (NPHP) project, an affordable housing scheme for low-income households, has been launched. Under this program, at least five million low-cost houses will be built nationwide.

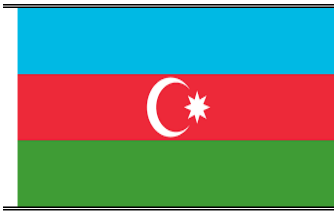
Despite rapid growth in recent years, Pakistan's mortgage market remains very small. In 2018, its size was equivalent to just about 0.3% of GDP in 2018 due to very high interest rates and limited mortgage offerings.

1.1.3.6. Azerbaijan

Economy

Growth, would continue backed by rising oil prices and the development of gas production. The resulting increase in revenues would have a positive impact on household consumption. The revival of credit would also allow growth in private investment, which would remain mainly foreign.

Table 20: Macroeconomic indicators for Azerbaijan



Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	-3,1	0,1	1,4	3,3
Inflation (yearly average, %)	15,6	7,9	1,6	2,8
Budget balance (% GDP)	0,3	-1,5	5,9	6,5
Current account balance (% GDP)	-3,6	4,1	12,4	12,5
Public debt (% GDP)	50,7	54,1	48,4	46,0

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

Revenue growth since 2016, is anticipated to slow *(3% increase)* primarily as a result of development of the non-oil sector, and subsequently by hydrocarbon price recovery *(57% of budget revenues)* and by the expansion in gas production. In that context, a new fiscal rule has been introduced to lower reliance on the oil cycle by regulating expenditures when prices are high.

Financial Sector

The country's financial system is underdeveloped and bank-dominated, which has been struggling with rising non-performing loans and low profitability.

Baku Stock Exchange was opened in 2000, while the Financial Market Supervisory Authority is launched in early 2016 in order to regulate and supervise capital markets in the country.

The government is in an attempt to strengthen the country's financial system through a Capital Market Modernization Project that involves developing market infrastructure and automation systems, and upgrading the legal and institutional frameworks.

Real Estate Markets

Foreigners may not own land, but are permitted to lease land.

The Azerbaijan Mortgage Fund issues mortgage loans to the clients. As of August 2017, the government also launched issuance of mortgage loans electronically. Life insurance and appraisal is mandatory in case of mortgages agreements financed by the Fund.

Real estate registration system is held by the government and the World Bank ranks Azerbaijan 17 out of 190 countries in 2019 in its country rankings on the Ease of Registering Property (World Bank, 2019).

1.1.3.7. Brunei Darussalam

Economy

Being the third largest oil producer in the Asian region, oil production accounts about half of the GDP of the country. The country's growth rate increase is expected to depend heavily on the increase in the construction output. Due to decline in oil revenues, a series of fiscal deficits have emerged in the public budget, while public burden is extremely low.

Table 21: Macroeconomic indicators for Brunei Darussalam

Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	-2,5	1,3	2,3	5,1
Inflation (yearly average, %)	-0,7	-0,2	0,4	0,5
Budget balance (% GDP)	-15,2	-16,4	-13,0	-11,7
Current account balance (% GDP)	12,9	16,7	7,8	17,4
Public debt (% GDP)	3,0	2,8	2,4	2,3

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

Inflation is highly stable and expected to remain at low levels. On the other hand, unemployment is a major concern in the country as the rate of unemployment has reached 7,1% in 2018 and forecasted to remain stable. Ensuring long-term fiscal sustainability and intergenerational equity and fostering economic diversification by improving the business climate are two important components of expected reforms.

Financial Sector

The country's financial sector remains healthy among challenging global environment. The sector is regulated and supervised by the central bank (Autoriti Monetari Brunei Darussalam). There is a small but solid banking system in which banks have high levels of liquidity, good capital adequacy ratios and well-managed levels of non-performing loans. A dual banking system prevails, whereas Islamic banks are dominant and growing rapidly in the country.

Along with the strong Islamic banking system, a growing Islamic insurance (takaful) industry and an expanding market for Sukuks exist in Brunei Darussalam, which has recently been drawing much attention internationally as a centre for Islamic financial services.

Recently, the country earmarked a total of USD 306.3 mn to finance the establishment of the its stock exchange.

Real Estate Markets

Bruneian laws on the purchase of real estate is very strict and confined only to the local residents of the country. However, in the recent years, even the foreigners have been able to invest in the real estate market in the country.

In view of the recent changes, many property developers across the world are now starting partnerships with the land for sale in Brunei by real estate agents. This is helping the country to effectively market its properties in the nearby countries such as Singapore and Malaysia.

It has to be noted that a foreigner may not be able to avail a mortgage from the bank in Brunei unless he has been living in the country for many years. There are various fees involved in purchasing a land. The major cost of legal valuation and property survey which eats up almost one-third of the property cost. The next one is the fee to be paid to the lawyer who would help to complete the sale for land and complete purchase transaction smoothly.

Brunei boasts a public housing scheme that is heavily subsidized by the government mainly through oil and gas revenues. The National Housing Program is accessible to all Bruneians regardless of race while the Landless Indigenous Citizen Scheme is exclusively for indigenous Brunei Malays.

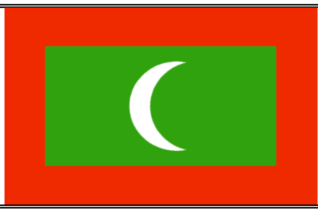
In 2018, real estate loans amounted to USD 666,67 mn and USD 685,35 mn in conventional and in Islamic means, respectively. Residential mortgages dominate the market. Appraisal and insurance for the underlying property is compulsory.

1.1.3.8. Maldives

<u>Economy</u>

Growth mainly driven by the tourism sector is expected to remain stable in Maldives. Tourist islands attract sizeable infrastructure and development investments, which contribute to growth whereas leading to high public deficits .

Table 22: Macroeconomic indicators for Maldives



Indicators	2016	2017	2018 (e)	2019 (f)
GDP Growth (%)	7,3	6,9	6,1	6,3
Inflation (yearly average, %)	0,5	2,8	1,5	1,7
Budget balance (% GDP)	-9,7	-6,5	-7,6	-6,6
Current account balance (% GDP)	-24,5	-22,1	-18,0	-15,2
Public debt (% GDP)	65,0	69,4	72,0	73,5

Source: *COFACE, World Bank*
Note: *(e): Estimate; (f): Forecast*

Current account deficit also pressurizes the economy, however tourism revenue would continue to support the balance. On the other hand, growing exposure to international creditors, particularly Chinese, put the country under pressure.

<u>Financial Sector</u>

The financial system of the country comprises of commercial banks and non-bank financial institutions, such as insurance companies, a finance leasing company, a housing finance company, money remittance companies and payment service providers, the pension fund and companies operating in the capital market. Securities market and the pension fund are regulated by the Capital Market Development Authority, while the rest of the financial institutions are subject to the regulations of the Maldives Monetary Authority.

It is allowed to issue conventional and Islamic equity or debt securities in the market. Maldives Stock Exchange welcomes these issuances, but the corporate debt market is mostly untapped with just one company listed with debt securities and one with Sukuk.

Obtaining credit from banks is not an easy task, thus World Bank ranks the country 134 out of 190 countries in 2019 in its country rankings on the Getting Credit (World Bank, 2019).

Real Estate Markets

Tourism-related construction facilities are enormous. The expansion of the Velana International Airport is an on-going project that would enable the airport to host more than 7 mn passengers per year, compared to the current amount of 1,5 mn. Other massive projects such as bridging islands continue as well, meaning that the construction sector would be the main augmenter to the economic activity in the country.

World Bank ranks Maldives 175 out of 190 countries in 2019 in its country rankings on the Ease of Registering Property due to the fact that it takes 57 days, requires 6 steps, and costs 15,7% to register a property (World Bank, 2019). Furthermore, foreigners cannot own land in the country.

Housing Development Finance Corporation, incorporated in 2004 as a public (51%)-private (49%) company delivers services in mortgage financing.

1.2. Market Diversity

The literature points to a set of policies for countries to benefit from international financial integration. These policies should target achieving a number of preconditions explained by economic and non-economic variables. Economic ones include (Kose, Prasad, & Taylor, 2011):

- A deep and well-supervised financial system able to intermediate efficiently foreign finance into productive investments. It can also help manage better the volatility of capital flows. *(Financial Development)*

- The quality of corporate and public governance, the legal framework, level of corruption and the degree of government transparency, which can influence resource allocation in an economy. *(Institutional Quality)*

- Trade openness, which reduces the likelihood of financial crises and mitigates the costs of crises if they do occur. *(Trade Integration)*

- Capital account liberalization, which is more likely to succeed if backed by proper fiscal, monetary and exchange rate policies. *(Macroeconomic Policies)*

Whereas non-economic characteristics like distances between countries, the absence of a common language, differences in time zones etc. would also widen the gap. Such diversity may appear to be an impediment to integration; however, this can be addressed by policy, such as the case with the initiative designed in this report to promote real estate securities markets.

In this framework, though there is a great deal of diversity among the COMCEC member countries as well as among the ones included in this report, each being at different levels of progress relative to above preconditions, there is room for improvement. Diversity would help investors find different levels of risk and return, matching their risk tolerance with a financial instrument *(e.g. a real estate security)* (Sobel, 2012). Hence, diversity may support for the attractiveness of a common trading venue initiative revealing the different contribution levels of the member countries at different levels of development.

In this section, several economic and non-economic variables are identified in order to address different dimensions of diversity within the COMCEC member countries.

1.2.1. Economic Variables

1.2.1.1. Gross Domestic Product

Data on GDP in Table 23 below provide support for the income classification tabulated earlier. Especially GDP per capita data reveal that there is a huge discrepancy *(about 48 times)* between the lowest *(713 USD - Gambia)* and the highest *(34.244 USD - Kuwait)* figure.

Table 23: GDP data

Grouping	Country/Data	GDP (mn USD)	GDP per capita (USD)	FDI/GDP (%)
Arab Group	Saudi Arabia	782,48	23.219	0,4
	Egypt	250,89	2.549	3,1
	Kuwait	141,68	34.244	0,1
	Morocco	118,49	3.238	3,1
	Tunisia	39,86	3.446	2,0
	Bahrain	35,33	24.051	1,5
	Palestine	14,62	3.198	1,8
	Djibouti	1,97	2.050	8,9
African Group	Nigeria	397,27	2.028	0,9
	Senegal	24,13	1.522	2,8
	Gabon	17,02	8.029	10,1
	Gambia	1,62	713	0,4
Asian Group	Indonesia	1.042,17	3.894	2,3
	Turkey	766,51	9.311	1,7
	Iran	454,01	5.628	1,1
	Malaysia	354,34	11.239	3,0
	Pakistan	302,14	1.473	0,9
	Azerbaijan	46,94	4.721	3,0
	Brunei Darussalam	13,57	31.628	4,1
	Maldives	5,27	8.050	10,1
Developed	Eurozone	13.669,95	39.996	0,5
	Japan	4.970,92	39.287	0,5
	United States	20.494,10	62.641	1,3
	United Kingdom	2.825,21	42.491	2,1

Source: *SESRIC, World Bank, Global Economy.*

Furthermore, the average FDI/GDP level is about 3,07, which is relatively higher than the ones pertaining to developed countries. Since, FDI data show the net inflows of investment from foreign investors to obtain a permanent stake of management *(10% or more of voting stock)* in a company operating in an economy, this figure indicates the need and importance of foreign investments for most of the COMCEC member countries, especially for the ones considered within the African group.

1.2.1.2. Credit Ratings

Credit ratings of the COMCEC member countries, *i.e. sovereign credit ratings*, are portrayed in Table 24. Data prove that, apart from a few exceptional cases *(i.e. Kuwait, Malaysia and Saudi Arabia)*, the COMCEC member countries are positioned in non-investment area with different layers of ratings. There are even some countries that have not obtained any credit ratings so far.

Table 24: Sovereign credit ratings of COMCEC member countries

Grouping	Country/Rating Agency	S&P	Moody's	Fitch	Description
Arab Group	Saudi Arabia	A-	A1	A+	Upper medium
	Egypt	B	B2	B+	Highly speculative
	Kuwait	AA	Aa2	AA	High
	Morocco	BBB-	Ba1	BBB-	Lower medium
	Tunisia	N/A	B2	B+	Highly speculative
	Bahrain	B+	B2	BB-	Highly speculative
	Palestine	N/A	N/A	N/A	N/A
	Djibouti	N/A	N/A	N/A	N/A
African Group	Nigeria	B	B2	B+	Highly speculative
	Senegal	B+	Ba3	N/A	Speculative
	Gabon	N/A	Caa1	B	Highly speculative
	Gambia	N/A	N/A	CCC	Substantial risks
Asian Group	Indonesia	BBB	Baa2	BBB	Lower medium
	Turkey	B+	B1	BB-	Highly speculative
	Iran	N/A	N/A	B+	Highly speculative
	Malaysia	A-	A3	A-	Upper medium
	Pakistan	B-	B3	B-	Highly speculative
	Azerbaijan	BB+	Ba2	BB+	Speculative
	Brunei Darussalam	N/A	N/A	N/A	N/A
	Maldives	N/A	B2	B+	Highly speculative
Developed	Eurozone	AA	Aaa	AAA	High
	Japan	A+	A1	A	Upper medium
	United States	AA+	Aaa	AAA	High
	United Kingdom	AA	Aa2	AA	High

Source: *Trading Economics*
Note: *Eurozone, UK, Japan and US data are given for comparison purposes.*

Credit ratings matter because, the credit rating of an issuer domiciled in a developing country with low sovereign credit rating might be lower, which would cause hesitation for investors.

1.2.1.3. Competitiveness

The Global Competitiveness Index depicted in Figure 3 seeks to quantify the quality of the macroeconomic setting, the state of public services in a country, and its level of willingness for technology. As it is clear, global competitiveness in the COMCEC member countries is moderate in general, but lower than that of developed countries.

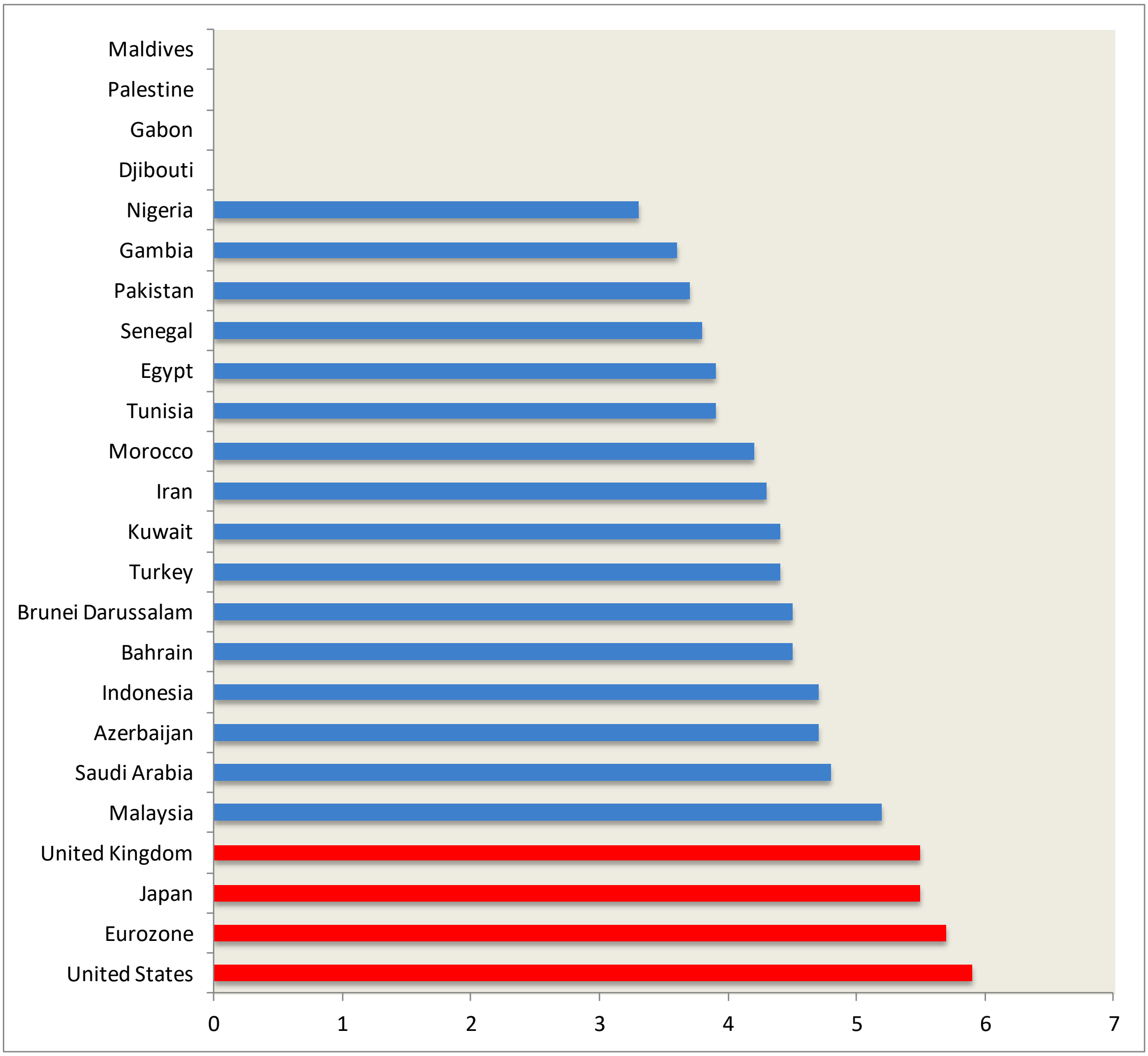


Figure 3: Global competitiveness index (2018)
Source: *(Schwab, 2017)*
Note: *Very High 5.51 to 7; High 4.51 to 5.50; Moderate 3.51 to 4.50; Low - 3.01 to 3.50; Very Low 0 to 3.00.*

As a complementary information, Table 25 reports for the economic complexity index scores. This index ranks countries on the basis of the diversity and complexity of their export basket. Countries with a great diversity of productive, especially complicated specialized know-how, can generate a wide range of sophisticated products. The index therefore provides a useful measure of economic development.

Table 25: Economic complexity index score

Grouping	Country/Data	Economic Complexity Index Score
Arab Group	**Saudi Arabia**	0,747
	Egypt	-0,320
	Kuwait	0,116
	Morocco	-0,892
	Tunisia	-0,288
	Bahrain	0,327
	Palestine	0,037
	Djibouti	N/A
African Group	**Nigeria**	-1,903
	Senegal	-0,519
	Gabon	-1,225
	Gambia	N/A
Asian Group	**Indonesia**	-0,306
	Turkey	0,176
	Iran	-0,158
	Malaysia	0,971
	Pakistan	-0,860
	Azerbaijan	-0,655
	Brunei Darussalam	N/A
	Maldives	N/A
Developed	**Eurozone (Germany)**	2,075
	Japan	2,309
	United States	1,755
	United Kingdom	1,532

Source: *SESRIC*[22]
Note: *Negative values indicate complexity is below the global average. Eurozone, UK, Japan and US data are given for comparison purposes.*

The scores prove that the COMCEC member countries are low in economic complexity with only a few ones having positive values meaning that their economic development levels are above average.

1.2.1.4. Currency

Another matter of diversity is about the legal tender used in the relevant economy. As shown in Table 26, there are various arrangements under the monetary policy framework of member countries.

[22] SESRIC data was enriched by information retrieved from https://atlas.media.mit.edu/en/rankings/country/eci/.

Table 26: Exchange rates

Exchange Rate Arrangement	Monetary Policy Framework						
	Exchange Rate Target				Monetary Aggregate Target	Inflation Targeting	Other[1]
	US dollar	Euro	Composite	Other			
No Separate Legal Tender							Palestine New Shekel[2]
Currency Board	Djibouti Franc			Brunei Dollar			
Conventional Peg	Saudi Riyal Bahraini Dinar	Senegal CFA Franc[3] Gabon CFA Franc[4]	Kuwaiti Dinar Moroccan Dirham				
Stabilized Arrangement	Maldives Rufiyaa				Nigerian Naira[5]		Pakistani Rupee[5]
Crawl-like Arrangement			Iranian Rial[5]				
Other Managed Arrangement					Gambia Dalasi		Azerbaijan Manat
Floating						Turkish Lira Indonesian Rupiah	Tunisian Dinar[6] Malaysian Ringgit Egyptian Pound

Source: *(Deutsche Bundesbank, 2019)*
Notes: *[1] Includes countries that do not have a nominal anchor explicitly indicated, but rather track different monetary policy indicators.*
[2] Palestine does not have its own currency; rather Israeli Shekel circulates in the Palestinian territories. Hence, it is dependent on Israeli monetary policy.
[3] Senegal belongs to the WAEMU. The responsible monetary authority is the BCEAO, whose CFA franc (F.CFA = Franc de la Communauté Financière Africaine) is legal tender.
[4] Gabon belongs to the Central African Economic and Monetary Community. The responsible monetary authority is the BEAC, whose CFA franc is legal tender.
[5] The country maintains a de facto exchange rate anchor to the US dollar.
[6] Preliminary measures have been taken by the central bank for targeting inflation.

Different exchange rate regimes would be a frustrating issue for investors as, for instance, it would be difficult to handle post-trading activities such as clearing and settlement.

1.2.1.5. Financial Development

As suggested by Table 27, banks dominate the financial markets in the COMCEC member countries. Moreover, both banking system depth and stock market development levels are high, as they both surpass GDP, only in Kuwaiti and Malaysian cases. There is even no data for some countries *(e.g. Senegal, Gambia)*.

Table 27: Financial Market Development (2018-2019)

Grouping	Country/Data	Bank Assets /GDP (%)	Stock Market Cap /GDP (%)	# of Listed Co.
Arab Group	Saudi Arabia	69,03	63,43	200
	Egypt	84,05	16,74	250
	Kuwait	109,60	105,40	175
	Morocco	85,38	51,55	76
	Tunisia	86,04	20,90	82
	Bahrain	103,03	57,92	44
	Palestine	48,66	25,55	48
	Djibouti	32,85	N/A	N/A
African Group	Nigeria	20,21	7,93	164
	Senegal	42,16	N/A	N/A
	Gabon	21,61	N/A	N/A
	Gambia	N/A	N/A	N/A
Asian Group	Indonesia	38,05	46,71	619
	Turkey	73,27	19,47	377
	Iran	70,63	23,90	323
	Malaysia	135,25	112,32	902
	Pakistan	43,14	25,00	546
	Azerbaijan	33,96	0,10	34
	Brunei Darussalam	49,92	N/A	N/A
	Maldives	42,67	N/A	9
Developed	Eurozone (France)	112,46	106,46	823
	Japan	158,30	127,72	3.776
	United States	62,67	148, 05	3.148
	United Kingdom	130,48	118,10	2.100

Source: *Global Economy, CEIC*

This fact reveals itself in the financial development index information as well. In line with Figure 4 below, most of the countries are financially underdeveloped.

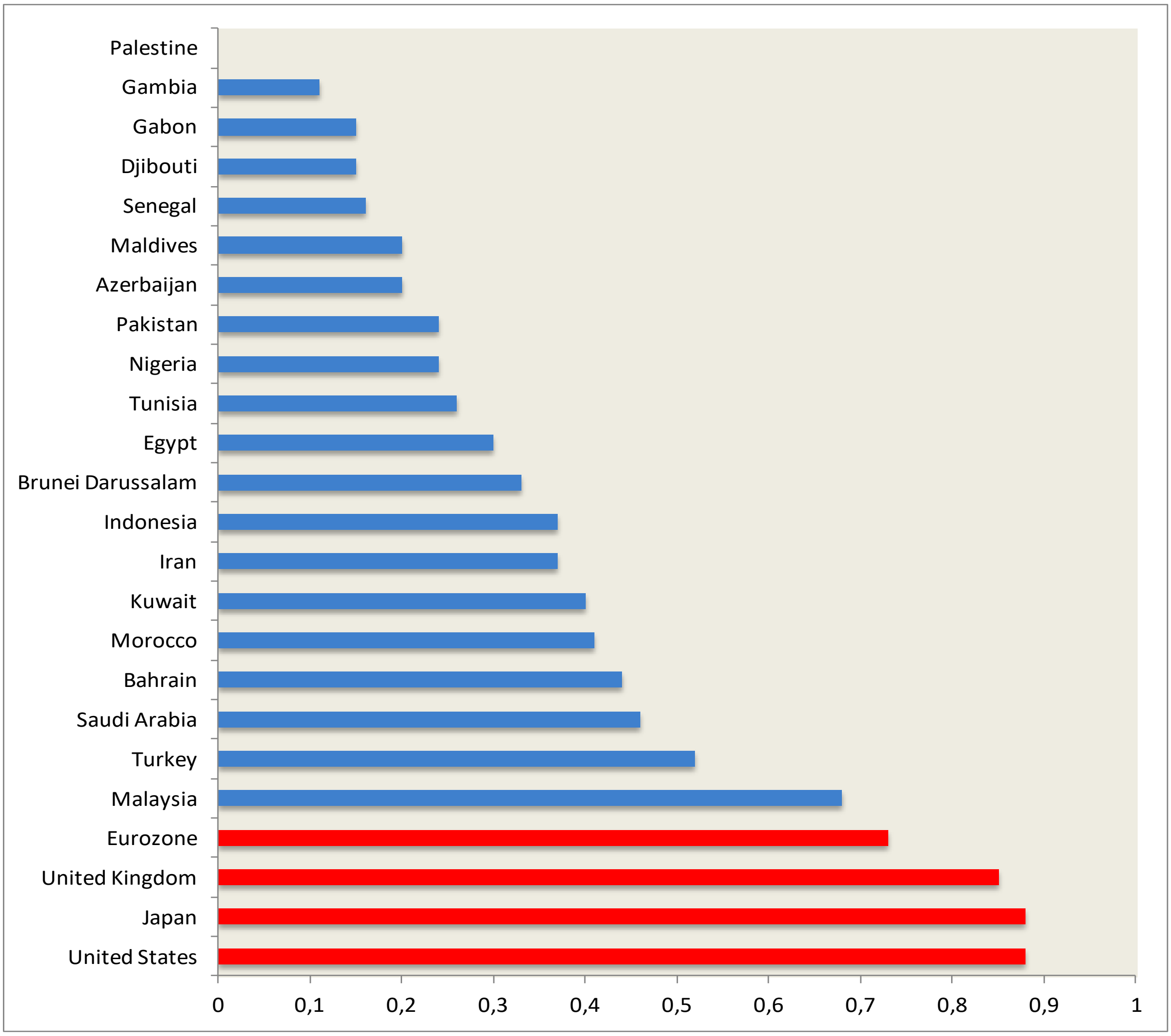


Figure 4: Financial development index (2016)
Source: *SESRIC, World Bank*
Note: *Eurozone, UK, Japan and US data are given for comparison purposes.*

From the viewpoint of investors, secondary markets in the COMCEC member countries have quite different characteristics in terms of the market and regulatory environment, custody and settlement procedures, dealing landscape, and derivatives practices. As discussed earlier, fair treatment for minority investors is not met or restrictedly met in many of the countries. Moreover, neither the equity nor the foreign exchange market is developed at all. The criteria regarding post-trade services such as custody and settlement, especially, making omnibus and segregated account facilities available to international investors, are not in place adequately. Although efficient trading and post-trade reporting mechanisms are commonly provided in the countries, liquidity level is somewhat low. Ultimately, sophisticated transactions associated with stock lending, short sales, off-exchange trading and derivatives are almost not met.

Table 28: Quality of markets assessments matrix

Criteria/Country	Kuwait	Malaysia	Palestine	S. Arabia	Tunisia	Turkey	Nigeria	Bahrain	Indonesia	Pakistan	Egypt	Morocco
Market and Regulatory Environment												
Formal stock market regulatory authorities actively monitor market	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Restricted	Pass	Pass	Pass
Fair and non-prejudicial treatment of minority shareholders	Pass	Pass	Restricted	Not Met	Restricted	Pass	Restricted	Not Met	Not Met	Pass	Pass	Pass
No or selective incidence of foreign ownership restrictions	Pass	Restricted	Pass	Restricted	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
No objection to or significant restrictions or penalties applied to the investment of capital or the repatriation of capital and income	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Developed equity market	Restricted	Pass	Not Met	Not Met	Not Met	Pass	Restricted	Not Met	Pass	Pass	Pass	Not Met
Developed foreign exchange market	Restricted	Restricted	Restricted	Not Met	Not Met	Pass	Not Met	Not Met	Restricted	Restricted	Not Met	Restricted
No or simple registration process for foreign investors	Restricted	Pass	Pass	Pass	Pass	Pass	Restricted	Restricted	Pass	Restricted	Restricted	Pass
Custody and Settlement												
Settlement - Rare incidence of failed trades	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Custody-Sufficient competition to ensure high quality custodian services	Pass	Pass	Not Met	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Clearing & Settlement - T+2 / T+ 3	T+3	T+3	T+2	T+2	T+3	T+2	T+3	T+2	T+2	T+2	T+2	T+3
Settlement - Free delivery available	Not Met	Restricted	Restricted	Not Met	Restricted	Pass	Not Met	Not Met	Restricted	Restricted	Restricted	Restricted
Custody - Omnibus and segregated account facilities available to international investors	Not Met	Pass	Not Met	Not Met	Not Met	Restricted	Not Met	Not Met	Pass	Restricted	Restricted	Pass
Dealing Landscape												
Brokerage - Sufficient competition to ensure high quality broker services	Pass	Pass	Restricted	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Liquidity - Sufficient broad market liquidity to support sizeable global investment	Pass	Pass	Restricted	Pass	Restricted	Pass	Restricted	Not Met	Pass	Pass	Pass	Not Met
Transaction costs - implicit and explicit costs to be reasonable and competitive	Pass	Pass	Restricted	Pass	Pass	Pass	Not Met	Pass	Pass	Pass	Pass	Pass
Stock Lending is permitted	Restricted	Restricted	Not Met	Restricted	Not Met	Pass	Not Met	Not Met	Restricted	Restricted	Not Met	Restricted
Short sales permitted	Restricted	Restricted	Not Met	Restricted	Not Met	Pass	Not Met	Not Met	Restricted	Restricted	Not Met	Not Met
Off-exchange transactions permitted	Not Met	Pass	Not Met	Not Met	Not Met	Pass	Restricted	Not Met	Pass	Pass	Not Met	Not Met
Efficient trading mechanism	Pass	Pass	Pass	Pass	Pass	Pass	Restricted	Pass	Pass	Pass	Pass	Pass
Transparency - market depth information / visibility and timely trade reporting process	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Derivatives												
Developed Derivatives Market	Restricted	Restricted	Not Met	Not Met	Not Met	Restricted	Not Met	Not Met	Not Met	Not Met	Not Met	Not Met

Source: *FTSE Russell*

1.2.1.6. Real Estate and Construction

As Figure 5 portrays, construction sector is key for the COMCEC member countries in their economic development. Indeed, the value added of construction is greater than that of developed countries in some of the COMCEC member countries.

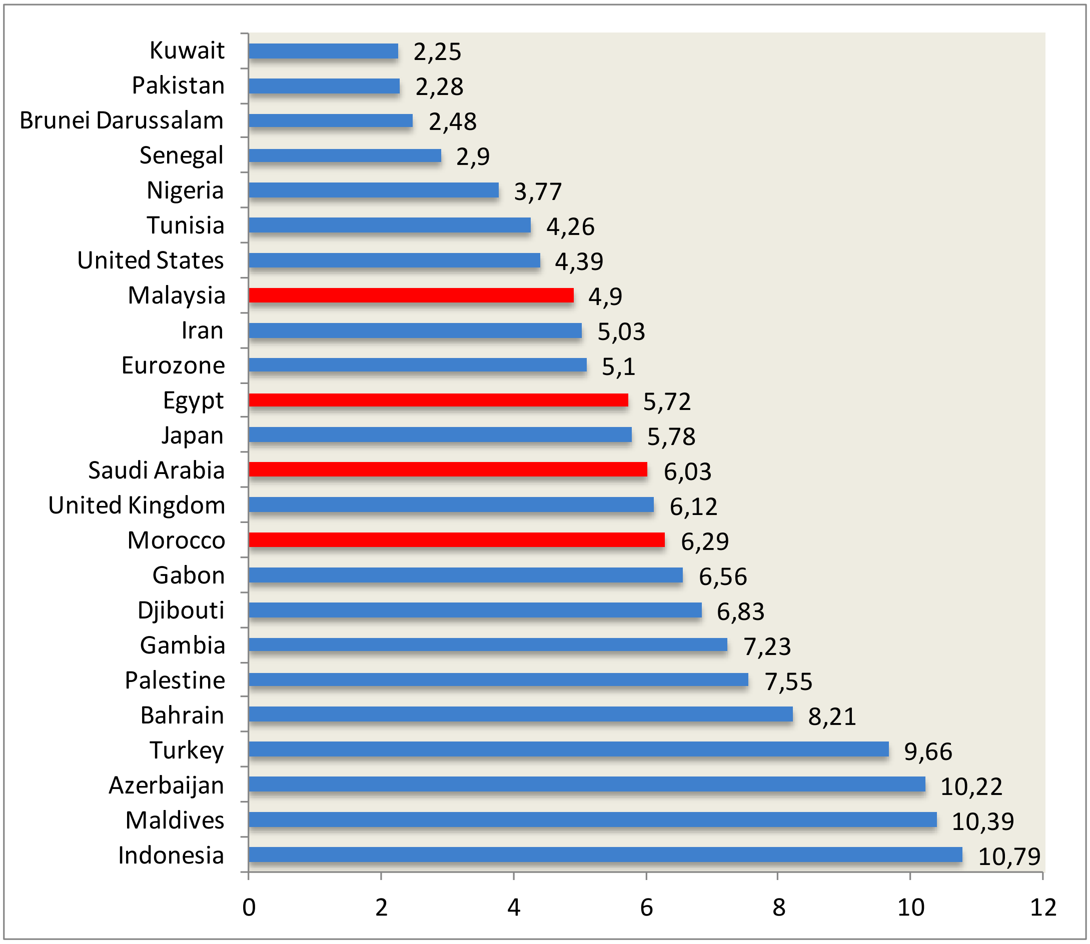


Figure 5: Construction, share in total value added percentage (2017)
Source: *SESRIC, OECD*

However, as Table 29 puts forward, rights associated with constructed properties are not protected when compared to the situation in developed countries. Moreover, access to loans is not so easy in some of the COMCEC member countries, which may hinder primary market development, and in turn, the potential of trading real estate securities on secondary markets.

Table 29: Physical property rights (2018)

Grouping	Country/ Score (Ranking)	Protection of Physical Property	Registering Property	Ease of Access to Loans	Overall
Arab Group	Saudi Arabia	6,753 (34)	9,970 (5)	4,880 (61)	7,201 (32)
	Egypt	4,882 (87)	7,537 (116)	4,831 (64)	5,750 (96)
	Kuwait	6,037 (47)	8,803 (80)	5,626 (37)	6,822 (48)
	Morocco	6,161 (42)	9,259 (57)	4,654 (71)	6,691 (54)
	Tunisia	5,830 (54)	8,743 (81)	3,940 (96)	6,171 (73)
	Bahrain	7,435 (26)	9,026 (72)	6,161 (21)	7,541 (26)
	Palestine	N/A	N/A	N/A	N/A
	Djibouti	N/A	N/A	N/A	N/A
African Group	Nigeria	4,627 (95)	7,687 (115)	2,640 (119)	4,985 (114)
	Senegal	5,452 (65)	8,186 (102)	3,780 (99)	5,806 (93)
	Gabon	N/A	N/A	N/A	N/A
	Gambia	N/A	N/A	N/A	N/A
Asian Group	Indonesia	6,030 (48)	9,094 (68)	5,818 (32)	6,981 (40)
	Turkey	5,590 (61)	9,725 (25)	5,166 (49)	6,827 (47)
	Iran	4,744 (92)	9,566 (30)	3,051 (114)	5,787 (94)
	Malaysia	7,265 (30)	9,520 (33)	6,184 (20)	7,656 (22)
	Pakistan	4,334 (104)	4,989 (122)	4,281 (81)	4,535 (120)
	Azerbaijan	6,321 (40)	9,828 (15)	5,015 (55)	7,055 (37)
	Brunei Darussalam	5,659 (56)	0,404 (125)	4,240 (82)	3,434 (124)
	Maldives	N/A	N/A	N/A	N/A
Developed	Eurozone (Germany)	7,598 (23)	8,300 (97)	6,923 (9)	7,607 (24)
	Japan	8,449 (10)	9,547 (31)	7,025 (7)	8,340 (7)
	United States	8,829 (6)	9,275 (55)	5,715 (36)	7,940 (18)
	United Kingdom	7,862 (20)	9,499 (35)	7,563 (2)	8,308 (8)

Source: *International Property Rights Index*

The following Table 30 justifies these findings by means of ease of doing business scores with respect to property registrations and credit obtainments, this time from a different source. As can be seen, although the number of procedures are on average, overall registration process seems to require undue cost and efforts in some countries.

Table 30: Ease of doing business

Grouping	Country/Data	Registering Property				Getting Credit
		Procedures (number)	Time (days)	Cost (% of property value)	Rank (1-190)	Rank (1-190)
Arab Group	**Saudi Arabia**	2	1,5	0,0	24	112
	Egypt	9	76	1,1	125	60
	Kuwait	9	35	0,5	69	134
	Morocco	6	20,5	6,4	68	112
	Tunisia	4	39	6,1	87	99
	Bahrain	2	31	1,7	26	112
	Palestine	7	35	3,0	84	22
	Djibouti	6	24	5,7	110	161
African Group	**Nigeria**	12	105	11,1	184	12
	Senegal	5	41	7,6	118	144
	Gabon	6	102	11,5	178	124
	Gambia	5	66	7,6	132	134
Asian Group	**Indonesia**	5	25	8,4	100	44
	Turkey	6	5	4,0	39	32
	Iran	6	31	5,7	90	99
	Malaysia	6	11,5	3,5	29	32
	Pakistan	8	208	4,2	161	112
	Azerbaijan	3	5,5	0,1	17	22
	Brunei Darussalam	7	298,5	0,6	142	1
	Maldives	6	57	15,7	175	134
Developed	**United States**	4	12	3,4	38	3
	United Kingdom	6	21,5	4,8	42	32
	Japan	6	13	5,8	48	85
	Eurozone (Germany)	6	52	6,7	78	44

Source: *(World Bank, 2019)*

1.2.2. Non-economic Variables

1.2.2.1. Language

Table 31 provides a snapshot for the diversity in languages spoken in the COMCEC member countries. As can be seen, Arabic is the most common language among the subject countries. However, that there are 11 different languages spoken points the cultural diversity as well.

Table 31: Language spoken

Country	Language	Country	Language	Country	Language
Kuwait	Arabic	Indonesia	Bahasa Indonesia	Azerbaijan	Azerbaijani
Malaysia	Bahasa Malaysia	Pakistan	Urdu, English	Saudi Arabia	Arabic
Egypt	Arabic	Gambia	English	Tunisia	Arabic
Morocco	Arabic, Berber	Iran	Persian	Gabon	French
Bahrain	Arabic	Palestine	Arabic	Djibouti	French, Arabic
Senegal	French	Turkey	Turkish	Nigeria	English
		Brunei Darussalam	Malay	Maldives	Maldivian

Source: *SESRIC*

Richness in language would be very important for a common trading venue in order for the investors have convenience in accessing readily available information securities.

1.2.2.2. Demographics

There is also a great diversity in the population growth figures in the COMCEC member countries. They all are higher than the ones pertaining to developed countries as pictured in Figure 6.

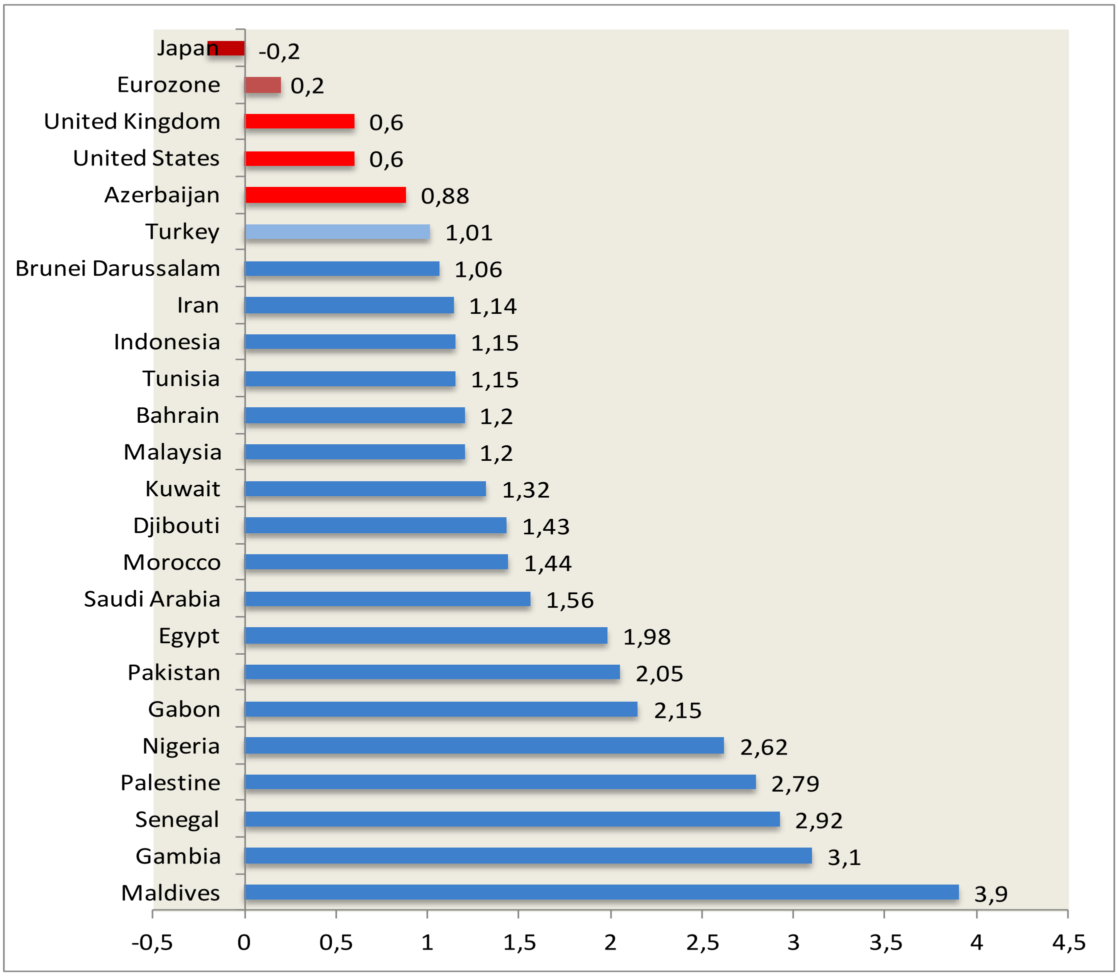


Figure 6: Population growth, annual percentage (2017)
Source: *SESRIC, World Bank*
Note: *Eurozone, UK, Japan and US data are given for comparison purposes.*

This is a hot prospect for the future of the common trading venue initiative since as population continues to grow, so would the potential for development in real estate markets, which would be desirable in terms of secondary market activity as well.

When compared to developed countries, however, urban population in the COMCEC member countries are relatively low. Therefore, urbanization is and will be a need in the market.

Table 32: Population and age (2019)

Grouping	Country/Data	Population	Urban Population	Ratio	Median Age
Arab Group	Saudi Arabia	34.140.662	26.763.925	78,4	30,2
	Egypt	101.168.745	39.172.736	38,7	24,8
	Kuwait	4.248.974	3,870,451	91,1	33,5
	Morocco	36.635.156	22.093.561	60,3	28,3
	Tunisia	11.783.168	7.907.762	67.1	31,4
	Bahrain	1.637.896	1.297.139	79,2	31,4
	Palestine	5.186.790	3.822.445	73,7	19,6
	Djibouti	985.690	739.902	75,1	24,1
African Group	Nigeria	200.962.417	104.282.822	51,9	17,9
	Senegal	16.743.859	7.537.896	45,0	18,4
	Gabon	2.109.099	1.680.891	79.7	22,7
	Gambia	2.228.075	1.378.564	61,9	17,1
Asian Group	Indonesia	266.536.482	150.870.274	56,0	28,3
	Turkey	82.961.805	59.931.842	72,2	30,2
	Iran	82.820.766	62.702.803	75.7	30,1
	Malaysia	32.454.455	25.029.766	77,1	28,1
	Pakistan	204.596.442	81.499.983	39,8	22,7
	Azerbaijan	10.014.575	5.554.445	55,5	30,7
	Brunei Darussalam	428.963	336.970	78,6	30,4
	Maldives	532.411	181.769	34,2	28,9
Developed	United States	329.093.110	276.062.331	83,9	37,8
	Japan	126.854.745	119.420.037	94,1	46,7
	United Kingdom	66.959.016	54.511.753	81,4	40,3
	Eurozone (France)	65.480.710	53.298.174	81,4	41,4

***Source**: Housing Finance Africa, Worldometers*
***Note:** Eurozone (France), UK, Japan and US data are given for comparison purposes.*

When it comes to age, the population is apparently young, which would ignite the need particularly for housing and infrastructure developments.

Figure 7 depicts the number of households over the whole population in the country. Data show that the COMCEC member countries have far lower number of households as compared to the ones in developed countries. This data provide insight for the number of people who occupy a housing unit in a given country. The lower the number, the greater the need for affordable housing.

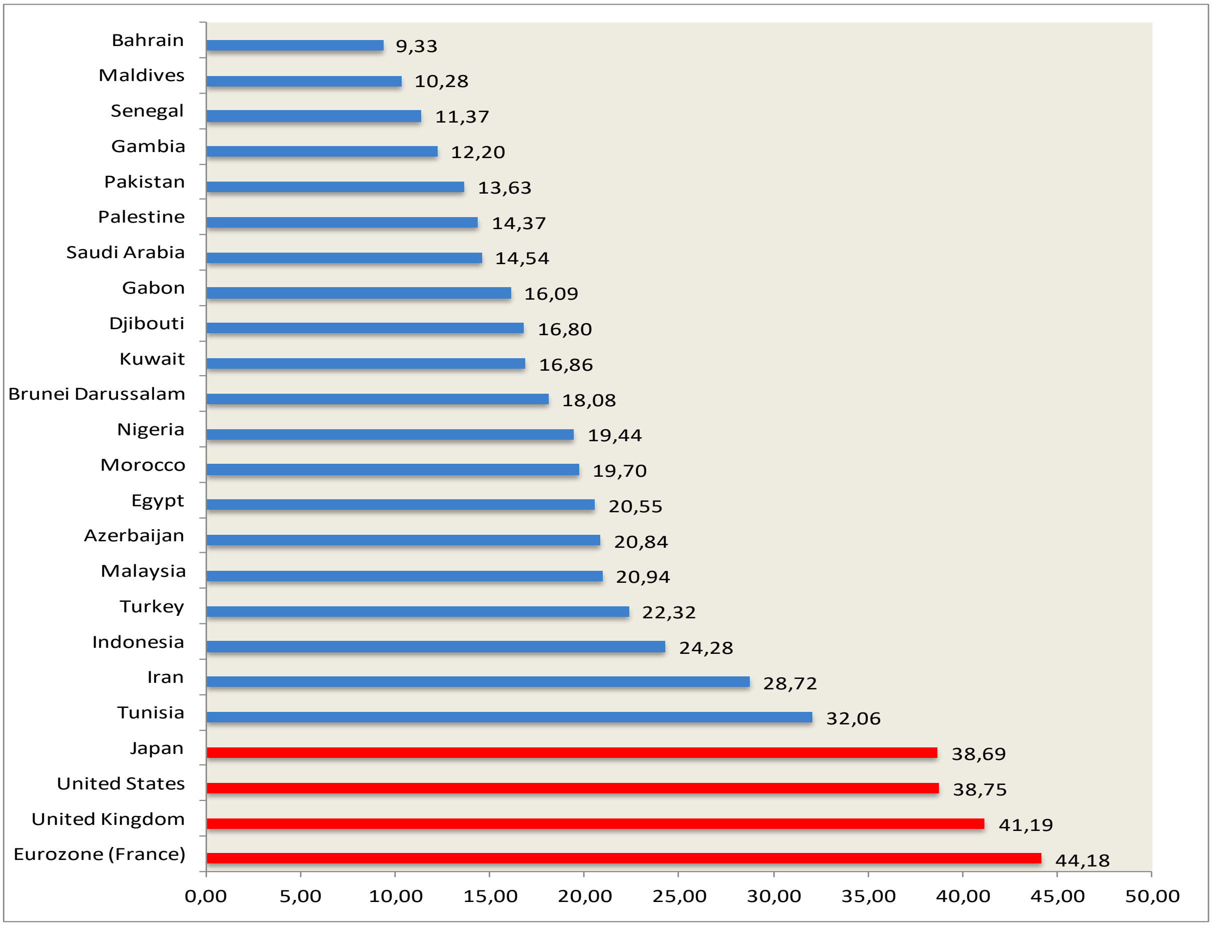


Figure 7: Number of households/Population, percentage (2017)
Source: *SESRIC, Worldometers*
Note: *Eurozone (France), UK, Japan and US data are given for comparison purposes.*

1.2.2.3. Time Zones

Due to geographical reasons, time zones are also quite different for the COMCEC member countries as shown in Table 33.

Table 33: Time Zones

Country	GMT	Country	GMT	Country	GMT
Kuwait	+3	Indonesia	+7-+9	Azerbaijan	+4
Malaysia	+8	Pakistan	+5	Saudi Arabia	+3
Egypt	+2	Gambia	0	Tunisia	+1
Morocco	+1	Iran	+4:30	Gabon	+1
Bahrain	+3	Palestine	+3	Djibouti	+3
Senegal	0	Turkey	+3	Nigeria	+1
		Brunei Darussalam	+8	Maldives	+5

Source: *SESRIC*

Evaluative Summary

Takeaway #1 – It is of great importance for the COMCEC member countries to attract foreign investment in their real estate markets.

- Current economic situation in most of the developing countries as well as the COMCEC members is fragile due to weak momentum, while heightened debt levels, widened twin deficits and subdued investment growth represent great challenges for these countries in achieving their potential.

- It is considered as urgent that developing countries make significant structural reforms that improve the business climate and attract investment (World Bank, 2019). Given the fact that cross-border real estate investments account for a significant proportion[23] of global real estate investment volume and contribute to a country's FDI, it would be reasonable to anticipate that these investments would lead to growth in most of the COMCEC member countries where FDI is highly concentrated in the real estate industry (OECD, 2018).

Takeaway #2 – The growing demand is the key common driver for real estate markets in COMCEC member countries against major diversities.

- Favourable demographics *(such as young population, population growth, labour force expansion, wealth improvement etc.)* is accompanied with rapid urbanization and real estate investment be it industrial, commercial or residential in the COMCEC member countries. In order to cope with this surging demand, governments continuously try to implement sound policies on proper city planning and required infrastructure *(e.g. railway infrastructures, port and airports)*.

- The regulatory policies set by the governments on real estate operations provide several incentives for the consumers to provide them with decent and affordable houses, for the developers to promote business opportunities, and for the investors to earn high returns on investment.

Takeaway #3 – It would be a natural step for investors within or outside of the COMCEC member countries to begin deploying capital to real estate securities representing various real estate investment alternatives.

- A considerable expansion in the real estate sector would require funding due to excess demand. Existing financial systems, mainly relying on banks, in many countries might not be sufficient as expected to provide affordable finance in the primary market. Although Islamic finance is getting its share in the financial system with rapid growth rates, it is still modest in size relative to conventional finance schemes.

- Secondary market for real estate securities would be a desirable development for any country in promoting real estate investments. Due to the fact that real estate securities markets are currently underpenetrated (PwC, 2018), a common COMCEC-wide secondary market, however, would be a major milestone in achieving financial integration following the footstep of well-known regional experiences.

[23] According to Jones Lang La Salle, cross-border purchases accounted for 31% of real estate investment activity in 2018, nearly the 10-year average, implying that investors are still keen to purchase outside their own markets (JLL, 2019).

2. LEGAL AND INSTITUTIONAL FRAMEWORKS REGARDING REAL ESTATE SECURITIES MARKETS

"A primary challenge of real estate investment management is to assess the relative reliability of the conflicting indications of risk generated by observations of publicly traded (or listed) real estate investments, such as REITs, and privately held (or unlisted) real estate. Privately held real estate is typically highly illiquid, taking months or even years to trade at competitive prices. This illiquidity is driven by the extent to which each property is unique. The high illiquidity of most real estate can raise serious challenges for portfolio management, including cash management, risk measurement, and risk management. Listed real estate is highly liquid, with readily observable market prices. But indices of listed real estate prices indicate substantially higher volatility and substantially lower diversification benefits than do indices of private real estate."
(Garay, 2016)

Investment in real estate securities may pose certain risks such as decreases in real estate value and enhanced susceptibility to adverse economic or regulatory developments that affect the industry. Adding to that, security prices may fluctuate in the secondary market, sometimes rapidly and dramatically, due to factors affecting individual companies, particular industries or sectors, or general market conditions. When the conceptual difference between real estate securities, i.e. conventional and Islamic, is considered, more specific risks may need to be identified which are inherent in the financial contract. Furthermore, CIS, not only as an investor but also as an issuer, may be exposed to risks about having a large concentration of investments in particular types of real estate investments or in particular real estate markets[24]. Lastly, regulatory oversight and investor protection mechanisms are also instrumental for deep and liquid secondary markets. Overall, most of the risks arising from real estate securities investments are often associated with cross-border trading, including exchange rate fluctuations, and economic policy uncertainties. Developing markets are more fragile as they are more prone to such risks, which requires more prudent oversight and protection.

Accordingly, it is very important to improve and maintain a robust regulatory infrastructure through which the risks associated with real estate securities are assessed and appropriately controlled within a framework that follows best practice and international standards. Such an infrastructure would allow a country for timely reforms in order to synchronize its pace with global changes.

The strength and effectiveness of the legal and institutional framework would reveal itself in secondary markets where trading take place. Secondary markets have important functions in providing liquidity for real estate, but more importantly in spreading the risks associated with real estate through the economy more efficiently. It involves a variety of transactions ranging from resale of mortgages to another institution for portfolio purposes to issuance of tradable and marketable securities e.g. with the mortgages as collateral. Real estate securities are key to the secondary markets as they are offered as alternative investment products for investors who want to enjoy the ability to achieve steady cash flows through rental income, hedge against inflation and healthy yields with prospect of capital appreciation. Institutional investors, namely CIS, for instance, establish specialized portfolios investing in real estate

[24] Real estate prices in the market are subject to change due to volatile conditions in the economy and the legal system that affects demand and supply.

securities such as Sukuk, MBS, securities tracking real estate indices such as ETFs, or a basket of real estate securities, or REITs. In this regard, investors who wish to become involved in real estate securities trading or increase their activity in the investment space should be aware of how secondary market trading works in a given market.

This chapter is based on the general understanding of the prevailing legislation regarding real estate securities in the COMCEC member countries in order to make a comparative assessment of different markets. Further, existing secondary market facilities for real estate securities in these countries are discussed.

2.1. Legal and Institutional Framework

Since market efficiency is enhanced by robust regulatory infrastructure, understanding the prevailing legislation regarding real estate securities in any jurisdiction is crucial. Regulatory oversight and investor protection mechanisms are also instrumental for deep and liquid secondary markets. This section aims at exploring the opportunities for more harmonized regulations and grounds for multilateral cooperation.

2.1.1. Regulation on Real Estate Securities

2.1.1.1. Real Estate Securities

Developing real estate securities regulations would be of particular significance in order to improve the secondary market, to facilitate capital formation and economic growth, and to pave the way for harmonized and internationally recognized standards in the future. Common initiatives, in this respect, would help markets benefit from both conventional and Islamic financial industry that have more expertise in terms of market experience and finance knowledge and would enable them to introduce core principles for effective regulation on real estate securities, which would gradually spread to all financial sectors, namely banking, securities, and insurance (Al-Ali, 2019). Regulation of real estate securities is necessary for the achievement of investor protection, market fairness, efficiency and transparency, and systemic risk reduction. Inadequate regulation can nonetheless place an unjustified burden on economies and prevent market growth and development (IFSB, 2018).

A number of COMCEC member countries studied in the scope of this report already have enforced regulations specifying the rules regarding real estate securities predominantly on Sukuks and REITs. These regulations however by and large significantly differ from each other. For instance, REITs in Saudi Arabia has a closed-ended investment fund structure while the ones established in Bahrain are investment trusts. Dividend distribution requirements, tax liabilities, ownership restrictions are also other conceptual differences. Some countries, interestingly, are specialized only in one specific type of real estate securities. As an example, in Azerbaijan only MBS *(so called as mortgage bonds)* and in Egypt[25] only REITs *(so called as real estate funds)* are regulated.

Alongside their existing frameworks, some countries also carry out prospective actions for necessary improvements in their legislations. Kuwait, on one hand, currently deals with REITs and real estate companies in the context of listing and CIS regulations. Morocco, on the other

[25] Although Sukuks are regulated in Egypt, there have been no issuances to date as discussed further.

hand, is in the process of drafting a MCB legislation (ECBC, 2018). In Pakistan, a proposal for establishment of a Shariah-compliant trading counter at PSX has been presented to the SECP's Shariah Advisory Board. The Shariah Advisory Board granted, in principle, approval for the introduction of the counter and asked that relevant regulatory changes to the regulations may be made and presented to the board for its review. Moreover, The SECP's Shariah Advisory Board granted, in principle, approval for murabahah share financing product at PSX and decided to coordinate with the Shariah advisors to bring about necessary improvements to the process flow and agreements. The revised agreements and process flow will be presented to the Shariah Advisory Board for its review and approval (SECP, 2018).

In some countries, instead of prevailing regulations, only ongoing or prospective projects in order to regulate real estate securities exist. For instance, there is an ongoing project to develop Sukuk legal framework including real estate backed Sukuks in Palestine. Tunisia also discusses the opportunity and feasibility of real estate securities/products development. The country is in the process of launching an ad-hoc study committee to deliver findings relating to the issues specific to the introduction of real estate products. Table 34 portrays the current situation of the regulatory mechanisms on real estate securities:

Table 34: Regulatory Situation Regarding Real Estate Securities

Grouping	Country/Response	Existing		Ongoing	
		Yes[1]	No	Yes	No
Arab Group	Saudi Arabia	✓		N/A	N/A
	Egypt	✓		N/A	N/A
	Kuwait	✓		✓	
	Morocco	✓		✓	N/A
	Tunisia	✓[2]	✓	✓	
	Bahrain	✓		N/A	N/A
	Palestine		✓	✓	
	Djibouti		✓	N/A	N/A
African Group	Nigeria	✓		N/A	N/A
	Senegal	✓		N/A	N/A
	Gabon		✓	N/A	N/A
	Gambia		✓	N/A	N/A
Asian Group	Indonesia	✓		N/A	N/A
	Turkey	✓		N/A	N/A
	Iran	✓		N/A	N/A
	Malaysia	✓		N/A	N/A
	Pakistan	✓		✓	N/A
	Azerbaijan	✓		N/A	N/A
	Brunei Darussalam	✓		N/A	N/A
	Maldives		✓		✓

Source: *Compiled by the author from literature review and the survey responses.*
Note: [1] *"Yes" indicates that at least one type of real estate securities is regulated in the country.*
[2] *Though it is answered as "No" in the survey, Tunisian colleagues mentioned that one of the several decrees enacted in 2018 was the Decree of Islamic Sukuks by the private sector institutions.*

However, Table 34 shows that many of the countries considered in the African group[26], especially located in the Sub-Saharan Africa *(with the exception of Nigeria)* and Maldives have

[26] Gambia has only been a regular Sukuk issuer to meet their domestic funding needs. In effect, the Central Bank utilizes Sukuks as a money market instrument, which have short tenures *(Sukuk-al-salaam)*. However, the notional asset on which

not promulgated any real estate securities regulations in their jurisdictions yet. The lack of regulation might stem from the fact that primary market has not been developed to underlie real estate securities, that financial institutions are not experienced with real estate securities or that legal issues cause challenges in property ownership for foreign entities. To illustrate, even though efforts have been made to promote Islamic finance, studies clarify the fact that there is limited knowledge of Islamic finance instruments among end-users and policymakers throughout Africa (The Economist, 2015). But, this regulatory gap might be addressed by enabling necessary conditions for real estate securities, e.g. REITs as a recent report suggests in the context of affordable housing (RebelGroup, 2017), so as to channel investment into African real estate markets. Besides, greater support from a multilateral development platform could help.

Although legislative context is a key determinant in developing real estate securities markets and having appropriate real estate securities regulations in place is a plus, it might not necessarily mean that these regulations are satisfactory to attract funds from investors. Many of the necessary and sufficient conditions relate to the institutional strength of the country and property markets in question. Solid property rights and precise title documentation, for instance, are important components underlying the sort of institutional structure needed for the emergence of real estate securities[27]. In addition, accurate and reliable valuations of property are crucial, as is the transparency of the property market. In other words, a certain level of market development and maturity might be required for the real estate securities markets to work.

For this reason, in some of the countries, secondary markets for real estate securities have not been developed despite the fact that legislative framework has already been set as discussed in further sections. Egyptian experience would be an appropriate example in that even though one of the earliest modern finance initiatives intended to be Shariah-compliant in Egypt and the capital markets law covers all envisaged Sukuk types, the issuance regime and redemption rights, as a matter of practice, there has been no Sukuk issuance to date (Bassiouny, 2018). In recent reports, it has been recommended to accelerate the amendment of the law, which would provide additional foreign investment opportunities and thereby relieve the government from its domestic financing dependency (COMCEC, 2017). This is also the case for REITs in the Middle East, since they have recently gained traction with a number of new entrants into the market amidst challenging conditions in the real estate sector. Currently, there are only 16 listed REITs in Saudi Arabia, while 1 in Bahrain and Kuwait.

Main types of real estate securities regulated within the context of relevant COMCEC member country legislative framework are as follows:

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the financial transactions of these Sukuks are based is gold. The Central Bank is thus empowered to sell gold and issue Sukuks on a book entry system (COMCEC, 2017). The market has recently seen domestic debut sovereign Sukuk issues from Senegal as well. Sukuks in the Senegal experience have been backed by infrastructure assets. For instance, a recent Sukuk was issued by Fonds Commun de Titrisation de Créances *(an SPV under the guarantee of Government of Senegal)* to finance economic and social developments including a program for drinking water supply, and an implementation program of road network and street lighting (Please refer to https://www.sukuk.com/sukuk-new-profile/fctc-sukuk-etat-du-senegal-2-4979/ for detailed information).

[27] As discussed earlier in 1.2.1.6, the level of protection of property rights are not adequate at all and access to loans is not easy in some of the COMCEC member countries. Similar problems reveal themselves in the ease of doing business scores with respect to property registrations and credit obtainments as well.

Table 35: Real Estate Securities in the COMCEC member country markets

Grouping	Country/ Security	Sukuks	Real Estate Certificates	MBS / ABS	MCB / ACB	Real Estate CIS Shares	Real Estate CIS Units	Other
Arab Group	Saudi Arabia	✓[1]	N/A	✓	N/A	N/A	✓[1,2]	N/A
	Egypt	N/A	N/A	✓	N/A	N/A	✓	N/A
	Kuwait	✓[1]	N/A	N/A	N/A	N/A	✓[1,2]	N/A
	Morocco	✓[1]	N/A	✓	N/A	✓	N/A	N/A
	Tunisia	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Bahrain	✓[1]	N/A	✓	N/A	N/A	✓[1]	N/A
	Palestine	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Djibouti	N/A	N/A	N/A	N/A	N/A	N/A	N/A
African Group	Nigeria	✓[1]	N/A	✓	N/A	✓	N/A	N/A
	Senegal	✓[1]	N/A	N/A	N/A	N/A	N/A	N/A
	Gabon	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Gambia	✓[1]	N/A	N/A	N/A	N/A	N/A	N/A
Asian Group	Indonesia	✓[1]	N/A	✓[1]	N/A	N/A	✓[1]	N/A
	Turkey	✓[1]	✓[1]	✓[1]	✓[1]	✓[1,6]	✓[1]	N/A
	Iran	✓[1]	✓[1,4]	✓[1]	N/A	✓[1]	✓[1,5]	N/A
	Malaysia	✓[1]	N/A	✓[1]	✓[1]	✓[1]	✓[1]	✓[1,3]
	Pakistan	✓[1]	N/A	✓	N/A	N/A	✓[1]	N/A
	Azerbaijan	N/A	✓	N/A	✓	✓	✓	N/A
	Brunei Darussalam	✓[1]	N/A	N/A	N/A	N/A	✓[1]	N/A
	Maldives	✓[1]	N/A	N/A	N/A	N/A	N/A	N/A

Source: *Compiled by the author from literature review and the survey responses.*
Note: *[1] "Tick" applies Islamic real estate securities as well.*
[2] In Kuwait, the real estate CIS is structured as Real Estate Funds in the KCMA Law. It is a financial vehicle equivalent to any investment fund, which is a corporate entity, regulated under the oversight of the KCMA. It enables its unit holders to collectively share in the fund revenues arising out of the underlying real estate assets. In this framework, the structure uses the term 'units' rather than 'shares'[28]. In Saudi Arabia, similarly, REITs are known as real estate investment traded funds (Tadawul, 2018).
[3] Other real estate securities are structured products and stapled securities[29], which exist in the Malaysian market.
[4] It is called housing loan privilege certificate.
[5] There are no REITs in Iran. However, the country considers units similar to shares.
[6] In Turkey, REITs are known as real estate investment companies as they do not share important features that a typical REIT possess, such as mandatory dividend payout, minimum number of shareholders or investment restrictions regarding specific properties (e.g. development projects and vacant lands).

As can be realized from Table 35, Sukuks and Real Estate CIS Shares/Units are the most prominent types of real estate securities regulated in the COMCEC member countries. But, securitization utilized by MBS/ABS issuances have also been a common area of regulation. In many countries, a vast majority of the real estate securities possess the Islamic notion as well. In Iran, indeed, it is not permitted to launch any instrument that contradicts with Shariah principles. Since only Islamic financial services are provided in the market, all parties involved in transactions are full-fledged Islamic financial service providers.

[28] Please refer to https://www.cma.gov.kw/pdfviewer?file=/documents/20622/625645/CMA+13+EN+100/b2c4c1ae-f054-44e3-9b2e-f0fedf70be34#page=1&zoom=page-fit,-22,849 for detailed information.
[29] Stapled securities essentially refer to an arrangement where different types of securities are bound together and the "stapled" securities generally have the following characteristics: (1) The affected securities are transferred and traded together; and (2) Issuance of new shares or units in one type of security is matched with a corresponding issuance of new shares or units in the other type of securities. For example, ordinary shares of a company may be stapled to units of a REIT. Stapled structures could be designed to provide investors with a regular income stream from a passive investment vehicle as well as access to income or capital growth from a more active investment vehicle (Securities Commission Malaysia, 2013).

Table 36: Sukuk types in the COMCEC member country markets

Grouping	Country/ Sukuk Type	Ijarah	Mudharabah	Istisna'a	Wakalah	Musharakah	Manfa'ah	Murabahah	Hybrid	Salam
Arab Group	Saudi Arabia	✓^{T}	✓^{T}	N/A	✓^{T}	✓^{T}	✓^{T}	✓^{T}	✓^{T}	N/A
	Egypt	✓^{T}	✓^{T}	✓^{T}	N/A	N/A	N/A	N/A	N/A	N/A
	Kuwait	✓^{T}	✓^{T}	N/A	✓^{T}	✓^{T}	✓^{T}	N/A	N/A	N/A
	Morocco	✓^{T}	✓^{T}	✓^{T}	✓^{T}	✓^{T}	N/A	✓^{T}	N/A	✓^{T}
	Tunisia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Bahrain	✓^{T}	✓^{T}	N/A	✓^{T}	N/A	N/A	N/A	N/A	✓^{T}
	Palestine	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Djibouti	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
African Group	Nigeria	✓^{T}	✓^{T}	N/A	N/A	✓^{T}	N/A	✓^{T}	N/A	N/A
	Senegal[1]	✓^{T}	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Gabon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Gambia[1]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	✓^{T}
Asian Group	Indonesia	✓^{T}	✓^{T}	N/A	✓^{T}	✓^{T}	N/A	N/A	N/A	N/A
	Turkey	✓^{T}	✓^{T}	✓^{T}	✓^{T}	✓^{T}	N/A	✓^{T}	✓^{T}	N/A
	Iran[2]	✓^{T}	✓^{T}	✓^{T}	✓^{T}	✓^{T}	✓^{T}	✓^{T}	✓^{T}	✓^{T}
	Malaysia	✓^{T}	✓^{T}	✓^{T}	✓^{T}	✓^{T}	✓^{T}	✓^{T}	✓^{T}	N/A
	Pakistan	✓^{T}	N/A	N/A	N/A	✓^{T}	N/A	N/A	N/A	N/A
	Azerbaijan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Brunei Darussalam	✓^{T}	N/A	✓	✓^{T}	N/A	N/A	N/A	N/A	N/A
	Maldives	N/A	✓^{T}	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: *Compiled by the author from literature review and the survey responses.*
Note: *Superscript ^{T} refers to fact that the relevant sukuk type has tradability feature.*
[1] Gambia and Senegal issued sovereign Sukuks.
[2] In Iran, Salam Sukuks and Islamic Treasury Securities are also reported as other types of Sukuks.

Among the Islamic real estate securities, Sukuk is the most popular one, not surprisingly as Muslim population dominates the market in most of the COMCEC member countries. It is observed that a variety of Sukuks can be issued in the COMCEC member country markets. Possible structural Sukuk types, which are based on real estate financial arrangements[30], are categorized in Table 36 above.

According to a recent report of International Islamic Financial Market, the Sukuk market continues to grow under the leadership of sovereign and quasi-sovereign[31] issuers and the preferred structures are Murabahah and Wakalah. 87% of the USD 434 bn outstanding Sukuk belong to just four key markets, i.e. Malaysia, Saudi Arabia, Indonesia and the UAE, which shows the usual concentrated nature of the Sukuk market. This would be subject to a gradual change, as Pakistan, Turkey and other markets *(including some in the African region)* become more active. Overall, domestic Sukuk issuances have reached the level of USD 79,06 bn, while international ones have closed the year at USD 37,6 bn in 2017 (IIFM, 2018).

It is important to add tradability feature to real estate securities, as the growth of the market would gain momentum by means of available funding through secondary markets. In particular, the opportunity to find a gateway to untapped markets through flexible secondary market transactions is the key. The survey findings reveal that secondary markets of the COMCEC member countries, where exists, by and large, have open regimes for such flexible trading.

Table 37 below suggests that international real estate securities are generally allowed to trade in the COMCEC member country markets on official approval. However, some of the markets, *e.g. Iran*, have not ever witnessed such a transaction yet. It is also possible for a domestic investor to invest in real estate securities abroad in most of the COMCEC member countries. In Iranian case, however, while there is no prohibiting regulation for retail investors and majority of legal investors to invest in foreign securities, there are prohibitions for CIS to invest abroad.

[30] Note that some markets such as Iran are not divided based on real estate and non-real estate securities and obtaining information about securities that their underlying asset is inherently real estate, have always been quite complicated and complex.
[31] Quasi-sovereign Sukuks are issued by a public sector entity inheriting an explicit or implicit government guarantee (COMCEC, 2017).

Table 37: Secondary market trading for real estate securities

Grouping	Country/Response	International securities may trade on domestic market		Domestic investors may trade abroad		Restrictions on investor types		Foreign exchange denomination	
		Yes	No	Yes	No	Yes	No	Yes	No
Arab Group	Saudi Arabia	N/A	N/A	N/A	N/A	✓	N/A	N/A	N/A
	Egypt	✓		✓			✓	N/A[1]	N/A[1]
	Kuwait	✓		✓		✓	✓	✓	
	Morocco	✓		✓			✓	✓	
	Tunisia	N/A	N/A	N/A	N/A	✓	N/A	N/A	N/A
	Bahrain	✓		✓		✓[2]		N/A	N/A
	Palestine	✓		✓			✓	✓	
	Djibouti	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
African Group	Nigeria	✓		✓			✓	N/A	N/A
	Senegal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Gabon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Gambia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Asian Group	Indonesia	✓		✓		✓	✓	N/A	N/A
	Turkey	✓		✓		✓	✓		✓
	Iran	✓		✓	✓		✓	✓	
	Malaysia	✓		✓		✓	✓	✓	
	Pakistan	✓		✓		✓		N/A	N/A
	Azerbaijan	✓		✓			✓	✓	
	Brunei Darussalam	✓		✓		✓		✓	
	Maldives		✓	✓			✓	✓	

Source: *Compiled by the author from literature review and the survey responses.*

Notes: [1] *Egypt market does not have foreign exchange denominated transactions.*

[2] *In Bahrain, aggregate foreign ownership limit of listed companies is 49%. Individual investors investment resulting in an acquisition of 5% or more of the issuer should file a disclosure with the regulator. Further prior regulatory approval is required for investments resulting in an acquisition exceeding 10% or more of the issuer's issued and paid-up capital. In 1999, the Government lifted the restrictions on foreign ownership, allowing GCC nationals to be able to own up to 100% of the shares of listed Bahraini companies giving them full access to the Bahrain market. Non-GCC nationals are still allowed to own up to 49% of a listed company's capital.*

Furthermore, there is a great flexibility in selling real estate securities to various investor types in that all types of investors *(e.g. domestic, foreign, retail, qualified/sophisticated etc.)* are involved in the secondary market for real estate securities, with minor considerations. For example, in Kuwait, there are no restrictions for public offerings of REITs; however, selling is restricted to qualified investors only if it is a private placement. In Saudi Arabia, foreign ownership is restricted to 49% when a REIT is listed on the Tadawul. However, a recent regulation has declared the requirements to qualify as a foreign strategic investor, who would be exempt from the 49% foreign ownership limit. In Iran, as another case, retail foreign investors are rarely engaged in real estate securities, rather main investor type for real estate securities are reported to be CIS. In Turkey, real estate certificates can be issued in the domestic or foreign markets through public offering or restricting the sale to qualified investors only. However, it cannot be sold through private placement method. Real estate investment fund units may only be sold to qualified investors as well. In Indonesia, up to 100% of the total shares listed on IDX may be purchased by foreigners through IDX. But, foreigners may acquire the ownership of bank shares for a maximum of 99% of the total shares through either direct placement or IDX (IDX, 2018b). In Malaysia, lastly, there are some restrictions for real-estate securities and unlisted REITs investors[32].

Foreign exchange denominated transactions and settlements are generally possible in the real estate securities markets. Turkey constitutes an exemption since foreign exchange denomination of securities are prohibited in order to protect the value of Turkish Lira.

Lastly, derivative instruments based on real estate *(e.g. real estate options, real estate indices based instruments)* or real estate securities *(e.g. collateralized debt obligations)* are almost not allowed to trade in the markets. One exception is Malaysia. Legally, an issuer may issue OTC derivatives relating to real estate without obtaining approval as long as it is only offered to sophisticated investors. At the moment, none are being offered to retail investors.

Table 38: Derivative instruments

Grouping	Country/Response	Yes	No
Arab Group	Saudi Arabia	N/A	N/A
	Egypt	✓[1]	
	Kuwait		✓
	Morocco		✓
	Tunisia	N/A	N/A
	Bahrain		✓
	Palestine		✓
	Djibouti	N/A	N/A
African Group	Nigeria		✓
	Senegal	N/A	N/A
	Gabon	N/A	N/A
	Gambia	N/A	N/A
Asian Group	Indonesia		✓
	Turkey		✓
	Iran		✓[2]
	Malaysia	✓	
	Pakistan		✓
	Azerbaijan	✓[3]	
	Brunei Darussalam		✓
	Maldives		✓

Source: *Compiled by the author from literature review and the survey responses.*
Note: *[1] Though they are allowed, there is no market for derivative instruments yet in Egypt.*
[2] Though it is reported as "No", "Mortgage Rights" once deemed to be the only derivatives at IFB. Holders of this right can use mortgage loan with preferred rate from Bank Maskan. The government tried to design the instrument to provide the opportunity of low interest loans. The rights was listed for the first time at IFB on October 2010 (IFB, 2014). Then IFB's Derivatives Market has been started in 2017 with Single Stock Call and Put Option contracts on some securities such as Islamic Treasury Bills and Equities[33]. There is a derivatives market at TSE, as well.
[3] Notwithstanding that there are no restrictions in legislation related to issuance of real estate based derivative instruments, there is no such financial instruments in circulation.

[32] For instance, while foreign unit holders are not restricted in a REIT, foreigners can hold only up to 70% of the equity in that REIT's management company (EPRA, 2018).
[33] Please refer to http://en.ifb.ir/Exchange/Markets for detailed information.

2.1.1.2. Issuers

There are various issuers that are entitled to issue real estate securities in the relevant COMCEC member country. Table 39 shows this variety in a brief form:

Table 39: Issuers of Real Estate Securities in the COMCEC member country markets

Security/Issuer	Banks	Non-bank financial institutions	SPV	Real estate CIS	Non-financial corporations	Sovereign	Construction Companies
Sukuks	Iran Kuwait	Iran Kuwait Indonesia Maldives	Iran Kuwait Turkey Brunei	Iran Kuwait	Iran Malaysia Kuwait	Iran Kuwait Turkey Gambia Senegal Indonesia	
Real Estate Certificates	Iran		Turkey	Turkey	Iran Turkey	Iran Turkey	Azerbaijan
MBS / ABS	Iran	Iran Egypt	Iran Turkey				
MCB / ACB	Turkey	Azerbaijan					
Shares*	Iran	Iran		Iran Malaysia Turkey	Iran		
Units		Malaysia Egypt	Kuwait	Iran Malaysia Kuwait Turkey Azerbaijan			
Others					Malaysia		

Source: *Compiled by the author from literature review and the survey responses.*
Note: ** in case of non real estate CIS*

It is possible to argue that these issuers are allowed to offer their real estate securities in foreign markets on official approval[34]. This argument is justified by the survey findings reported in Table 40, which shows both ways *(i.e. domestic to non-domestic and non-domestic to domestic)* of issuances in markets.

[34] In some circumstances, this may require obtaining a specific licence to become a Licensed Person, such as in Kuwait, or incorporating a local company, such as in Malaysia.

Table 40: Secondary market access for issuers

Grouping	Country/Response	International issuers may issue in domestic market		Domestic issuers may issue in foreign market	
		Yes	No	Yes	No
Arab Group	Saudi Arabia	N/A	N/A	N/A	N/A
	Egypt	✓		✓	
	Kuwait	✓		✓	
	Morocco	✓		✓	
	Tunisia	N/A	N/A	N/A	N/A
	Bahrain	✓		✓	
	Palestine	✓		✓	
	Djibouti	N/A	N/A	N/A	N/A
African Group	Nigeria	✓		✓	
	Senegal	N/A	N/A	N/A	N/A
	Gabon	N/A	N/A	N/A	N/A
	Gambia	N/A	N/A	N/A	N/A
Asian Group	Indonesia	✓		✓	
	Turkey	✓		✓	
	Iran	✓		✓	
	Malaysia	✓		✓	
	Pakistan	✓		✓	
	Azerbaijan	✓		✓	
	Brunei Darussalam	✓			
	Maldives	✓		✓	

Source: *Compiled by the author from literature review and the survey responses.*

2.1.1.3. Responsible Parties

Responsible parties involved in facilitating secondary market transactions for real estate securities and their main duties and responsibilities are tabularized as follows.

Table 41: Parties involved in secondary market transactions for real estate securities

Grouping	Country/ Party	Clearing bodies	Dealer/ brokerage firms	Settlement bodies	Custody institutions	Investment banks	Securities Exchanges
Arab Group	Saudi Arabia	✓	✓	✓	✓	N/A	✓
	Egypt	✓	✓	✓	✓	✓	✓
	Kuwait	✓[I]	✓[I]	✓[I]	✓[I]	N/A	✓
	Morocco	✓	✓	✓	✓	N/A	✓
	Tunisia	✓	✓	✓	✓	N/A	✓
	Bahrain	✓	✓	✓	✓	N/A	✓
	Palestine	✓	✓[I]	✓	✓[I]	N/A	✓
	Djibouti	N/A	N/A	N/A	N/A	N/A	N/A
African Group	Nigeria	✓	✓	✓	✓	N/A	N/A
	Senegal	N/A	N/A	N/A	N/A	N/A	N/A
	Gabon	N/A	N/A	N/A	N/A	N/A	N/A
	Gambia	N/A	N/A	N/A	N/A	N/A	N/A
Asian Group	Indonesia	✓	✓	✓	✓	N/A	✓
	Turkey	✓	✓	✓	✓	N/A	✓
	Iran	✓[I]	✓[I]	✓[I]	✓[I]	N/A	✓[I]
	Malaysia	✓[I]	✓[I]	✓[I]	✓[I]	✓[I]	✓
	Pakistan	✓	✓	✓	✓	N/A	✓
	Azerbaijan	✓	✓	✓	✓	N/A	✓
	Brunei Darussalam	✓	✓	✓	✓	N/A	N/A
	Maldives	✓	✓	✓	N/A	N/A	✓

Source: *Compiled by the author from literature review and the survey responses.*
Note: *Superscript [I] refers to fact that the "tick" applies Islamic service providers as well.*

2.1.2. Regulation on Collective Investment Schemes

Regulatory environment regarding CIS and/or real estate CIS is by and large similar to that of real estate securities. However, it is possible to state that CIS regulations generally follow real estate securities regulations. For instance, regulations on real estate investment funds have recently been ratified in Iran. An exemption would be Palestine, since the country has CIS regulations while no regulations regarding real estate securities exist. Table 42 displays the current situation of the regulatory mechanisms on CIS:

Table 42: Regulatory Situation Regarding CIS/Real Estate CIS

Grouping	Country/Response	Existing		Ongoing	
		Yes	No	Yes	No
Arab Group	Saudi Arabia	✓		N/A	N/A
	Egypt	✓		N/A	N/A
	Kuwait	✓		✓	
	Morocco	✓		N/A	N/A
	Tunisia	✓[1]	✓	N/A	N/A
	Bahrain	✓		N/A	N/A
	Palestine	✓		N/A	N/A
	Djibouti	N/A	N/A	N/A	N/A
African Group	Nigeria	✓		N/A	N/A
	Senegal	N/A	N/A	N/A	N/A
	Gabon	N/A	N/A	N/A	N/A
	Gambia	N/A	N/A	N/A	N/A
Asian Group	Indonesia	✓		N/A	N/A
	Turkey	✓		N/A	N/A
	Iran	✓		N/A	N/A
	Malaysia	✓		N/A	N/A
	Pakistan	✓		N/A	N/A
	Azerbaijan	✓			✓
	Brunei Darussalam	✓		N/A	N/A
	Maldives	✓		N/A	N/A

Source: *Compiled by the author from literature review and the survey responses.*
Note: *Though it is answered as "No" in the survey, Tunisian colleagues mentioned that one of the several decrees enacted in 2018 was the Decree adding the money market funds to the existing CISs.*

Interestingly, although there is no regulation regarding real estate securities in the Palestinian market, CIS regulations exist. But, until today no real estate CIS has been witnessed.

Either an ordinary CIS or specifically a real estate CIS may invest in real estate securities in the market, it is important to figure out the main types of CIS and real estate CIS regulated in the COMCEC member country. Another point is that, some types of CIS are entitled to invest directly in real estate as well. Iran is a specific case in that all legal forms of funds can invest in real estate related securities, whereas they all are not able to invest in real estate directly. In Palestine, there have been no real estate CIS in existence. Table 43 summarizes our findings:

Table 43: CIS/Real Estate CIS in the COMCEC member country markets

Grouping	Country/CIS	Investment Trust	Investment Funds	Exchange Traded Funds	Pension Funds	Investment Companies	Others
Arab Group	Saudi Arabia	N/A	✓[R,I]	✓[I]	N/A	N/A	N/A
	Egypt	N/A	✓[R]	✓	✓	✓	N/A
	Kuwait	N/A	✓[R,I]	N/A	N/A	N/A	Contractual CIS[1]
	Morocco	✓[R]	N/A	N/A	N/A	N/A	N/A
	Tunisia	✓	✓	N/A	N/A	✓	N/A
	Bahrain	N/A	✓[R,I]	✓	N/A	N/A	N/A
	Palestine	N/A	✓[2] [R,I]	N/A	N/A	✓[I]	N/A
	Djibouti	N/A	N/A	N/A	N/A	N/A	N/A
African Group	Nigeria	✓[R]	✓	✓	✓	N/A	N/A
	Senegal	N/A	N/A	N/A	N/A	N/A	N/A
	Gabon	N/A	N/A	N/A	N/A	N/A	N/A
	Gambia	N/A	N/A	N/A	N/A	N/A	N/A
Asian Group	Indonesia	✓[R,I]	✓[R,I]	✓[I]	✓	N/A	N/A
	Turkey	N/A	✓[R]	✓	✓	✓[R]	N/A
	Iran	N/A	✓[R,I]	✓[I]	N/A	✓[R,I]	N/A
	Malaysia	✓[R,I]	✓[I]	✓[I]	✓[I]	N/A	Funds and Trusts[3]
	Pakistan	N/A	✓[I]	✓[I]	✓[I]	N/A	N/A
	Azerbaijan	✓[R]	✓[R]	N/A	N/A	N/A	N/A
	Brunei Darussalam	✓[R]	✓[R]	N/A	N/A	✓	N/A
	Maldives	N/A	✓	N/A	✓	N/A	N/A

Source: *Compiled by the author from literature review and the survey responses.*
Note: *Superscripts [R] and [I] refer to fact that the "tick" applies to real estate CIS and Islamic CIS as well, respectively.*
[1] A CIS in Kuwait may exist also in the form of a contractual CIS. Such a CIS is established for the purpose of investing funds owned by two or more professional clients (limited to 25) related to any type of assets, including real estate, enabling these clients to gain profits accrued through acquisition or ownership or management or disposition of the assets. KCMA may permit the incorporation of a contractual CIS that does not have a corporate entity[35].
[2] Until today there has been no real estate CIS in existence.
[3] These include Unit Trust Funds, REITs, Wholesale Funds, Private Retirement Schemes, Close-End Funds (company structure), and Business Trust.

[35] Please refer to https://www.cma.gov.kw/en/web/cma/cma-board-releases/-/cmaboardreleases/detail/615513 for detailed information.

It is apparent that in most of the countries CIS framework also involves Islamic CIS. Indeed, in some countries, such as Iran, the market is fully Shariah-based leading that all CIS must be established as Shariah-compliant entities. However, there also markets, e.g. Egypt, where Shariah-investment products have not been provided yet.

2.1.3. Regulatory Oversight and Investor Protection

2.1.3.1. Authorized Bodies

Relevant authorities involved in the regulation, authorization and supervision of real estate securities, issuers and responsible parties in the secondary market(s) are provided in Table 44.

Table 44: Regulatory bodies in the COMCEC member countries

Country	Regulation	Authorization	Supervision
Kuwait	KCMA	KCMA	KCMA
Egypt	FRAE	FRAE	FRAE, EGX
Tunisia	CMF	CMF	CMF
Morocco	AMMC	AMMC	AMMC
Bahrain	CBB	CBB	CBB
Nigeria	NSEC	NSEC	NSEC
Saudi Arabia	SCMA	SCMA	SCMA
Palestine	PCMA	PCMA	PCMA
Indonesia	FSAI	FSAI	FSAI
Malaysia	MSC	MSC	MSC
Pakistan	SECP	SECP	SECP
Turkey	CMB	CMB	CMB
Azerbaijan	FIMSA	FIMSA	FIMSA
Brunei Darussalam	AMBD	AMBD	AMBD
Maldives	CMDA	CMDA	CMDA
Iran	SEO[1] CBI[1]	SEO[1] CBI[1]	SEO

Source: *Compiled by the author from literature review and the survey responses.*
Note: *[1] While all issuers are subject to rules and regulations of SEO in Iran, the Central Bank of Iran is responsible for regulating and authorizing sovereign musharakah sukuks.*

2.1.3.2. Investor Protection

There is no specific legislation for investor protection in some of the COMCEC member countries with respect to real estate securities. However, effective mechanisms are established by means of best practices. For instance, sukuks can and in some cases must have guarantor in Iran. Additionally, in case of Iranian Construction Funds and Real Estate Investment Funds, the management of the fund must use insurance for the CIS properties.

Table 45: Investor protection for real estate securities

Grouping	Country/Response	Yes	No
Arab Group	Saudi Arabia	N/A	✓
	Egypt	✓	
	Kuwait	✓	✓[1]
	Morocco	N/A	N/A
	Tunisia	✓	
	Bahrain	✓	
	Palestine		✓
	Djibouti	N/A	N/A
African Group	Nigeria	✓	
	Senegal	N/A	N/A
	Gabon	N/A	N/A
	Gambia	N/A	N/A
Asian Group	Indonesia	✓	
	Turkey	✓	
	Iran		✓
	Malaysia	✓	
	Pakistan	✓	
	Azerbaijan		✓
	Brunei Darussalam	✓	
	Maldives		✓

Source: *Compiled by the author from literature review and the survey responses.*
Notes: [1] *Although reported as "No", in 2017, the settlement guarantee fund was replaced by the Financial Collateral System. In the collateral system each broker and custodian places a collateral amount related to their trading activities with the KCC to cover their failed obligation. The KCC is given authority to debit the collateral to cover the obligation if the broker/custodian fails to cover the obligation on settlement date. In the case where the collateral is not sufficient, the broker/custodian is required to place additional collateral in the account.*

However, in member countries where such funds are available, protection schemes are generally established to cover losses of clients in case a broker firm goes bankruptcy. These schemes are deemed applicable for real estate securities as well.

In Malaysia, for instance, Securities Industry Dispute Resolution Centre plays an important role as an independent corporate body set up to settle financial conflicts between investors and the members of the centre who are holders of Capital Markets Services Licence or are registered by the MSC for operating in securities, derivatives, unit trusts, private retirement schemes, and fund management business. The Capital Market Compensation Fund Corporation is the compensation fund of last resort for customers of licensed brokers, derivatives dealers, fund managers, unit trust management companies and private retirement scheme providers. It provides an avenue for individual investors in the event a relevant Capital Markets Services Licence holder fails to pay amounts owing to its investors.

In Turkish markets, though there is no specific regulation for real estate securities in terms of investor compensation or insurance systems, Capital Markets Law includes particular provisions that protects the assets and rights taking place in the portfolios of issuers in that they cannot be pledged except for collateral purposes, cannot be set up as collateral, cannot be attached even for the purpose of collecting public receivables, cannot be included in the bankruptcy estate and cannot be subject to any cautionary injunction even when the issuer's management or audit is transferred to public institutions.

In Egypt, EGX investors are protected by means of Settlement Guarantee Fund and Investor Protection Fund, where former ensures that the settlements are executed properly, and the latter is a private legal entity established specifically to compensate investors from the fraudulent activities of their brokerage firms. Both schemes are applicable to real estate securities as well[36].

2.1.3.3. Listing and Trading Requirements

Table 46 reports for admission and disclosure requirements for listing of real estate securities on a case-by-case basis:

Table 46: Admission and disclosure requirements

Iran <u>Documents that should be filed for admission</u> Since real estate securities are issued in different Islamic contracts, there are variety of forms that are specific for each contract. However, common forms are: 1- Form B: Registration Statement/Prospectus; 2- Form G: Technical, Economic and Financial Report/ Justification report 3- Form P: Subscription Announcement 4- Form F: Property Valuation Report by Appraisals/Assessors <u>Approving authority of application of admission</u> SEO CBI (in case of governmental and municipal Musharakah Sukuk) <u>Time frame for having the approval of issuance</u> That depends on the accuracy of documents. The minimum time is within a month (in case of government, this time frame is lower). <u>Documents that should be filed for disclosure</u> Different securities may impose different disclosure. However, the common ones are as follow: 1- Financial Statements 2- Cash Flow Statement 3- Explanatory Notes (history of the company, bases of preparing financial statements and etc. 4- Contracts between obligator and SPV. <u>Public availability</u> There is a specific regulatory portal which is under supervision of the SEO. Its name is CODAL and all originators must file their disclosure with CODAL. <u>Auditing requirements for issuers' financial statements</u> All financial statements of issuers (originators) must be audited by those auditors authorized by the SEO.

[36] Please refer to http://www.egx.com.eg/en/Investor_Protection.aspx for detailed information.

Palestine <u>Documents that should be filed for admission</u> Prospectus <u>Approving authority of application of admission</u> PCMA. <u>Time frame for having the approval of issuance</u> 60 days <u>Documents that should be filed for disclosure</u> Financial statements and other requirements as mentioned in the investment fund regulations. <u>Public availability</u> Through the electronic disclosure system. <u>Auditing requirements for issuers' financial statements</u> IFRS and IAS standards.
Kuwait <u>Documents that should be filed for admission</u> The required documents for admission can be found in the following: - Article (1-3) and (2-3) from chapter 3 – Listing Application of Funds in the Exchange found in the Executive Bylaws Module Twelve (Listing Rules) - Articles (9-7) to (12-7) - Chapter 7-Lisitng in Boursa Kuwait Rulebook <u>Approving authority of application of admission</u> - Boursa Kuwait –Recommendation on the application to KCMA - KCMA – Final approval <u>Time frame for having the approval of issuance</u> - 6o days in total described as the following: - 30 days for Boursa Kuwait to give the recommendation. - 30 days to process the completed application (by the KCMA). <u>Documents that should be filed for disclosure</u> The issue of the listed Sukuk is required to disclose any material information on the market activity, price of the listed Sukuk, that may negatively or essentially impact the ability of the issuer or the obligor to meet his debt instruments. <u>Public availability</u> The above disclosure shall be made to KCMA, the exchange, and the representative of sukuk holders. <u>Auditing requirements for issuers' financial statements</u>

As per the provisions of the KCMA Executive Bylaws, issuers' financial statements have to be prepared as per IFRS standards.
Malaysia <u>Documents that should be filed for admission</u> The prospectus needs to be registered with MSC, together with the constitutive document, in addition to other requirements under the Bursa Malaysia listing requirements. <u>Approving authority of application of admission</u> MSC approves the listing and Bursa Malaysia approves the admission of the REIT on the main market. <u>Time frame for having the approval of issuance</u> The MSC requires a period between 2 – 3 months to approve the establishment of the REIT, in addition to other requirements under the Bursa Malaysia listing requirements. <u>Documents that should be filed for disclosure</u> The disclosure requirements for the prospectus can be found in the relevant parts of the Prospectus Guidelines for Collective Investment Schemes, e.g. Part II Chapter 4 for the Content of Prospectus for Unlisted Funds The disclosure requirements in relation to Annual reports, which would contain the REIT's financial statements can be found in the relevant parts of the Guidelines On Listed Real Estate Investment Trusts e.g. Chapter 14 for reporting and audit requirements The disclosure requirements for the shares IPO can be found in the relevant parts of the Prospectus Guidelines e.g. Part II Division 1 Chapter 1 for disclosure relevant to the contents of the prospectus The requirements for documents to be filed for sukuk can be found in the relevant parts of the Unlisted Capital Market Products under the Lodge and Launch Framework and the Lodgement Kit e.g. Part 1 Section 1 for information to be provided to the SC at the initial lodgement. <u>Public availability</u> Documents are made available under the following websites: 1. MSC website: www.sc.com.my 2. BNM's Fully Automated System for Issuing/Tendering (FAST) website: https://fastbeta.bnm.gov.my/fastbeta3/public/MainPage.do 3. Bond+Sukuk Information Exchange website: www.bixmalaysia.com 4. Bursa Malaysia's website: http://www.bursamalaysia.com/market/ and 5. Respective Issuer's website. <u>Auditing requirements for issuers' financial statements</u> The latest financial statements submitted by the issuer must be audited based on the approved accounting standards as defined in the Financial Reporting Act 1997. Guidelines on Listed Real Estate Investment Trusts requires that the financial statements of the REIT to be audited annually.
Egypt <u>Documents that should be filed for admission</u> 1. Pre-registration with the Financial Regulatory Authority. 2. Application for listing in the Stock Exchange on a specified form.

3. An official power of attorney from the legal representative of the company acting as the listing agent or contact officer authenticated by the land registry that the listing process has finished.
4. A certified copy of the prospectus for bonds approved by the FRAE, showing the percentage offered for the public subscription.
5. A certificate indicating the credit rating granted to the issuance to be issued by one of the credit rating companies licensed by the FRAE.
6. The formation of the bondholders' group or the financing sukuk and the appointment of their legal representative and the meeting minutes of the bondholders / sukuk group.
7. Preparing the journal of investment where the statute of the company and its amendments is published.
8. Official and recent commercial register.
9. A certified copy of the General Assembly minutes including the approval of the General Assembly of the company on bond/sukuk issue.
10. Certificate from the auditor indicating the company's net assets, accompanied by the proposal of the auditor to issue bonds / sukuk.
11. A certified copy of the Board of Directors minutes including the approval of the Board of Directors of the company on the detailed preconditions of the issuance.
12. FRAE Letter of approval on the prospectus of bonds / sukuk, and a copy of the approval of the FRAE on issuing bonds / sukuk.
13. A certificate from the bank receiving the subscription of the bonds / sukuk, indicating the names of the subscribers, the number and value of what they subscribed to and the allocation ratio.
14. MCDR's approval letter to the registration of this issue of bonds / sukuk at the Central Depository.
15. A statement approved by the legal representative of the company and the manager of the issue explaining the periodical amortization data.
16. Completing the forms referred to in the executive procedures of the listing rules on the company's correspondence and stamped with the company seal
17. Receipts indicating paying the listing fees and administrative services.

<u>Approving authority of application of admission</u>

FRAE

<u>Time frame for having the approval of issuance</u>

One month and can be extended

<u>Documents that should be filed for disclosure</u>

Board of Director structure, shareholder and executive management structure, financial statement, financial indicators, corporate governs, auditor report, bond coupons, insider trading

<u>Public availability</u>

Through trading terminals and EGX Website

<u>Auditing requirements for issuers' financial statements</u>

Auditors report should be attached to the financial statement

Turkey

<u>Documents that should be filed for admission</u>

Prospectus, decision of the competent body, main contract, brokerage agreement, independent audit reports, jurist opinion, signature circulars, information about real estate projects, sample of title deed for real estate, real estate value assessment report, documents providing the adequacy of the issuer

<u>Approving authority of application of admission</u>

CMB <u>Time frame for having the approval of issuance</u> When the application file is completed in accordance with the legislation of the Board, the application is concluded within 10 working days. <u>Documents that should be filed for disclosure</u> Prospectus, export document, financial statements, result of feasibility report, in the real estate project, the average sales prices of similar independent sections that are not subject to real estate certificate issuance, the discount based on these prices and other applicable conditions, explanation about changes in real estate projects. <u>Public availability</u> They have to publish their documents via website of Public Disclosure Platform. <u>Auditing requirements for issuers' financial statements</u> During the application, they have to submit to Board the audited financial statements for the last two years which are independently audited and that are closest to the application date.
Maldives <u>Documents that should be filed for admission</u> Prospectus <u>Approving authority of application of admission</u> CMDA <u>Time frame for having the approval of issuance</u> 14 days <u>Documents that should be filed for disclosure</u> Prospectus, listing application, quarterly reports, audited annual report with financials and directors report, material changes. <u>Public availability</u> Issuers publish on website and make a public announcement via at least one media channel. <u>Auditing requirements for issuers' financial statements</u> Independent auditor's report in accordance with IFRS.

Source: *Compiled by the author from literature review and the survey responses.*

2.1.3.4. Credit Rating

Many stakeholders including investors, issuers, investment banks, brokers, dealers, and governments base their decisions on credit ratings. For investors, CRA improve the variety of investment options and provide independent, user-friendly relative credit risk measurements, which usually enhances market efficiency, reducing both borrowers and lenders' cost. This in turn increases the total supply of risk capital in the economy, which results in greater development (IDX, 2018a).

Obtaining a credit rating would also be crucial in that it would help secure competitive pricing and enhance the take-up rate of real estate securities. A recent survey has revealed that credit rating is considered as one of the influential factors for Sukuk issuances (COMCEC, 2018).

Credit rating requirements for real estate securities are briefly summarized in the following Table 47:

Table 47: Credit rating required

Grouping	Country/Response	Yes	No
Arab Group	Saudi Arabia	N/A	N/A
	Egypt	✓	
	Kuwait	✓[1]	
	Morocco	✓	
	Tunisia	N/A	N/A
	Bahrain	✓	
	Palestine		✓
	Djibouti	N/A	N/A
African Group	Nigeria	✓	✓
	Senegal	N/A	N/A
	Gabon	N/A	N/A
	Gambia	N/A	N/A
Asian Group	Indonesia	✓	✓
	Turkey	✓	✓
	Iran	✓	✓
	Malaysia	✓	✓
	Pakistan	✓	✓
	Azerbaijan		✓
	Brunei Darussalam	✓	
	Maldives	✓[2]	

Source: Compiled by the author from literature review and the survey responses.
Note: [1] Credit ratings are not required for any Real Estate CIS product. However, it is required in the case of Sukuks.
[2] As there is no agency available, the mandatory requirement has been waived off.

In Iran, SEO is the body that authorizes CRA. Currently there are 3. Though credit rating facility has been voluntary so far in Iran, originators prefer to issue securities with guarantors. However, the SEO is planning to make ratings of some sukuk issuance mandatory. In Kuwait, credit rating for financial securities is considered as a securities activity that requires a license from the CMA. However, no licensing has occurred so far, rather the CMA have accepted credit rating reports from top internationally recognized CRA. In Bahrain and Morocco credit rating services for real estate securities are obtained on a voluntary basis. In Malaysia, Pakistan, Nigeria, Indonesia and Turkey, however, it depends on the type of the issuance in general[37]. While, the service is held mandatory in Egypt. In some cases, such as in Nigeria and Morocco, CIS regulations require to include real estate securities with investment grade ratings.

2.2. Secondary Market Potentials for Real Estate Securities

It is assumed that the market for a specified set of financial instruments and/or services is fully integrated if all prospective market participants have the following appropriate features in the same manner (Baele et al., 2004):

"

- *They are subject to a single set of rules when they decide to deal with those financial instruments and/or services.*
- *They have equal access to the same set of financial instruments and/or services.*
- *They are treated equally when they are active in the market.*

"

This definition involves many facets of financial integration. It can be achieved by means of enforcement of a formal international treaty. Such a treaty would require the provision for concerted or cooperative policy responses to financial disturbances. It also would require member economies to eliminate potential constraints on cross-border financial activities including harmonization of financial system regulations (Ho, 2009). But, it could arise even in the absence of explicit agreements as well. This might involve the entry of foreign banks into domestic markets, foreign involvement in insurance and pension fund markets, cross-border securities trading and direct borrowing on global markets by domestic firms (Stavárek, Řepková, & Gajdošová, 2012). In any case, financial institutions could run or provide cross-border financial services and connect banking, equity and other kinds of financial markets, such as real estate securities.

In this theoretical landscape, it would be appropriate to evaluate the possibilities for harmonization and financial integration in terms of real estate securities among the COMCEC member countries given their secondary market potentials.

Obviously, notable differences in national economies in terms of economic, financial sector and real estate market development alongside with non-economic aspects in the COMCEC member countries, which are discussed in Chapter 1, have been reflected in their legal and institutional frameworks regarding real estate securities as well. Indeed, real estate securities legislations

[37] If the securities were to be offered through public offering, then the issuer *(corporate)* should obtain a credit rating. For instance, listing criteria for ABS in Indonesia require a credit rating with minimum grade of BBB- *(investment grade)* (IDX, 2018b). In Pakistan, similarly, an issuer may make a public offer of debt security such as Sukuk, if it has obtained rating of the debt security from a credit rating company licensed by the SECP and the rating shall not be more than six months old. The minimum rating shall be A2 (short term) in case of short term debt securities *(instruments with tenor of up to one year)* and BBB+ (long term)/ A2 (short term)in case of long term debt securities *(instruments with tenor exceeding one year)*. Please refer to https://www.secp.gov.pk/document/clean-copy-of-public-offering-regulations-2017-updated-january-5-2018/?wpdmdl=30546 for detailed information.

within the COMCEC member countries significantly differ from each other[38]. Given the specific situations and unique nature of each market, such differences might threaten prospective initiatives on financial integration and harmonization since a one-size-fits-all approach might be neither feasible nor beneficial. Achieving a consensus as to a single appropriate legal solution is hard in a community of lots of countries, let alone across a large number of very diverse jurisdictions.

An alternative, at this point, would be to integrate only those member countries that have attained a certain degree of financial market development and progressively increase the numbers as more member countries' financial systems develop. In this context, real estate securities market harmonization would occur through cooperation of exchanges which are at similar levels of development within the COMCEC member countries. An approach that could be adopted involving these exchanges would be to harmonize real estate securities regulations by establishing a common legal framework. However, this option would also entail significant procedural and policy costs. Rather than a strong form of harmonization, thereby, a flexible process that is driven by key national experts would be a more effective way to achieve international understanding on a complex technical issue (Gkoutzinis, 2008). In this regard, it is possible to launch a common trading venue dedicated to the secondary markets of real estate securities as a starting point of legislative harmonization to minimize cross-country differences in the future. Survey findings provide a justification for this argument.

First of all, a great majority of the answers regarding how to develop real estate securities markets show that improving existing regulatory frameworks and developing innovative investment products in that respect have more priority than adopting generally accepted international standards and principles for market practice and cooperating with other markets in order to induce real estate securities investments. This briefly indicates that harmonization and financial integration issues would be considered only after accomplishing a satisfactory level of legislative infrastructure.

Potential means

1. Improving the existing regulatory framework.
2. Establishing or enhancing the facilities of trading venue(s) for real estate securities.
3. Promoting real estate securities markets in terms of subsidies *(e.g. tax exemptions etc.)*.
4. Adopting generally accepted international standards and principles for market practice.
5. Developing innovative investment products for investors.
6. Cooperating with other markets in order induce real estate securities investments.
7. Ensuring Land Code and Ownership are adequately in place to facilitate development

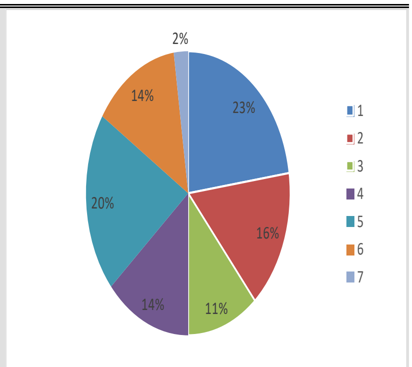


Figure 8: Potential means of developing real estate securities markets
Source: *Compiled by the author from the survey responses.*

[38] With respect to Sukuks, there are at least three issues. First, various challenges arising from different aspects of a relevant country's legal system, i.e. civil law, common law, or Islamic law, might have an adverse effect on Sukuk structures. Second, tax regulations, though they often provide incentives to attract local and international investors and issuers of Sukuks, might be too fragmented and complex. Third, but not last, each jurisdiction might have evolved differently to accommodate the Shariah-related needs and requirements of its domicile country (COMCEC, 2018).

Another point disclosed by Figure 8 is that improvements on trading venues for real estate securities also depend on the availability of product variety and robustness of regulations, meaning that secondary market would follow later. It is expected that, in most of the countries, relevant progress on both agenda items would focus on Sukuks and Real Estate CIS Shares/Units. Other types of real estate securities, which would be attributed much more importance in developing real estate securities markets in the COMCEC member countries are clarified in the following Figure 9:

Real Estate Security

1. Sukuks
2. Real Estate Certificates
3. Mortgage/Asset Backed Securities
4. Mortgage/Asset Covered Bonds
5. Real Estate CIS Shares
6. Real Estate CIS Units

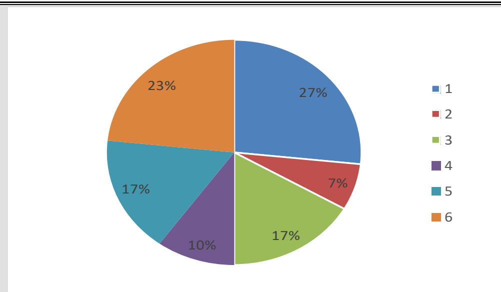


Figure 9: Potential types of real estate securities
Source: *Compiled by the author from the survey responses.*

It would herewith be plausible to assert that, the idea of a common trading venue for real estate securities could be realized provided that relevant regulations regarding the market and products are set or improved. Many COMCEC member countries, indeed, argue that such a venue has various benefits as justified by survey responses reported in Figure 10 below:

Benefits

1. Such a venue would increase efficiency in the market.
2. Such a venue would provide liquidity for real estate securities.
3. Such a venue would increase the market depth.
4. Such a venue would enhance fairness in price determination.
5. Such a venue would provide exposure for real estate securities issues.
6. Such a venue would provide domestic investors with new investment opportunities

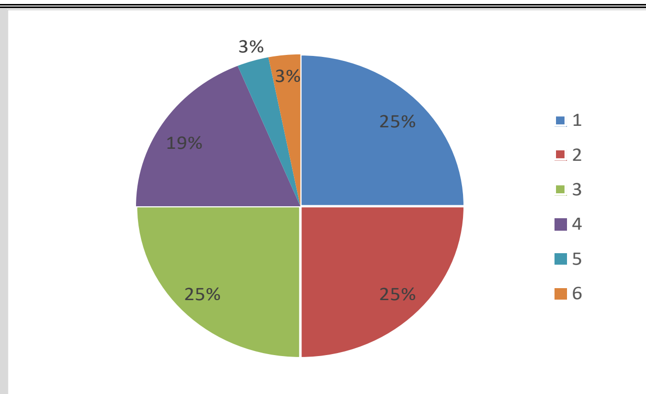


Figure 10: Possible benefits of a common trading venue for real estate securities
Source: *Compiled by the author from the survey responses.*

As Figure 10 suggests, most prominent benefits are associated with market efficiency, liquidity and depth, which in turn improve the tradability of real estate securities in the secondary market.

Nevertheless, some measures should be taken in order to achieve these beneficial outcomes both for publicity reasons and due to vulnerabilities inherent in the real estate securities markets in terms of both securities and their issuers. While Figure 11 portrays the measures to be considered in increasing the publicity of the trading venue, subsequent Figure 12 shows vulnerabilities surveyed:

Means

1. Intensive promotion of the trading venue *(e.g. international road shows, forums, events etc.)*
2. Cooperation with international bodies
3. Signing contracts with well-known parties to increase know-how
4. Organization of educational programmes
5. Allowing for alternative investment products *(e.g. socially responsible, sustainable finance, green securities etc.)*.
6. Using the capacity of regulatory bodies and OIC related organizations like SESRIC.

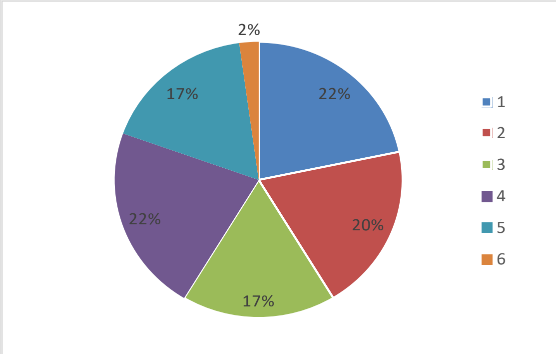


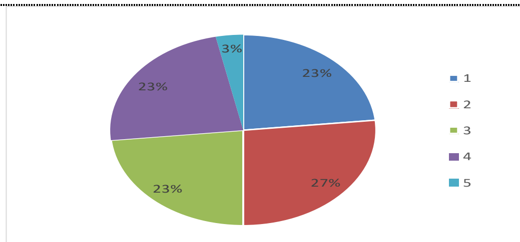
Figure 11: Public awareness
Source: *Compiled by the author from the survey responses.*

It is clear that an exhaustive set of promotional facilities, including educational activities, would be a requirement for the sake of increasing the attractiveness of the trading venue. Signing contracts with reputable parties, *e.g. NASDAQ, Bloomberg etc.*, and cooperating with international bodies would be other engagements for promotion. Moreover, opening the window of opportunity for alternative investment products such as green bonds/Sukuks would enhance the appeal of the market.

Vulnerabilities

Security-Related

1. Lack of a centralised clearing and settlement and custody system.
2. The lack of harmonisation in market regulation.
3. Low volume and value traded.
4. Low participation of investors.
5. Others *(Weak knowledge and awareness)*



Issuer-Related

1. Lack of familiarity with international capital markets.
2. Shortage of qualified personnel.
3. Cost and fulfilment of regulatory requirements.
4. Unfair pricing of the real estate security.
5. Lack of investors.
6. Uncertainty surrounding the success of the trading venue.
7. Lack of liquidity in the secondary market.
8. Others *(Disparity between national and venue requirements, particularly in case of listing, disclosure etc., money transfers, exchange rate use, and regulatory arbitrage)*

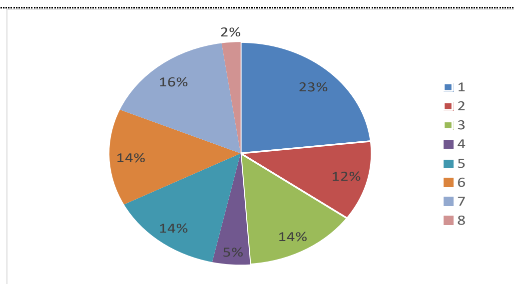


Figure 12: Potential vulnerabilities in a common trading venue for real estate securities
Source: *Compiled by the author from the survey responses.*

What is common with both the security- and issuer- related responses is that, functionality of a common trading venue is one of the most important issues not only for the investors but also for the issuers. As will be discussed later, international experience suggests that newly established trading platforms suffer from low liquidity and volume of transactions. The COMCEC member countries, in this regard, argue that there are several methods to struggle with low levels of liquidity and volume as shown in Figure 13.

Means

1. Granting specific incentives or exemptions for issuers/investors *(e.g. tax, costs, fees)*
2. Allowing for multicurrency real estate securities
3. Enjoying market making/liquidity providing services
4. Having a common framework that includes a single set of rules for market participants *(e.g. common CIS principles, common prospectus etc.)*
5. Keeping the product range wide rather than allowing for one or a few specific type of real estate securities.
6. Opening the venue to foreign investors besides member country investors
7. Opening the venue to retail investors as well as institutional investors.
8. Setting the trading hours in order to have the venue open all the time.

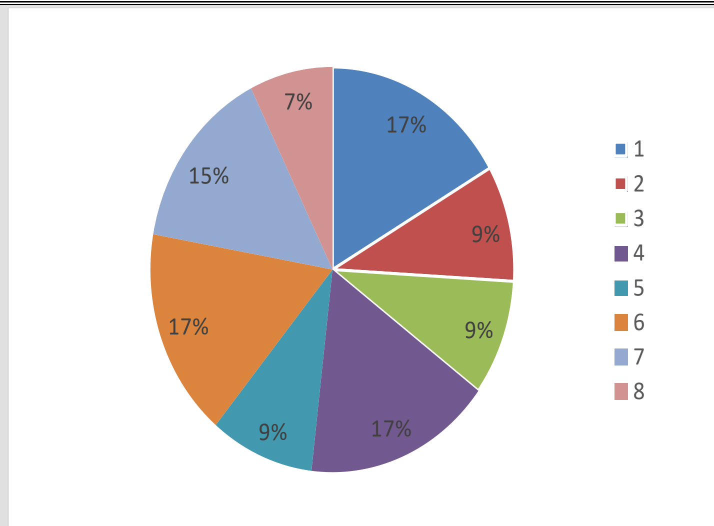


Figure 13: Means of improving liquidity and volume
Source: *Compiled by the author from the survey responses.*

As it is clear from Figure 13, incentivizing the market participants and attracting investors by offering them a wide range of products are primary means of improving liquidity and trading volume in the market. But more interestingly, having a common framework that includes a single set of rules for market participants is considered as one of the top priorities. A similar finding is reported in the previous Figure 12 as well where lack of harmonization is deemed as a vulnerability to be faced with in a common trading venue for real estate securities.

It has been already discussed that regulatory harmonization would cause undue cost and efforts and launching a common trading venue dedicated to real estate securities would be a better option at this stage. Hence, that the need for harmonization to ensure proper functioning of the trading venue as responded seems to generate a contradiction. In other words, the results imply that a common trading venue would not work without a harmonized regulatory framework.

Frankly speaking, harmonization matters in removing the diversity in national frameworks and would be a necessary condition for a common trading venue. If financial services can be provided in various markets, obeying a single set of identical rules only will without doubt cause transactions to become cheaper. However, in most cases the same results can probably be achieved by mutual recognition[39]. Again, only one set of rules has to be taken care of by a

[39] Recognition refers to financial products as well as to market participants licensed or supervised in other jurisdictions.

financial service provider. To make this option workable some minimum standardization might be necessary, but not a comprehensive one (Baum, 2000)[40].

In addition, the harmonization argument depends on the structure of the trading venue. If it were expected to be designed as a stock exchange, be it a regulated or an alternative one, then harmonization would have been a must course of action, because listing and trading requirements for securities should have been in harmony in order to serve for efficient price determination. If the trading venue, however, were simply structured as a platform that would allow investors to access and trade securities already listed in national stock exchanges, then harmonization would not have been a major issue at all. In other words, each national exchange would be cross-linked to form a network enabling cross-border trading of real estate securities on a centralized international trading platform that would be easily accessible from a single desktop workstation (Irving, 2005). Such a structure would not hamper financial integration; contrarily, it would be a different aspect of it. In fact, Liebscher et al. (2006) show that integration can take many forms and present various aspects, and regulatory harmonization is just one of them. From this point of view, provision of a trading platform would also be one means of financial integration[41].

When the eligibility criteria for real estate securities are considered as in Figure 14, it is clear that results complement previous findings in that frequently emphasized criteria are the ones that require common standards, rules and regulations for the market. Hence, the COMCEC member countries believe that proper functioning of the trading venue relies on a tight legal and institutional setting.

Criteria

1. Trading venue shall automatically accept each member country's own product regardless of eligibility criteria.
2. Only defined and approved real estate securities shall trade (in issuer terms, it must not be possible for all to enter the market).
3. There shall be common standards (e.g. a common framework for CIS etc.) to be met.
4. Issuers and the participants in the venue shall meet eligibility criteria as well.
5. Investment grade rating required.
6. Underlying assets shall possess predefined quality standards.
7. There shall be no restrictions on the tradability of the relevant security.
8. Others *(a network of stakeholders, e.g. a board of regulators or some authorized brokerages, should sign predefined standards and requirements and communicate them with issuers)*

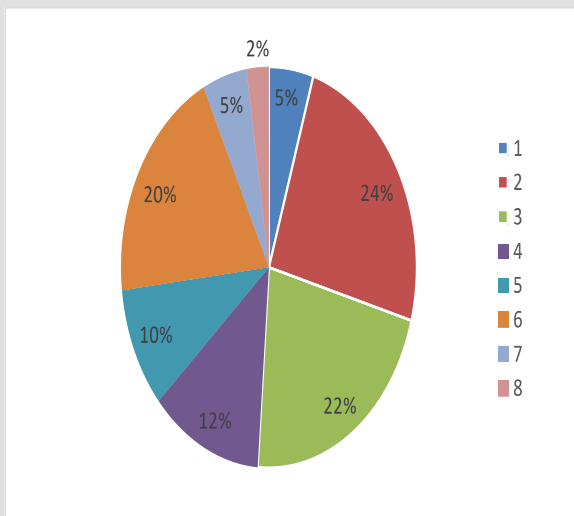


Figure 14: Eligibility criteria for real estate securities
Source: *Compiled by the author from the survey responses.*

[40] The presence of minimum standards provides national regulators and market participants trust that the mutual recognition would not result in a regulatory race-to-the-bottom, where market participants engage in regulatory arbitration to circumvent different laws or regulations of host countries (Pan, 2007).
[41] The comparables and mechanics of such a trading platform will be discussed in Chapter 3 and Chapter 4, respectively.

Taken together, the COMCEC member country responses regarding the trading venue highlight the need for regulatory harmonization to achieve financial integration through real estate securities markets. Conceptually, they are provided in a manner that they would be appropriate for a trading venue that is to be designed as a regulated stock exchange or an alternative trading platform. Strikingly, member countries similarly weigh these two options as the most suitable structures for a common trading venue as stated in Figure 15:

Structure

1. Founding a regulated COMCEC level real estate securities exchange

2. Opening a real estate securities market in an existing regulated exchange*

3. Establishing an electronic trading platform

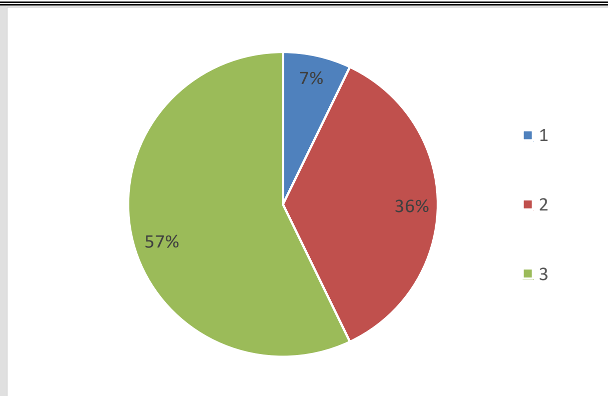


Figure 15: Structure for a common trading venue for real estate securities
Source: *Compiled by the author from the survey responses.*
Note: ** Iran, Egypt and Pakistan recommend both 2nd and 3rd options, but Iran emphasizes that the latter is easier.*

As a result, although the survey results generally welcome the common trading venue initiative for real estate securities[42] among the COMCEC member countries, they strongly imply that the envisaged trading venue should have an exchange-like structure insomuch that harmonized rules and regulations are once set before operating the venue efficiently.

In this section, therefore, secondary market potentials for real estate securities in the COMCEC member countries are evaluated in order to set the fundamentals for such a common trading venue. Since Brunei, Gabon, Gambia, Senegal, and Djibouti do not have a stock market, a secondary market for real estate investments does not exist. For this reason, these countries are excluded. Stock exchanges and trading time information of remaining countries are listed in Table 48.

[42] Various products are considered as eligible for a common trading venue. For instance, Tunisia and Kuwait considers Real Estate CIS units/shares for such a venue; Palestine and Iran considers Sukuks as well. Malaysia and Egypt add mortgage/asset backed securities in the portfolio.

Table 48: Stock exchanges in the COMCEC member countries

Country/Response	Stock Exchange	Trading Days	Trading Hours[1]
Saudi Arabia	The Saudi Stock Exchange (Tadawul)	Sunday-Thursday	10:00-15:00
Egypt	Egyptian Exchange (EGX)	Sunday-Thursday	10:00-14:30
Kuwait	The Boursa Kuwait (XKUW)	Sunday-Thursday	09:00-12:40
Morocco	The Bourse de Casablanca (CSE)	Monday-Friday	09:30-15:20
Tunisia	The Bourse de Tunis (BVMT)	Monday-Friday	10:00-14:00
Bahrain	The Bahrain Bourse (BHB)	Sunday-Thursday	09:30-13:00
Palestine	The Palestine Exchange (PEX)	Sunday-Thursday	10:00-13:00
Nigeria	The Nigerian Stock Exchange (NSE)	Monday-Friday	09:30-14:30
Indonesia	The Indonesia Stock Exchange (IDX)	Monday-Friday	09:00-12:00 / 13:30-15:50
Turkey	The Borsa Istanbul (BIST)	Monday-Friday	10:00-13:00 / 14:00-18:00
Iran	The Tehran Stock Exchange (TSE)	Saturday-Wednesday	9:00-12:00
Malaysia	The Bursa Malaysia (MYX)	Monday-Friday	09:00-12:30 / 14:30-17:00
Pakistan	The Pakistan Stock Exchange (PSX)	Monday-Friday	9:32-15:30
Azerbaijan	The Baku Stock Echange (BSE)	Monday-Friday	10:00-13:00 / 14:15-16:00
Maldives	Maldives Stock Exchange (MSE)	Sunday-Thursday	10:00-14:30

Source: *Stock Market Clock*
Note: *[1] Trading hours are reported for continuous regular trading and for equities markets only. There are other trading opportunities such as for discovery, pre-auction, pre-opening, pre-close or closing auction sessions as well. In addition, trading hours may change depending on Ramadan, Fridays or in other cases.*

2.2.1. Arab Group

2.2.1.1. Saudi Arabia

A functioning secondary market for real estate securities exists where Sukuks and REITs can be traded on the markets of Tadawul. The Tadawul is primarily an equities market and the introduction of government's Sukuk issuance programme as well as the launch of REITs have been the two biggest structural advances recently.

Sukuks have been trading on the stock exchange since 2009. However, domestic issuers have employed private placements[43] rather than public offerings due to the fact that trading debt instruments in secondary markets have been prohibited upon the opinions of Islamic scholars. Despite the country demonstrates a high value of Sukuk issuances, it has only a few listed Sukuks on Tadawul (Almezeini, 2017). This being the case, in July 2017, the government, acting through the Ministry of Finance, turned to the Sukuk market via its newly introduced Sukuk issuance programme, which intended to help address the fiscal deficit and to revive Sukuk trading. Typically, Sukuks may not be listed unless they are offered to the public by way of a public offer. By way of exception, Sukuks issued by the government may be listed without being offered to the public. It is expected that listing government Sukuks will deepen the debt securities market, which in turn will further boost liquidity in the secondary market and enhance the attractiveness of debt instruments to both investors and issuers[44]. Currently two indices, namely Sukuk&Bonds Index and Corporate Sukuk&Bonds Index, are calculated to track the performance of Sukuks.

[43] Tadawul also provides OTC trading for privately placed Sukuks.
[44] Please refer to https://www.prnewswire.com/news-releases/tadawul-launches-trading-of-saudi-government-debt-instruments-678488143.html for detailed information.

REITs *(so called as real estate investment traded funds, which are structured as closed-ended funds)* are introduced in 2016. By regulation, they can own residential and commercial facilities ranging from tiny offices to large shopping malls, warehouses, health facilities, hotels, etc. In line with the rules and regulations of SCMA, REITs can invest locally, regionally, and globally as well. However, a REIT's overseas investments cannot exceed 25% of its total value of assets. REIT units may be acquired in the primary *(e.g. in the event of an initial public offering)* or secondary market. REITs are required to distribute 90% of its net income annually. This requirement is a corollary of the fact that assets in the REIT portfolio represent a collective ownership of completed real estate that is able to generate regular rental income. However, the fund manager is permitted to invest in real estate development and to renovate or redevelop these properties provided that it does not exceed 25% of its total value of assets. Investing in vacant lands is prohibited.

Being a nascent REITs market (EY, 2017), as of 31.12.2018, trading volume of REITs reached to 717 mn, which corresponds to about 2% of the total market. Total trading value, however, is just 0,82% of total market trading value. In more concrete terms, the value traded was USD 7,5 bn in 2017, which dramatically dropped down to USD 1,9 bn in 2018 (Tadawul, 2018).

The Securities Depository Centre Company is a separate joint stock company, which has the special purpose of executing post-trade facilities for equities, ETF, government bonds, REITs and corporate bonds traded on the Tadawul. The company is regulated by the SCMA. Upon this framework, trading in Tadawul should track the following steps:

- Investor opens an investment account through local brokers who are members of the exchange and authorized to practice all activities related to securities.

- Investor fills in the required forms to buy or sell a particular security through brokers, through the purchase and selling services provided by e-channels offered by some brokers, or by phone without the need to be present in person. When filling the form, the investor should determine the order type whether it is a buy or sell order.

- Investor places order with the local broker.

- Local broker checks with sub-custodian if money *(or holdings in case of sell orders)* is available.

- Upon confirmation of cash availability, local broker places order in the market through the trading system.

- Shares move from seller trading account to buyer trading account in real time.

- Local broker receives execution confirmation through trading system.

- Local broker confirms trade to client.

- Local broker forwards deal conformation to local custodian by 3.30pm.

- Client advises global custodian, who in turn will instruct the local sub-custodian.

- Local broker transfer securities to local sub-custodian.

- Global custodian sends settlement instructions to local sub-custodian by 3.30pm local time.

- The local sub custodian post matches trades with global custodian instructions

- Local sub-custodian settles cash with broker on net settlement basis

- Local sub-custodian sends trade settlement confirmation to the client/global custodian.

- Trades of securities of any kind are finalized after two business days following the trading date; i.e. (T + 2).

2.2.1.2. Egypt

A functioning secondary market for real estate securities exists where MBS/ABS and Real Estate CIS units can be traded on the trading platform of EGX. EGX also provides transfer of ownership mechanism of unlisted securities through the OTC mechanism[45].

However, no significant trade has occurred for the last two years. In 2016, the transactional volume of MBS/ABS and real estate CIS units were USD 100.000 and USD 606.843, respectively. In 2018, USD 292 mn was raised by MBS/ABS issuances[46].

Misr for Central Clearing, Depository & Registry (MCDR) is the national depository as well as the securities clearing agent for listed securities. MCDR participants maintain safekeeping accounts at the depository. The participants hold assets on behalf of their customers. Under the current structure, each participant maintains an omnibus account with the MCDR, while maintaining beneficial ownership level accounts via an online connection with the MCDR, a depository requirement that allows for standardisation of the provision of beneficial ownership information to the depository.

The process how a cross-border investment is made is as follows:

- Client wants to trade on a security,

- She opens an account within the FRAE-licensed local broker that is a member of the exchange,
- She formulates her order by specifying the price, quantity and type of security to be traded,

- Local broker submits the trading order to its floor broker and,

[45] There is no independent OTC market for securities. OTC trading must be executed through licensed brokers or through the EGX trading terminals.
[46] In a recent speech of the Chairman of EGX, it is stated that EGX newly listed securitized bonds issued by a financial leasing company owned by an investment bank, which is regarded as the inauguration of a wave of listings on the primary market of bonds. Please refer to https://enterprise.press/stories/2019/02/17/coffee-mohamed-farid-chairman-egx/ for detailed information.

- Order is proceeded through stock exchange,

- Local broker sends the original execution invoice to the local custodian[47]. Local custodian should match the invoices against the settlement instructions received from clients, and check sufficient funding is available in the client's account. Local custodian would accept the obligation for all matched trades on the MCDR screen, where instructions are in place, valid, and with the appropriate funding by 2 pm Cairo Time. For instructions that fall under specific scenarios *(missing/wrong instructions, no funds, wrong execution, not our client)*, the local custodian would not accept the obligation, which means the obligation for such transactions will automatically go to the local broker, and they will arrange to fund the trade instead:

- MCDR handles the clearing and settlement of securities by debiting the funds *(securities)* from the local custodian's/local broker's account and credit the securities *(funds)* to investor simultaneously

- Broker receives the transcript of ownership or the physical shares themselves, and it gives the bookkeeper of the client the physical shares or the transcript of ownership.

2.2.1.3. Kuwait

A functioning secondary market for real estate securities exists where Sukuks and Real Estate CIS can be traded on the trading platform of XKUW. XKUW also operates OTC service for local stocks of shareholding companies that are not listed on the main market along with corporate bonds and Sukuks. This OTC platform is a new electronic platform for trading unlisted securities and is the only one in the GCC region[48].

The market is overwhelmingly relying on OTC transactions. Both Sukuks and Real Estate CIS units are traded OTC only. In other words, none of the real estate securities has been listed at the stock exchange yet.

Amount of funds raised on Sukuks and CIS units issuances reached USD 4 bn and USD 66 mn in 2018, respectively. Sovereign Sukuks have the dominance *(75%)* among all Sukuk issuances. As of 2018, the total market value of Real Estate CIS is USD 586 mn corresponding to about 10% of the total market value of the CIS industry as a whole.

REITs in Kuwait can only invest in developed real estate that generates income. No securities, funds, development projects or vacant lands can be included in the portfolio. As in the case of Saudi Arabia, REITs are required to distribute at least 90% of the fund's net profit at least once

[47] All cross-border investors must have established a valid client-specific custody account with a local custodian authorised by FRAE and must have a unique, personalised stock exchange code for the EGX. Investors would need to provide their personal details, along with information regarding their custody account and their stock exchange code when submitting a request for cross-border investment. Otherwise, such requests cannot be taken from the investor. Investors should contact their global custodian to set up a valid custody account in Egypt. It can last a maximum of two weeks to establish that account.

[48] Off-exchange trading or the OTC market is known as the Grey Market where trading of unlisted stocks and bonds take place. KCC is not involved officially in the settlement of OTC trades, however, most counterparties use it to ensure proper settlement. Please refer to https://otc.boursakuwait.com.kw for detailed information.

annually[49]. The country was the first to launch an Islamic REIT *(Al Mahrab Tower REIT)* in the GCC region in 2007.

A potential investor should appoint a sub-custodian bank where relevant. Then, she should set up a trading account at Kuwait Clearing Company (KCC). After assigning a broker *(a local one such as KFH Brokerage, EFG Hermes, AlTejari Brokerage etc. or an international one)*, trading on real estate securities can start on the exchange. Orders are routed and executed by means of brokers. KCC offers clearing, settlement and depositary facilities and acts as the Central Counterparty to settle and clear all the daily transactions executed on the exchange. The KCC also offers companies and investment funds with registrar and trustee services, and provides local and regional custody facilities for both local and foreign investors. On the other hand, there are private custody institutions such as HSBC, NBK Capital and CitiBank as well.

The trading process for an illustrative buy transaction is specified as follows:

- Investor executes trade with the broker, an exchange member, at the XKUW between 9 am and 12.40 pm local time.

- Broker enters the trade order in the Boursa trading system using the investor's National Investor Number. Once a trade is executed, Boursa confirms the trade to the broker through the trading system immediately. The broker provides trade execution to the investor.

- Matched trade orders are electronically transmitted from Boursa to KCC in real time. Once matched trades are transmitted to KCC, trade orders are irrevocable, however, can be amended by the broker after obtaining Boursa approval

- Sub-custodian receives trade confirmation from some of the brokers via email and report of alleged trades from KCC at the end of trade date

- Sub-custodian sends allegement report to the global custodian via email on T+1 around 8 am (local time).

- Client/Global custodian send settlement instructions to Sub-custodian by 3.30 pm (local time)

- Pre-matching is performed manually by Sub-custodian through validating market allegement against instructions received from clients and brokers

- If Sub-custodian is unable to accept the trade obligation due to missing/mismatched instructions, insufficient funds and insufficient securities in place by our stated instruction and funding deadlines, the trades would be rejected. The market deadline for custodians to reject trades is 12 pm (midday) T+2 (local time). Once the trade is rejected, the obligation (cash and securities) pass to the executing broker.

- Sub-custodian transfers funding from internal Suspense Account to KCC Cash Clearing account at Sub-custodian (as 'Settlement Bank') by 9.30 am (local time)

[49] REITs are allowed to distribute dividends on a quarterly, semi-annual or annual basis.

- KCC reflects debits on buyer's memorandum account and credits on seller's memorandum accounts on SD and simultaneously credits buyer's C-TAN securities account and debits seller's C-TAN securities account

- Sub-custodian runs an internal settlement batch to debit the client's cash account to credit Sub-custodian Suspense Account and simultaneously credits securities to client's account.

2.2.1.4. Morocco

A functioning secondary market for real estate securities exists where REITs *(so called as real estate investment companies)* can be traded on the trading platform of CSE.

There are only 2 companies, which are specialised in the holding and management of professional real estate assets *(e.g. offices, industrial sites, warehouses, shops, health and education assets)*.

CSE comprises a central market in which bid and ask orders are matched for each listed security and a block trading market in which listed securities are traded OTC for a size equal to or above the minimum block size under central market pricing conditions. Apart form that, the OTC market is only used for debt instruments *(listed or non-listed)*.

Maroclear is the clearing agency for all depository-eligible securities including government securities, equities, corporate bonds, corporate money market instruments and mutual funds. It is also the sole custodian acting as the central securities depository for its members as well as ensuring the transfer and administration of securities, and operates a system for the central handling of securities.

An investors should have opened an account within a financial intermediary in order to place a trade order. That financial intermediary is obliged to execute that order and to manage the investor's account. The intermediary discloses the order details specifying the price, quantity, time, etc. The procedure of transactions are listed as follows:

- An order is placed with a financial intermediary. If it is a bank, the order is automatically transferred to a brokerage firm,

- The order is sent to the CSE by the brokerage firm's dealing agent. When the order is executed, a transaction notice is produced and submitted to the investor.

- If it is a buy (sell) order, the client's securities account is credited (debited) and cash account debited (credited) on T+3.

2.2.1.5. Tunisia

BVMT involves a principal market reserved for the equities of large and high performance companies and a bond market reserved for the negotiation of debt securities. The OTC market is also open to the securities of pubic shareholding companies not admitted to the BVMT official list. It is available for registration of unlisted securities and block transactions of listed securities.

In terms of secondary markets, BVMT developed the securitization framework for mortgage loans in 2001. However, the market has witnessed only a few transactions by the International Arab Bank of Tunisia.

As of 2018, the number of CISs is 124 including 78 diversified CISs, 43 bonds CISs and 3 equities CISs. Besides the assets under management are amounted to USD 1,6 bn. None of these CISs invest in real estate for the time being[50].

Société Tunisienne de Compensation et de dépôt des Valeurs Mobilières, namely Tunisie Clearing, is the sole central depository for listed equities, some non-listed equities, government and corporate bonds. Securities held at Tunisie Clearing are registered automatically within five working days of trade execution in the name of the account holder at the issuer registrar or his mandated entity. For some non-listed equities and corporate bonds held outside Tunisie Clearing, registration is in the name of the beneficial owner and can take up to three months. Securities are available for trading during the registration process.

Foreign investors are only allowed to acquire shares in domestic firms through authorized local brokers or mutual funds. Foreign brokers need a local intermediary to trade and can only serve foreign clients.

2.2.1.6. Bahrain

A functioning secondary market for real estate securities exists where real estate CIS units *(including REITs)* and Sukuks can be traded on the trading platform of BHB. However, money market instrument such as Treasury Bills and Debt Securites such as Government bonds and Sukuks may be traded OTC if these are not available on the exchange.

Conventional or Islamic real estate funds can be established in Bahrain. The common structures are offshore limited partnerships and companies, locally domiciled funds and recently REITs.

Establishment and listing of REITs, known as a Bahrain real estate investment trust (BREIT) were enabled by means of a law which was introduced in late 2016. BREITs can be established on either a CIS or a non-CIS basis. The former may be offered only to qualified investors, while the latter are lightly regulated but may only be offered to accredited investors who invest at a minimum capital. According to existing CBB regulations, the dividend payout ratio of a BREIT has to be at least 90% of its net realized income and development property must not exceed 20% of the portfolio. BREITs are gaining more attention in Bahrain, though very few have been launched to date[51]. Hence, it has been considered as a nascent market yet (EY, 2017).

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[50] In Tunisia, there are two types of CIS: (a) bond market funds: their security portfolio consists primarily of debt securities and (b) mixed unit trust: their security portfolio consists of equity securities and debt securities.

[51] Currently, the only REIT is Eskan Bank Realty Income Trust *(portfolio size is USD 75 mn)* in BHB issued on 29.12.2016. Similarly, the only real estate fund is GCC Real Estate Fund *(portfolio size is USD 14 mn)* issued on 14.06.2005. Both funds have closed-ended structure, whereas the former is a Shariah compliant one (BHB, 2018).

Bahrain is also one of the market leaders for Sukuks. However, there are only 5 Sukuks listed and traded on BHB as of 2018 (BHB, 2018).

The Bahrain Clear Company, the CSD, has commenced operations as of 2017 as a wholly-owned subsidiary of Bahrain Bourse. It carries out clearing and settlement of securities transactions and managing shareholder records, central depository functions, and other related post-trade facilities.
Illustratively, a buy trade is processed as follows:

- Investor places an order with the member broker.
- Broker inputs order via the automated trading platform known as X-Stream.
- As soon as the order is matched on the Exchange, the shares will be under 'held' status in the trading accounts of both the buyer/seller until T+2.
- Confirmation of the trade is sent to the Settlement bank by BHB.
- Deal confirmation is sent to client / local custodian by broker.
- Client sends matching trade instruction along with the payment details.
- Local custodian matches the deal confirmation with client instruction.
- Client arranges to remit the funds for value SD under advice to local custodian.
- Broker's account with Settlement bank is debited, confirmation sent to Exchange/CSD.
- The CSD releases 'hold' on shares from buyer/sellers trading accounts.
- The transfer of ownership takes place on the settlement of the trade at the CSD.
- Local custodian makes payment to broker, settlement confirmation sent to client.
- Local custodian instructs broker to transfer shares from the trading to the custody account of the client at the depository.
- The stock is normally moved at the CSD on T+3 by filling in transfer forms.

2.2.1.7. Palestine

Currently, PEX is a stock exchange where equities are traded only. Though there are neither real estate securities nor CIS trading on, there is a functioning secondary market where Sukuks, CIS shares/units, MBS etc. can trade when available. However, CIS regulations have been in force for quite some time *(2004)*. The reasons were stemming from the fact that investor base is insufficient and pricing mechanisms are not set forth.

In Palestine, dealer/brokerage firms play the financial intermediary role and custodians provide custody services on behalf of international investors. Four banks act as authorized custodians on behalf of foreign investors: Cairo Amman Bank, Bank of Palestine, The National Bank, and Bank of Jordan.

The Clearing, Depository and Settlement Centre, an essential department of the PEX, acts as the CSD in order to keep and maintain issuers' securities. It aims at enhancing and strengthening its position by assisting to attract local and international investors.

2.2.2. African Group

2.2.2.1. Nigeria

NMRC is entitled to supply long-term secondary market refinancing to its networking credit institutions for mortgages that satisfy certain eligibility requirements. As at the end of 2018, the NMRC successfully issued USD 50 mn bonds in that respect (NMRC, 2018). So as to complement the responsibilities of NMRC, the Mortgage Warehouse Funding Limited was launched in 2017 to facilitate the lack of liquidity for mortgage funding by offering short-term funding for originating banks.

In terms of stock exchange transactions, a functioning secondary market for real estate securities exists where REITs can be traded on the trading platform of NSE.

On the other hand, NASD OTC Exchange provides an OTC trading platform for public companies not listed on the Exchange. It was registered in December 2012 by the SECN to perform the function of an OTC market in the securities of unquoted public companies and other instruments. NASD participants include equity and debt issuers, institutional and retail investors, a pool of licensed traders and their participating institutions, custodians, settlement banks, clearing systems, private equity and venture capital firms with a perspective to enhancing liquidity in the unquoted long-term funding market segment.

Three types of REITs exist in Nigerian market:

- *Equity REITs:* purchase, hold and manage real estate with a main focus on profits earned by means of acquisition and management.

- *Mortgage REITs:* invest in mortgage loans collateralized by real estate without purchasing, owning or managing the property itself.

- *Hybrid REITs:* mix the investment strategies of the former two REIT types by investing in both properties and mortgages.

Currently, there are 5 REITs listed in the NSE, one with a residential portfolio only, while the other ones are diversified. As of 29 March 2019, market capitalization of these REITs totals to USD 86,3 mn, which corresponds to a miniscule 0,26% of overall equities market capitalization (NSE, 2019).

The Nigerian Sukuk market is still at an infancy stage. It stands out as the 3rd largest Sukuk issuer in the Sub-Saharan region following South Africa and Ivory Coast. The Sukuks issued are listed in both NSE and FMDQ[52]. The proceeds are used for real estate development projects such as schools, roads, bridges etc. The NMRC is also planning to issue Sukuks to provide less costly funding for mortgage refinancing and alleviate the interest-rate burden of the end users (COMCEC, 2018).

There is a single central depository in Nigeria for NSE and NASD traded instruments, the Central Securities Clearing System Plc. Clearing is provided by this company, while settlement is done by 20 designated Commercial Banks and the Central Bank of Nigeria as settlement banks.

A purchase transaction to be realized in the NSE involves the following steps:

- Investor issues a purchase order to the local broker on the NSE[53]. The broker executes the order on the exchange, sends a contract note to the investor and delivers a copy to the local custodian.

- Investor instructs the custodian to receive the securities.

- The custodian pre-matches the investor's instruction with the brokers contract note. The custodian resolves any discrepancies between the two sets of instructions and requests for new instructions if necessary. The investor forwards funding instructions for the trade to the custodian by 09:00 local time.

- The custodian debits the investor's cash account in its books and credits its settlement account at its settlement bank by 09:00. The depository effects movement of title by crediting the stock to the custodian's account at the depository. The settlement bank effects movement of cash from the custodian's cash account on a net basis. The custodian dispatches a settlement confirmation to the client.

2.2.3. Asian Group

2.2.3.1. Indonesia

A functioning secondary market for real estate securities exists where Sukuks, ABSs and REITs can be traded on the markets of IDX. No official OTC market exists, but it is possible to trade all securities off-exchange and settle them directly between the parties of transaction.

Indonesian Sukuk market is considered as an intermediately developing one. The size of the outstanding Indonesian Sukuk market has continually expanded as a result of the pick-up in sovereign Sukuk issuances since 2010. However, the conventional product still dominates the bond market, with an approximately 85% share. Corporate Sukuk issuance only accounts for a 1% of total outstanding private debt securities. Sukuks can be listed on IDX provided that necessary approvals are obtained (COMCEC, 2018), but generally, securities debt instruments

[52] FMDQ OTC Securities Exchange is Nigeria's debt capital, foreign exchange and derivatives OTC securities exchange (https://www.fmdqotc.com).

[53] Trading in securities listed on NSE is executed through "Dealing Members". Dealing Members require the services of Authorized Dealing Clerks to access NSE trading terminals. These stockbrokers act on behalf of Dealing Members to access the market and assist investors in buying, selling or dealing in securities. Foreign investors also need to appoint a local stock broker to access the market and no brokers are needed for the government bond markets.

including Sukuks are traded through OTC mechanisms (ADB, 2012)[54]. For a striking example for Sukuks trading involving both venues, as of 2018, there are 17 project-based sovereign Sukuks having an outstanding value of USD 20,8 bn and a trading value of USD 11,9 bn; 5 fixed rate sovereign Sukuks having an outstanding value of USD 582 mn and a trading value of USD 158 mn; 4 retail sovereign Sukuks having an outstanding value of USD 3,9 bn and a trading value of USD 4 bn; and 17 treasury bills having an outstanding value of USD 2 bn and a trading value of USD 1,7 bn (IDX, 2018b).

As of 2018, there are 14 ABS which have a total outstanding value of approximately USD 635 mn, while the trading value is only USD 32 mn.

There are two types of REITs, a Shariah and a conventional one. The former is a real estate CIS subject to Shariah guidelines, which require it to have 90% of its revenues generated from Shariah-compliant facilities. The latter is known as the REITs that do not comply with Shariah guidelines. REITs are prohibited from investing in vacant land or in development properties. In 2018, there are 2 REITs listed in the market and the market cap is about USD 1,5 bn (EPRA, 2018). Trading value of REITs exceeded USD 3,5 mn, which is very low when compared to equities and one ETF is tracking REITs in the market (IDX, 2018b).

Post-trade facilities are handled by KSEI and KPEI. KSEI was launched to offer depository and settlement services in appropriate terms. It has developed the C-BEST *(The Central Depository and Book-Entry Settlement System)* to provide electronic registration and settlement services for securities such as Sukuks, multi-currency bonds, and promissory notes. Pre-matching can be performed either via phone or the C-BEST scheme under the country's bond settlement system. KSEI can maintain accounts at an individual accountholder level, while maintaining an omnibus account at Bank of Indonesia. Access to KSEI is not permitted for third parties except of brokers and custodians as being participants (IDX, 2018a). KPEI, on the other hand, is the clearing and guarantee institution that provides services in clearing and stock exchange transactions settlement guarantee as a CCP. Each type of security is subject to its own clearing system under KPEI (ASF, 2018):

- *Equities:* Electronic Clearing and Guarantee System *(e-CLEARS)* supports the clearing and settlement activities including IDX validation, netting, positioning, and the reporting processes and links KPEI, Clearing Members and the Custodian Centre online.

- *Bonds:* Electronic Bonds Clearing System *(e-BOCS)* supports the settlement of bonds transactions in IDX that involve the custodian bank as one of the proactive parties over the data confirmation and affirmation process.

- *Derivatives:* Risk Monitoring On-line *(R-MOL)* supports clearing and risk management of the derivatives transaction settlement processes, administration and reporting and enables a seamless data interface between KPEI, IDX, exchange members and payment bank regardless of manual intervention.

[54] IDX offers FITS *(Fixed Income Trading System)* as a specialized automated remote trading system to facilitate the trading of listed debt instruments. There is an electronic disclosure system for OTC debt transactions, known as CTP-PLTE *(Centralized Trading Platform - Securities Transaction Reporting)* as well. Please refer to https://www.idx.co.id/en-us/products/bonds/ for detailed information.

Transactions on equities and corporate bonds, for illustrative purposes, have the following procedures:

- The broker executes trades instructed by its clients on the IDX. Trade confirmations are submitted to clients.

- The client delivers settlement instructions to the custodian for the purpose of pre-matching. Upon receipt of instructions the pre-matching process will take place between the buyers custodian/broker and the seller's custodian/ broker.

- For RvP transactions, the buyer must provide her custodian bank account with sufficient funds as of T+2 to ensure the transfer to the Central Bank or the payment bank on T+3. Since non-residents do not have overdraft facilities, a possible default in funding would almost certainly lead to a settlement failure and potential penalties.

- Shares and cash exchange is performed by each party of the transaction through C-BEST. Once these transactions are matched, the C-BEST account of the investor is updated with the shares. KSEI credits the proceeds for the selling party either through the payment bank or Central Bank, where the investor's cash account with the custodian bank is credited on the same day. Settlement confirmation is sent to investors when the transactions are verified as settled by KSEI and subsequently settled in the operating system of the custodian.

2.2.3.2. Turkey

A functioning secondary market for real estate securities exists where Sukuks and REITs (*so called as real estate investment companies)* can be traded on the markets of BIST.

Off-exchange fixed income trades of the banks and the intermediary institutions which were placed at their responsibility have to be registered with BIST. BIST Audit and Surveillance Board audits such registration processes for authenticity, as well as for correction or cancellation of faulty declarations. Moreover, the Offering Market for Qualified Investors, the market where equities and debt securities are issued to "qualified investors", provides the relevant infrastructure for unlisted securities as an OTC market.

Turkish Sukuk market is considered as a beginner developing one (COMCEC, 2018). In 2018, the amount of funds raised on Sukuk issuances reached to USD 4,7 bn, which doubled the amount that belongs to the previous year. A great majority of the issuers of these Sukuks were banks and based on Wakalah arrangements. Other types of Sukuks issued were Ijarah, Musharakah, Murabahah, and Hybrid. There was no real estate certificate issuance in 2018, but it was amounted to USD 405 mn in 2017.

REITs in Turkey do not correspond with their counterparts in other parts of the world as the concept of a trust does not exist in the country. Thus, REITs are known as real estate investment companies in effect, which are established to invest in real estate and financial instruments linked to real estate. These companies are corporate income tax-exempt listed companies. A typical REIT is required to manage its portfolio with a long-term investment horizon and in line with industrial and regional diversification strategies. In case a special purpose REIT is formed to operate in certain areas or invest in certain projects, at least 75% of the portfolio must consist of assets dedicated to such purpose (EPRA, 2018). REITs are obliged o invest in real estate, property rights and development property at a minimum rate of 51% of their portfolio values. Investment in vacant lands, however, is allowed up to 20% (PwC, 2017).

As an emerging REITs market (EY, 2017), as of 2018, there are 33 real estate investment companies, which have a USD 4,3 bn of market capitalization. All of the CIS that can invest in real estate securities have a market cap of USD 31,3 bn. Amount of funds raised on MCB/ACB reached to USD 1,1 bn.

Takasbank, a specialized bank dedicated to securities services in Turkey, is the clearing and settlement centre for BIST, and the national numbering agency of Turkey. Apart from these services for the Turkish Capital Market, Takasbank provides Borsa Istanbul members with a range of banking services including central settlement, clearing and custody facilities for physical equities, revenue sharing certificates, private sector bonds, and asset-backed securities and derivatives as well as Lending and Borrowing services. Depository function for equities has been transferred to Central Registry Agency. The main functions of the agency are to dematerialize and electronically register financial instruments, with respect to issuers, intermediary institutions and investors. Effective from 2013, Takasbank acts as the CCP - buyer against seller and seller against buyer in securities lending market and the transactions in the market take place under Takasbank guarantee. Also effective from 2014, Takasbank started to act as the CCP for the BIST Futures and Options Market.

2.2.3.3. Iran

A functioning secondary market for real estate securities exists where Sukuks, MBS[55], real estate certificates[56], and real estate CIS units/shares[57] can trade on the stock exchanges, i.e. TSE and IFB.

As a matter of fact, Sukuks trade often in IFB, an OTC market operating in capital markets for listed and unlisted securities. Amounts of funds raised on Sukuks that are backed by real estates and real estate certificates were USD 218 mn *(total Sukuks issuances amount to USD 9,41 bn)* and USD 238 mn in 2018, respectively. As of 30 June 2019, trading value of Sukuks reached USD 43,3 mn. In September 2015, Islamic Treasury Bills were introduced in Iran. These bills are zero coupon bonds sold at discount to their face values. They have a one-year maturity and are traded predominantly at the IFB (COMCEC, 2017).

On the other hand, there were 6 Sukuks and 16 Islamic participation papers[58] and 2 real estate CIS trading on TSE by 2017. The trading value amounted to USD 2,8 bn mostly backed by participation papers *(77%)* (TSE, 2017).

An investor should open an account with a brokerage firm, which is a member of exchange, and obtain a trading code. After opening this brokerage account, she can start sending buy/sell

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[55] In Iran, MBS are issued in the form of mortgage-backed government bonds and lease-based Sukuk *(Sukuk Al Ijara)*, which are subject to different rules and regulations (Kherad, 2016).
[56] Known as housing loan privilege certificates, these certificates were issued in IFB by cooperating with Maskan Bank.
[57] Exchange traded construction funds were introduced in IFB.
[58] These securities are issued by government in order to enhance public involvement in implementing development projects of the government as well as lucrative projects of construction and services (TSE, 2017).

orders on online trading platform. Orders are executed by licensed traders through the trading terminal connected to the main system of TSE. More than 100 brokerage firms facilitate orders as the members of exchanges in the Iranian market. Central Securities Depository of Iran is involved in the clearing and settlement facilities.

2.2.3.4. Malaysia

Malaysian Sukuk market is considered as a matured developing one (COMCEC, 2018). In 2018, amount of funds raised with Sukuks issuances reached USD 39,36 bn. This stood at about 50% of total global Sukuk issuances. Sukuks outstanding, however, was USD 64,07 bn which corresponded to about 51% of total global Sukuk outstanding. Malaysia is the pioneering country for Green Sustainable and Responsible Investment (SRI) Sukuk issuances. A wide range of green SRI Sukuk issuances are anticipated in the near future, particularly for large-scale solar photovoltaic projects. In addition, MSC has launched the Green SRI Sukuk Grant Scheme that aims at reducing the marginal cost of certifying a green debt instrument.

Malaysian market is, however, an emerging one when REITs are considered (EY, 2017). REITs can be of listed or unlisted type. They can have a general purpose or a industry-specific purpose. First Islamic REIT was launched in 2005. REITs are not subject to a minimum distribution requirement. They are not permitted acquire vacant land (PwC, 2017), but they may acquire development property up to 10% of its total asset value. Further restrictions apply to the Islamic REIT in that the fund manager must ensure that at least 80% of the rental revenue is generated from permissible activities (EPRA, 2018). Currently, there are 18 listed REITs, which have a total market capitalization of USD 10,9 bn.

These facts and figures prove that the country has a well functioning secondary market for real estate securities. Sukuks and real estate CIS are traded on the exchange. Sukuks may also trade OTC as is the case for MBS.

BNM operated a centralized electronic trading platform for OTC trading on government and corporate debt instruments, which is integrated with Fully Automated System for Issuing/Tendering (FAST). It discloses relevant news and information on issuance terms, real-time prices, trade details regarding debt securities (ASF, 2018).

All transactions concluded by brokers on the Bursa Securities are netted-off via Bursa Clearing, a wholly owned subsidiary of Bursa Malaysia. Payments arising will be made through PayNet. Together with the Bursa Malaysia Depository, Bursa Clearing arranges the book-entry clearing, settlement and custody of transactions concluded on the Bursa Securities.
In concrete terms, it operates an against payment service, called the Institutional Settlement Service, that facilitates DvP settlement among custodians and between SBCs and custodian banks[59]. For equities and fixed income instruments listed on the Bursa Securities, the central depository is the Bursa Malaysia Depository. For fixed income instruments traded and settled via the SSTS system, the depository is BNM. The Bank settles and clears government bonds and unlisted corporate debt securities at its Real Time Electronic Transfer of Funds and Securities (RENTAS) settlement system (ASF, 2018).

[59] Custodian bank is a trustee that is required to be appointed to carry out trustee functions in relation to capital market products. For example, trustee for a bond or sukuk issue have the responsibility of safeguarding the interest of the bond/sukuk holders.

Using the Bursa Depository transfers under the Central Depository System (CDS), transactions are made as follows:

- The investor places an order with the broker who executes the trade at the exchange.
- Local sub-custodian perform pre-matching. Pre-matching via Central Matching Facilities of trades takes place on T+1 for delivery trades and T+2 for receipt trades.
- Settlement of delivery trades takes place. Sub-custodian transfers stocks to broker via the CDS while payment from broker via interbank/cheque will only be received on T+2.
- Settlement of receipt trades takes place. Brokers transfer shares to sub-custodian for good value on T+2. Sub-custodian pays the broker on T+2 via interbank/cheque payment.
- Payment from broker via interbank/cheque for stocks transferred on T+2 *(delivery trades)*.

2.2.3.5. Pakistan

A functioning secondary market for real estate securities exists where Sukuks *(mainly Ijarah)* and REITs can be traded on the markets of PSX.

Companies can issue Sukuk either by way of public offering or by way of private placement. SECP has recently approved PSX's regulations to encourage and facilitate listing of privately placed Sukuks. Thus, Sukuks are generally privately placed in the OTC market. There are 46 Sukuks listed and privately placed in the market of which outstanding amounts reached to USD 3,9 bn (SECP, 2018; Kazmi, 2019).

In Pakistan, "REIT Scheme" defines a listed closed-ended trust registered by licensed REIT Management Companies under the regulations enforced by SECP in 2015 and comprises of three types:

- *Developmental REIT:* invests in development property for industrial, commercial or residential purposes.
- *Rental REIT:* invests in commercial or residential real estate to generate rental revenue.
- *Hybrid REIT:* has a portfolio mixture of rental and development properties.

REITs can invest in vacant land for development purposes. At least 90% of the REIT income should be distributed to the unit holders annually in order to deserve the corporate tax-exemption privilege (EPRA, 2018).

There is only 1 REIT in the market, which has a total assets of USD 144 mn. Overall assets under management in the CIS sector, however, is about USD 3,2 bn[60]. The REIT is a budding sector. The government, through amendments to the Finance Act, 2018, reduce the tax rate on dividend received by corporate unitholder of a REIT from 25% to 15% (SECP, 2018).

Clearing and Settlement takes place electronically at a centralised clearing system, the National Clearing and Settlement System (NCSS), which is managed by the National Clearing Company of Pakistan Limited (NCCPL). The Central Depository Company of Pakistan Limited maintains an electronic book entry system for settlement of trades carried out all the three Stock Exchanges of the Country called Central Depository System. However, the depository for government securities is the State Bank of Pakistan (SBP).

Trading mechanism operates as follows:

- Client issues buy/sell order to broker on trade date.

- A broker places an order on the Exchange and confirms the trade with the client.

- Client sends settlement instructions to local agent.

- Local agent manually pre-matches settlement instruction with Broker/Counterparty by telephone/fax/email. Any mismatch is immediately clarified and rectified. Upon successful pre-match and by 17:00 hrs, the local agent is required to affirm the trades in the National Clearing and Settlement System (NCSS).

- The local agent will receive payment from NCCPL.

- The local agent will receive payment through RTGS from the counterparty.

- For trades settling via NCSS, the local agent's delivery obligations are automatically fetched from the client respective CDC sub-account. For client trades settling out of the NCSS, the local agent transfers shares to the counterparty's CDC account once the payment is received from the counterparty.

- Agent Bank sends settlement confirmation to client.

- Local agent wires funds based of FX instructions.

- Securities are automatically transferred from the seller's CDS account to the buyer's CDS account.

2.2.3.6. Azerbaijan

A functioning secondary market for real estate securities exists where mortgage bonds can be traded on the markets of BSE. Mortgage bonds can only be issued by the banks operating in the Republic of Azerbaijan and the Azerbaijani Mortgage Fund under the Central Bank of the Republic of Azerbaijan. In most of the cases, auctions for placement of mortgage bonds are

[60] Please refer to https://www.mufap.com.pk/aum_report.php?tab=01 for detailed information.

held at the BSE. Most recently, mortgage bonds in BSE have a market value of USD 412 mn. Though legal infrastructure for real estate CIS is ready, they have not been occurred in the market yet. This, perhaps, is related to the fact that investor base is not sufficient, i.e. retail domestic investors are the only market participants.

Clearing and settlement is carried out by the National Depository Center (NDC) that holds a relevant license issued by the State Committee for Securities. The NDC does clearing and settlement on the basis of real time data received from the BSE on concluded transactions.

Acquisition of securities on BSE and participation if BSE facilitated market is undertaken through stock exchange members, which are licensed investment companies.

2.2.3.7. Maldives

A functioning secondary market for real estate securities does not exist for trade even though required market structure and means have already been established. However, the market experienced Sukuks and MBS/ABS issuances at an amount of USD 5,8 mn and USD 5,3 mn in 2017 and 2018, respectively. By 2018, the outstanding values of them are USD 7,2 mn and USD 5,3 mn. The investor base involves a number of individuals, a few banks and insurance companies and 1 pension fund.

Typically, investors buy or sell securities through licensed stock brokers. There are currently 2 brokers in the country. Investors should have a Maldives Securities Depository Account to trade securities. Maldives Securities Depository (MSD) is the custodian for all securities *(shares, bonds etc.)* listed with the MSE. MSD undertakes clearing and settlement functions, administers transfer of OTC securities in accordance with OTC regulation of CMDA.

In order to activate the secondary market, the country has started an initiative. Accordingly, the private placement market is an alternative 'access to finance' avenue proposed to be introduced in the securities market for local companies, mainly private companies. It is proposed as a separate market segment where only institutional and private investors will participate. Any company registered in the Maldives that meets a certain conditions will be allowed to pitch their financing proposals to a pool of private investors (PIs) registered on a common electronic platform established in the capital market.

Evaluative Summary

Takeaway #1 – The COMCEC member countries differ significantly in legal and institutional frameworks as well as secondary market potentials for real estate securities.

- There are remarkable differences in legal and institutional frameworks of the COMCEC member countries regarding real estate securities. For instance, legislative, tax and Shariah governance framework are main challenges with respect to Sukuks. The distinctive nature of legal and tax jurisdictions implies that there is still a broad discrepancy in what appears to be a REIT in different regimes as well.

- Secondary markets of real estate securities possess different levels of development. When Sukuks are considered, for instance, while some markets are matured or advanced, lack of secondary market trading due to ineffective and inefficient platforms is an important issue and challenge in developing or nascent markets (COMCEC, 2018).

Takeaway #2 – Employing a concept of strict harmonization regarding real estate securities regulations among the COMCEC member countries would be too complicated and too slow to achieve, if not an unrealistic option.

- Greater convergence as well as harmonisation of regulatory standards among the countries is needed to improve long-term growth prospects of the COMCEC member countries (SESRIC, 2018), since diversity of markets *(e.g. legal systems)* creates costs to financial integration.

- Nevertheless, the attempt to deal with the slow process of legal harmonization to be carried out by national legislative bodies, the formulation of standardized norms and the drafting of model codes, which could be selected to regulate secondary market transactions for real estate securities would not be a viable alternative because of the existence of switching and to international cooperation costs (Carbonara & Parisi, 2006).

Takeaway #3 – A simple electronic trading platform would be a feasible option based on a mutual recognition approach under which the COMCEC member countries reach an agreement to recognize their regulatory schemes.

- Real estate securities are emerging as an alternative source of finance in addressing major development challenges faced by and provision of sufficient liquidity in the market appears to be the priority of many COMCEC member countries. Focusing on basic principles and concentrating on some key regulatory elements only, combined with a concept of mutual recognition would also result in integration instead of achieving a completely integrated market that requires a strict and comprehensive harmonization.

- Regulatory diversity comes along with regulatory arbitrage, but also with the benefits of congruence with differing cultures and the competition for survival of the most effective regulatory regime. A trading platform where investors have access to trade real estate securities with lowered entry barriers and reduced transaction costs would be realized with an effective allocation of regulatory jurisdiction, mutual recognition and international cooperation in enforcement (Baum, 2000).

3. INTEGRATED MARKET SPECIFICATIONS FOR REAL ESTATE SECURITIES

"The global exchange industry is undergoing major changes. This is due to the development of new markets, the introduction of new instruments, consolidation and consolidation of exchanges, a change of business principles. One of the main trends in the development of exchange institutions lies in their internationalization. The reasons for these processes are seen as sharply intensified globalization and consolidation of the traditional exchange of business in the face of increased competition. Technological capabilities and the need to withstand the onslaught of competition forced the exchange to go beyond national borders and to offer their services in foreign markets. Competing with brokerage electronic systems , exchanges abandoning traditional forms of work as 'closed clubs' that exist at the expense of members' contributions . They are increasingly becoming the financial centres that provide services to almost any participants who expressed willingness to use these services." (AEAEP, 2019).

Changes in the business environment associated with globalization, improvement in ICT and the drive towards more flexible trading systems are increasingly being reflected in changes in capital market infrastructure. Innovation comes from a variety of sources - from technology start-ups with brand new ideas, to major technology companies' R&D programmes – as well as from the market and exchange itself. It is considered as one of the most significant drivers in fuelling new product development, generating new financial markets, transforming industries, and fostering worldwide market competitiveness.

As markets develop and mature, they continue to invest in technology to deliver fresh innovations and services[61], so particularly, the widespread adoption of ICT[62] has been identified as critical to the development of new global financial systems where electronic trading has become a vital component of the financial market landscape. Electronic trading systems in a global economy promote functional integration and interdependence across markets. This has influenced market structures and has allowed new electronic markets to be created (Barrett & Scott, 2000).

BIS defines electronic trading in broader terms as *"it involves trades conducted in systems such as electronic quote requests, ECNs or dealer platforms; alternative electronic platforms such as dark pools; the quotation of prices or the dissemination of trade requests electronically; and settlement and reporting mechanisms that are electronic"* (BIS, 2016). In that respect, an electronic trading system offers some or all of the following facilities: (i) order routing *(from desktop to desktop)*; (ii) order execution *(click-and-trade)*; (iii) credit risk management *(CCP trading)*; (iv) automated settlement *(straight-through processing)*; and (v) pre-trade and post-trade information dissemination. Today, financial products can be traded via a variety of venues built on electronic trading systems. OTC markets and stock exchanges are on both ends of the spectrum, with other trading venues lying in between. ETPs are one of the principal examples of such other venues and are subsets of electronic trading systems in that they provide a matching engine to pair buyers and sellers, which further facilitates trading between multiple parties (Gemloc, World Bank, 2013).

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[61] In fact, it would not be a false argument that a modern stock exchange today is first and foremast an ICT service provider. In this regard, one important service provided by exchanges is connectivity to its system.

[62] Electronification, as a popular terms has evolved, is defined as the rising use of electronic trading technology, faster processing speeds, wider use of algorithmic and high-frequency trading.

Literally, ETPs are often referred to as MTF, which are organized trading systems established as an alternative to formal stock exchanges as will be discussed below, and are generally self-regulated organizations. Both stock exchanges and ETPs are alike and are subject to nearly identical governance criteria, corollary to the fact that they offer the same organized trading features in that both must:

- introduce objective requirements for system accession,
- specify the financial products to be traded in the system,
- guarantee efficient and effective trading by delivering adequate information for market participants to make investment decisions and by utilizing objective requirements for proper order execution,
- promote efficient post-trade settlement.

It can be said that the only distinction between a stock exchange and ETP is that the former is a centralized public trading system while the latter is a private initiative that enables for diversity (Gemloc, World Bank, 2013).

In this context, a real estate securities market structure can be specified by launching:

1. An organized real estate securities exchange,
2. A sub-market dedicated to real estate securities as incorporated in one of the organized securities exchanges, or
3. An ETP for real estate securities.

Each of the above three options increasingly welcome brand-new electronic trading facilities, which offer a variety of opportunities for investors and brokers today. As the fierce competition in the world markets continues, the ability to host and control various markets and asset classes on a single platform has become an important advantage. Regulatory reforms and developments in ICT lead to a fierce competition between different types of securities trading venues.

The result is extensive fragmentation of trading between securities exchanges[63] and non-exchange venues, namely ETPs such as ATS and MTF. There is also an increased fragmentation between dark *(non-displayed)* trading[64] and lit *(displayed)* trading[65] (OECD, 2016). Apart from

[63] MiFID II prefers to use the term 'regulated market' and defines it as *"a multilateral system operated and/or managed by a market operator, which brings together or facilitates the bringing together of multiple third-party buying and selling interests in financial instruments – in the system and in accordance with its non-discretionary rules – in a way that results in a contract, in respect of the financial instruments admitted to trading under its rules and/or systems, and which is authorised and functions regularly and in accordance with Title III of the MiFID"*.
[64] Lit trading is a form of equity trading where orders (prices and volumes) are visible prior to execution.
[65] Dark trading is a form of equity trading where orders (prices and volumes) are hidden prior to execution. Hence, there is no pre-trade transparency. This may include trading on dark pools and over the counter.

these venue-based platforms, off-venue trading, *e.g. OTC, broker crossing networks and systematic internalizers*[66], is possible as well. This fragmentation can be pictured as follows:

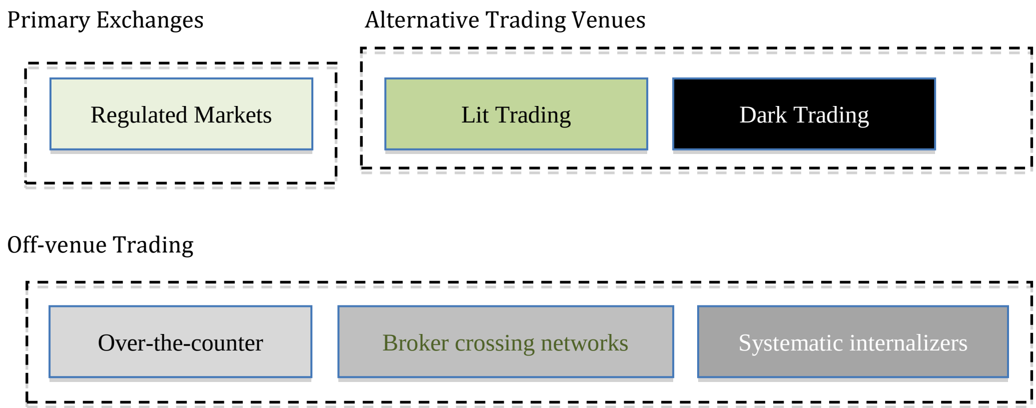

Figure 16: Types of trading
Source: *(Oxera, 2019)*

ETPs are categorized as alternative trading platforms in Figure 16 and refer to platforms where advanced and speedy electronic trading facilities that occur under the terms and conditions of their trading protocols. The rise of trading technologies inherent in the functioning of ETPs also enabled automated, algorithmic, and more recently high frequency trading *(HFT)*, which have recently been common in trading certain securities. Figure 17 portrays these trading technologies in a nutshell (BIS, 2016):

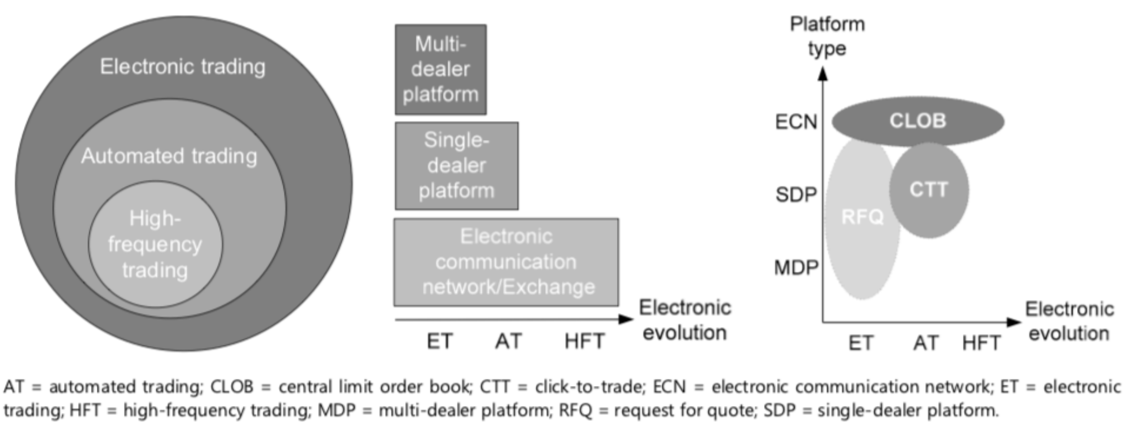

Figure 17: Taxonomy of trading styles, platforms and protocols
Source: *(BIS, 2016).*

[66] OTC is the trading that occurs between two parties away from a trading venue. Broker crossing networks are generally understood to be computerized trading systems operated by investment firms away from trading venues. Firms operating such networks typically use them to match combinations of in-house principal liquidity floes, client orders and electronic liquidity provider flows. These are prohibited under MiFID II. Systematic internalizers are firms that, on an organized, frequent systematic and substantial basis, deals on own account when executing orders outside a regulated market or an MTF without operating a multilateral system (Oxera, 2019).

At the left-hand side of Figure 17[67], multi-dealer platforms set the connection between clients and many dealers in order to negotiate electronically and execute orders in competition. Single-dealer platforms perform the same function, but clients are connected with a single dealer in this case. In these two platforms, prices are typically indicative. ECNs are systems in which trade orders are matched in electronic means. In today's financial markets, stock exchanges are all ECNs in essence. Electronic trading is available for all types of networks, while automated and HFT are more sophisticated technologies within the context of electronic trading especially for specific asset classes such as foreign exchange, derivatives, and equities.

Trading protocols are presented at the right-hand side of Figure 17. CLOB stands for central limit order books in which outstanding bid and ask orders are queued such that they are executed sequentially, usually in a priority by price and time of the entry. CLOBs are often suitable for ECNs where highly standardized financial instruments trade, small-sized orders are available, and transactions are executed under a straight-through process in a transparent manner. RFQ is the request for quote protocol in which users of the dealer-to-client platform are entitled to request prices from participating market-makers on an order of a particular size. Lastly, CTT is the click-to-trade protocol, which defines the capability to immediately trade at prices streamed by dealers (BIS, 2016).

Any trading protocol in any trading technology is associated with the execution latency and investment position. In this regard, while a traditional investor who is willing for long-term investment would not be interested in low latency feature of frequent trading, a trader with a short investment horizon would be enjoying HFT in the market as shown in Figure 18 below:

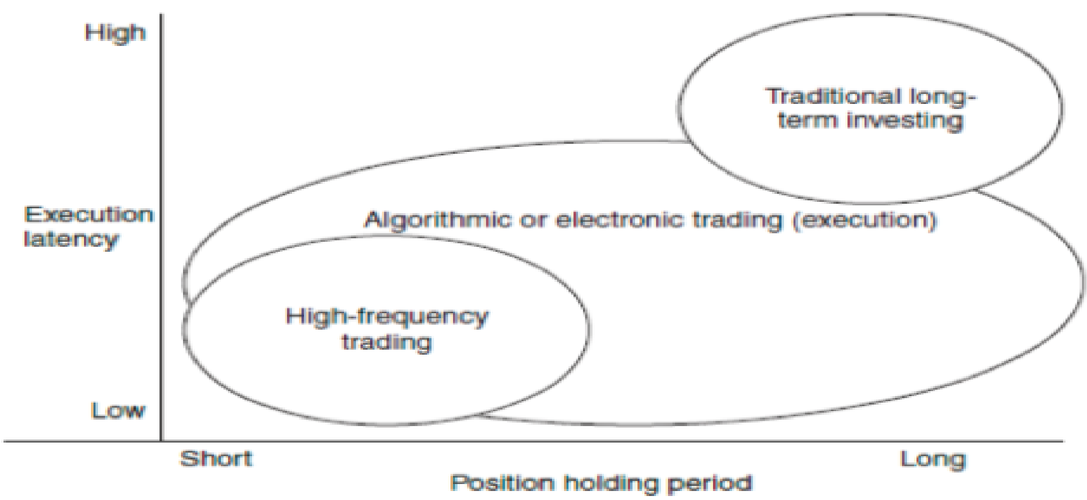

Figure 18: Trading scheme
Source: *(Aldridge, 2010)*

[67] Another platform type is dealer-to-dealer platforms, where dealers can express interest to buy or sell securities, which are then automatically executed when another dealer's hit the price with an opposite interest. Given the intensity of the trade, end investors do not typically participate in this market; hence this platform is so called as "inter-dealer". Though, dealers often trade either bilaterally over the phone or multilaterally via voice brokers, recently ECNs have become common especially for liquid sovereign bonds in these markets (BIS, 2016).

An ETP can make a substantial contribution to development of real estate securities markets based on the evaluations raised in previous chapters. A financial hub for real estate securities would not only be a need but also a necessity given the importance of real estate in the economies of the COMCEC member countries. It would be a need for countries, which both the legislative and institutional framework and secondary markets for real estate securities should have been improved. It would be a necessity for countries where funding mechanisms have been limited to provide support for real estate development for affordable housing and infrastructure projects. In concrete terms, such an enhancement in market structure features would be associated with increased foreign investors' involvement.

On the other hand, due to the fact that an ETP requires a harmonized market regulation as well, detailing the accession criteria, eligible instruments, trading requirements and market oversight, and given the current diversity in the development levels of real estate securities markets in the COMCEC member countries, a simple-structure ETP, rather than an exchange-like one would be more feasible. In this study, therefore, the term "ETP" is used to define a simple trading platform where investors are provided simultaneous and real-time remote access or connectivity to a variety of real estate securities already listed and traded in several countries. Thus, such an ETP, hereafter the CRESCENT Link, would work on a mutual recognition regime, which requires that each member country recognize the adequacy of the rules and regulations of another country to permit its real estate securities to trade on the platform. The ecosystem of the envisaged "hub and spoke"[68] platform is discussed in Chapter 4.

In this chapter, however, the familiarity of the COMCEC member country markets with electronic trading is addressed in the first section. Following that, some selected worldwide experiences with respect to exchange-based and platform-based trading venues are reported.

3.1. National Experience on Electronic Trading

Automation and electronic connectivity contribute to enhanced competition among traders to exploit lucrative market situations, such as arbitrage opportunities, in agent and proprietary trading as quickly as possible. This competition led to a demand for maximum speed and minimum latencies of transmission. Speed has become the main instrument for risk management, especially for market makers, as it must be ensured that quotes can be adjusted or withdrawn instantly in the event of news or extreme market movements. To minimize the physical distance between the servers of market participants and the market itself, colocation and proximity services were introduced (Gomber, 2016).

Although, this would not probably be the case for real estate securities transactions that would be accomplished through the CRESCENT Link in its nascent stages, it is important to evaluate

[68] In a network, all orders related to a relevant security are passed on to the individual market where the security is listed irrespective of the investor's nationality. Hub and spoke is one type of order transfer arrangements. The other one is known as the "spaghetti" model. In the spaghetti model, a direct link between the trading systems of the individual stock exchanges justifies the interaction between the members. The information flow related to the cross-border negotiations moves through a direct link between the investor's market where the order is originated and the target market where the securities are listed. Therefore, in the 'spaghetti' model, the coordination among multiple markets is complicated since the number of links required to integrate n markets amounts to n x (n-1). The hub and spoke model, therefore, allows for a better organization compared to the spaghetti model, since it is sufficient for the trading venues to be linked with the hub. The hub and spoke model solves the excessive number of links issue by establishing a sorting structure *(i.e. hub)* that centralizes orders of traders, sorting them towards the trading markets. Such an infrastructure require n connections for n markets (Carretta & Nicolini, 2006).

the available capacity of relevant COMCEC member country markets in terms of technological infrastructure. Certainly, most markets already have some electronic platform, but many still might be employing some element of manual execution of orders (*e.g. open outcry)* and manual paper-based procedures, which are ready to be electronification.

Furthermore, a synchronization among electronic trading, clearing, and settlement systems is required so as to execute and clear cross-border transactions of securities in an efficient manner. Technology in use on the national exchanges aimed at integrating operations may need to be aligned, if the systems used throughout the exchanges are not the same. This may call for an upgrade of the technology particularly used by smaller exchanges (Irving, 2005).

This section discusses the most recent developments in the COMCEC member country secondary markets regarding electronic trading systems. As would be quickly noticed, in many of the markets, a leasing solution has been preferred in order to establish and/or improve electronic trading systems in their secondary markets. Especially, NASDAQ OMX's products appear to be one of the most attractive options utilized for a long time *(e.g. NASDAQ has been cooperating with NSE since 1997, with Egypt and Bahrain since 1999)*. In fact, its X-Stream trading system is the most widely-used exchange trading platform used at more than 30 venues in addition to the COMCEC member countries such as Bangladesh, Switzerland, and New Zealand (Nasdaq OMX, 2015). Generally, the product has been leased covering a package of various by-products that involves "SMARTS" for market surveillance, "X-Stream CSD" for clearing and post trade facilities etc.

As will be discussed after a while, the COMCEC member country markets are at various stages of development in utilizing electronic trading systems. These systems can be demonstrated with respect to the services they provide from an evolutionary point of view as follows:

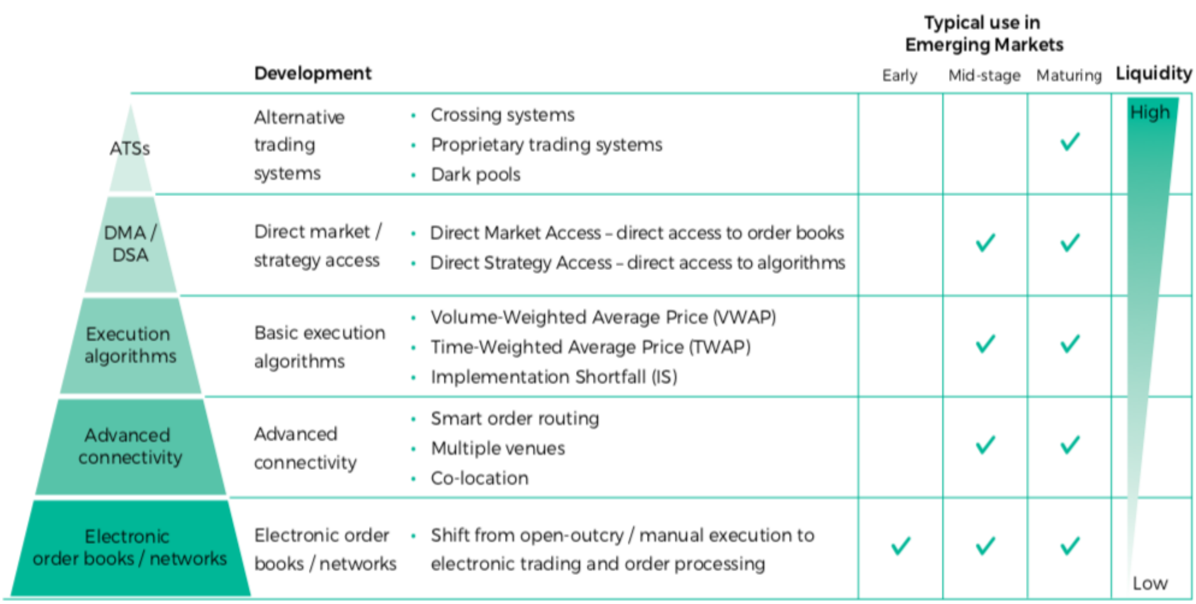

Figure 19: Electronic trading innovation pyramid
Source: *(Peterhoff et al., 2016)*

As Figure 19 suggests, advanced connectivity, which the model recommended in this report is based on, comes after a certain degree of electronification. The introduction of such an option designed would simplify connectivity for investors and would facilitate international involvement through forging links with other markets[69].

3.1.1. Arab Group

3.1.1.1. Saudi Arabia

In 2015, Tadawul has successfully deployed NASDAQ'S X-Stream INET trading system by replacing the old one, i.e. SAXESS. All trades are electronically processed through Tadawul's trading system and settlement is through the Tadawul Department. Trading is screen-based and electronic with brokers inputting real-time information on bid and ask prices for their clients to the system. The trade will be executed when the price is matched. Once a trade is matched and executed, the securities are electronically moved between the buyer's and seller's accounts immediately. Therefore, a seller must have the securities available in the account at the time of placing an order.

In 2017, Tadawul and NASDAQ signed an official contract to transform Tadawul's technology infrastructure for its post-trade facilities comprising of registry, depository and risk management technologies. The new post-trade technology replaces Tadawul's current Registry, Depository and Settlement Solution that has been employed since 2001 with a state-of-the-art, flexible and efficient technology. Moreover, this transformation is expected to allow Tadawul and market participants to offer new asset types and services for investors. Further the new technology would increase effectiveness and efficiency and would facilitate further growth of the market. It would also reduce risks in the post-trade area in compliance with international standards and best practices. This transformation is projected to be finalized in 2020, however, the necessary hardware and software procurement for the project has been completed; quality and testing plans have also been developed (Tadawul, 2018).

In April 2018, as part of the ongoing implementation and planning towards the Vision 2030, the Financial Sector Development Program (FSDP) was launched. In the FSDP, one objective in the context of ensuring formation of an advanced capital market is stated as offering an efficient platform to encourage investment and diversify the investor base. This objective is intended to be achieved by establishing co-trading linkages with selected developed markets to provide remote access to Saudi markets to attract foreign liquidity alongside with developing investment and trading strategies through the introduction of derivatives (Jadwa Investment, 2018).

3.1.1.2. Egypt

EGX has an automated order-driven trading system. The system enables brokers remote access to the exchange and links all independent bookkeeping activities to the Misr for Central Clearing, Depositary and Registry, which ensures higher settlement speed and efficiency.

[69] Today, various service providers are specialized on financial markets solutions regarding connectivity. For instance, Deutsche Börse Group offers connectivity services for accessing to the markets of CEE Stock Exchange Group involving Budapest Stock Exchange, Ljubljana Stock Exchange, Prague Stock Exchange, and Vienna Stock Exchange. Please refer to https://deutsche-boerse.com/dbg-en/products-services/ps-technology/ps-connectivity-services/ps-connectivity-services-cee-stock-exchange-group-connectivity for detailed information.

Based on its vision of becoming the financial hub and investment gateway in the Middle East and North African Region that best serves its stakeholders, EGX upgraded its trading platform to NASDAQ OMX high performance "X-Stream" solution to replace its outdated system "EFA Horizon"[70] in late 2008[71]. X-stream is designed to support the growing volume of EGX trading and the simultaneous trading of multiple asset classes including equity, debt, commodities, ETFs, futures and options in the context of on- and off-exchange trading environment. Furthermore, X-Stream system allows the introduction of the market makers scheme along with the opportunity of having a price discovery session for opening price determination (Amer, 2014).

3.1.1.3. Kuwait

Since 1995, the Boursa Kuwait has been using the Kuwait Automated Trading System, making it the first stock exchange in the Gulf region to introduce electronic trading.

In May 2012 the country confirmed the launch of a new trading system, i.e. X-Stream developed in partnership with NASDAQ OMX[72] just as in the case with Egypt. The implementation of the new trading system is part of a partnership contract with NASDAQ OMX signed in October 2009. NASDAQ OMX has also provided the Boursa with index calculation technology, a SMARTS powered surveillance solution and advisory services.

3.1.1.4. Morocco

Trading is via an electronic trading system based upon simultaneous DvP transactions. CSE has moved on from the old market structure *(Kerb sales and open outcry)* and the markets now operate under the rules set out in the "General Regulations" as issued by the CSE and published by order of the AMMC. This radical change took place in late 2016 when a new, trading, listing, and monitoring platform was acquired from Millennium IT, a subsidiary of the strategic partner of the CSE, the London Stock Exchange Group. It is composed of two solutions: (a) Millennium Exchange: includes a multi-asset trading platform as well as a negotiation tool, and (b) Millennium Surveillance: a tool to provide the market with a real-time monitoring solution aligned with international standards (CSE, 2016). This new platform enables the CSE to significantly improve the services it provides to its clients, with new functions that improve market transparency and liquidity, and makes it possible to process new products and financial instruments such as ETFs, REITs, treasury bonds and derivatives (CSE, 2017).

On January 12, 2015, the electronic trading activity of treasury bonds was launched via E-bond Maroc Bloomberg platform.

[70] EFA was then a Canadian software company, which was first acquired by Computershare, an Australian firm, and later by OMX.

[71] In 2014, parties have signed an agreement to extend the current contract for EGX till 2020 (Ottersgård, 2012). By the way, EGX's NASDAQ cooperation dates back to 1999 (Patterson, 2014).

[72] NASDAQ OMX and XKUW first entered in an agreement in 2009 for providing solutions for technology and business advisory expertise so as to help XKUW in developing its capital markets and converting Kuwait to a regional financial centre (MV, 2012).

3.1.1.5. Tunisia

The current electronic trading system run by BVMT was established in 1996. The system was developed by Atos Euronext and upgraded by new version in 2007 *(NSC V900)*. Recently, BVMT migrated to “PAM/CAP – FIX” market access platform from Sungard’s in line with its Optiq Project (BVMT, 2018).

The most liquid shares are traded continuously between 09:00 to 14:10 *(Continuous Trading)*, while the less liquid ones are traded in fixing mode three times a day, at 10:00, 11:30 and 13:00 *(Fixing)*.

3.1.1.6. Bahrain

All transactions for listed securities must be carried out on the trading floor using the Bahrain Bourse's automated trading platform, X-Stream of NASDAQ OMX[73] as in the Saudi Arabia, Egypt and Kuwait cases. The platform replaced the old one, i.e. Horizon, as of 2014, which took almost 2 years to complete the replacement project (BHB, 2015).

3.1.1.7. Palestine

PEX trading is carried out via the NASDAQ OMX’s Horizon system and overseen by the SMARTS electronic surveillance system. Clearing, settlement and depository functions are performed by the Clearing Depository & Settlement Centre using the Equator system. Both systems are tightly coupled NASDAQ OMX products. The PEX developed and uses its own e-disclosure “IFSAH” and e-IPO “EKTITAB” systems. In 2017, PEX entered into an agreement with NASDAQ to buy its new generation of trading platforms, i.e. "X-Stream". Trading will shift to the new technology, which is able to support 100,000 transactions per minute, in 2019’s second half.

3.1.2. African Group

3.1.2.1. Nigeria

NASDAQ OMX’s X-Stream *(branded as X-Gen)* is the only platform used by NSE[74], which has allowed for multilateral trading and continuous transaction reporting since 2013. The platform has the ability to enable investors to access the market and their portfolios online on a real-time basis. This gives investors the capability to trade in near real-time conditions anywhere in the world. Many NSE members, as well, have taken advantage of on-line trading platforms to deepen their businesses. Recently, NSE has also acquired NASDAQ’s SMARTS Market Surveillance platform to power their compliance program for market manipulation, including spoofing and layering.

The NASD, however, operates two trading systems, one is the OMX platform leased from the NSE and the other is called BITS, which is a bi-lateral inter-dealer trading system allowing trades to be executed and settled between participants. This web-based platform enables brokers to connect with their counterparties around the world. NASD continues attracting

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[73] In line with the agreement, Bahrain replaced then existing NASDAQ OMX platform (Horizon) with one powered by X-stream technology. NASDAQ OMX has been working closely with Bahrain since 1999 (BHB, 2013).

[74] NASDAQ OMX has been providing trading technology to NSE since 1997 (GC, 2012).

unlisted public limited companies in that it released a second version of BITS to include enhancements and fixes requested by participants (NASD, 2019). This would allow for seamless arbitrage between NASD and NSE (Oxford Business Group, 2015).

3.1.3. Asian Group

3.1.3.1. Indonesia

IDX trading system is called the Jakarta Stock Exchange Automated Trading System (JATS), which has been provided by NASDAQ OMX since 1995 and facilitates order input, opening price formation, order matching and trade confirmation. Orders are matched first by price priority and then by time priority. Upon trade execution, JATS generates trade confirmations online.

In 2009, IDX launched a new trading system called Jakarta Automatic Trading System Next Generation (JATS Next-G), which has increased transaction processing capabilities from 900 transactions per second to 2,500 transactions per second.

In 2012, IDX launched its latest version of trading system – JATS-NextG version 2.0 in order to increase the capacity of the trading system by 5 times, from 1 mn orders and 500 thousand transactions to 5 mn orders and 2,5 mn transactions. Recently, to keep up with the rapid and dynamic growth of capital markets, increase efficiency and effectivity in IDX trading system, and to accommodate more liquidity in the market, on May 7th 2018, IDX have upgrade its trading system JATS INET Version– which was a result of the development from its previous JATS-NextG version 2.0. The most significant development on the new upgraded systems are the maximum order trans- actions per day increased up to 15 million from previously 5 million. In addition, the maximum number trades per day increased from 2,5 million to 7,5 million trades per day. The new systems also able to fulfil 12.500 orders per second (IDX, 2018b).

Besides, an electronic trading platform was established as a facility to conduct the process of buying and selling bonds[75] with automated and integrated starting from order by user to order execution system into trade transaction and dissemination of pre-trade information such as quotation of bid/offer price and post trade information such as price and volume of transaction electronically. The implementation of the platform is expected to make the secondary market of bond products more transparent and liquid so can attract greater desire for investors to invest their funds. Another benefit of implementing the platform is that it can lower trade costs and risks, lower funding costs, and facilitate monitoring. Implementation of the platform was officially launched on April 6, 2017. For the initial phase, emissions that are traded online with the current platform are the government bond retail series. In the future, government Islamic securities and corporate bonds are expected to also be traded through this new platform (IDX, 2018a).

[75] Fixed Income Trading System (FITS) is the Bonds and Sukuks trading facility provided by IDX right now. Bonds and Sukuks that can be traded via FITS are Bonds and Sukuks listed on IDX. FITS system is integrated with the trading system for clearing and settlement.

3.1.3.2. Turkey

Equity trading is fully electronic. Borsa İstanbul members send the orders they collect electronically from the investors to Borsa İstanbul through the "FIX" protocol and "OUCH" protocol of NASDAQ OMX. Brokers may also enter buy and sell orders in the Electronic Trading System through the trading terminals located at Borsa İstanbul and members' headquarters. Trading in the Equity Market is carried out with "continuous auction", "continuous auction with market maker" and "single price" trading methods with respect to price and time priority, with a fully automated electronic trading system.

With the launch of BISTECH project, a balance price are calculated and disclosed during the collection of orders in the opening, mid-day single price and closing, and all single price sections of the session. Following the mid-day single price practice, the session continues with continuous auction system as from 13:30. Orders that remain unmatched in the order book by mid-day can be modified or cancelled during the order collection at single price at mid-day. Trading is executed electronically in the Debt Securities Market via the automated multiple price-continuous auction system. New trading platform of Borsa Istanbul, NASDAQ Genium INET (BISTECH) went live as in 2015. As the first phase, equity market migrated to the new trading platform.

3.1.3.3. Iran

Electronic trading systems was launched at TSE initially in 1994. In 2007, TSE moved to a powerful trading system designed by Atos Euronext, just in the case of Tunisia, for meeting the high trading volume. The agreement covered the following components:

- PAM and Web-PAM, the trading workstations including online trading
- NSC, the electronic trading system used by world-class stock exchanges in Europe, America and Asia
- TCS, the electronic trading system used for OTC markets
- Aramis, the Market Supervision System,
- Syn~Clear, the solution for clearing, settlement, depository, registry and associated risk management and control.

On the other hand, IFB uses a fully automated trading system is designed by TSE Technology Management Co., which is named "EBS".

3.1.3.4. Malaysia

Trading on Bursa Malaysia is executed through stock broking companies that are licensed by the regulatory authority and is a member of the exchange. The automated trading system of the stock exchange once comprised two main computer systems:

- The SCORE *(System on Computerised Order Routing and Execution)*, which was responsible for the matching of all trades.

- The WinSCORE system *(broker front end trading system)*, which was responsible for credit control management, order, trade routing, and confirmation.

All brokerage companies were equipped with the latter, in which the terminals were connected with the former to allow dealers to enter orders on their own regardless of a central buyer. This allowed a timelier order execution and a reduction of risk exposure for participants.

However, Bursa Malaysia launched a new trading platform – the Bursa Trade Securities (BTS) platform for securities market on December 1, 2008 and replaced SCORE. This NASDAQ OMX product integrated with the existing trading system and its function is to provide greater accessibility for investors and market participants, and enhance trading efficiency and transparency at Bursa Malaysia. Some of the new platform's key features include:

- The introduction of the Theoretical Opening Price, particularly useful during initial public offers.

- Continuous trade matching *(currently transactions are matched every ten seconds)*.

- The new trading platform includes ARAMIS, a new system that is designed to improve the market surveillance capabilities.

- Introducing a circuit-breaker. *(The Bursa is studying the possibility of introducing a circuit-breaker mechanism in the equities market in addition to the current static limits of 30%. Dynamic limits change continuously smoothing volatility and reducing possible manipulation.)*

- Dissemination of trading information *(the dissemination of trading information will be enhanced)*.

- Introduction of "Trading at last" functionality, where traders are allowed to trade within ten minutes before market closure.

In November 2018, BTS was upgraded by BTS2 powered by NASDAQ OMX's X-Stream INET (Bursa Malaysia, 2019).

3.1.3.5. Pakistan

PSX is a modern market where trading takes place through the Karachi Automated Trading System (KATS), which facilitates trading for stock brokers; the Karachi Internet Trading System (KiTS), which is an online (mobile) system for stock trading; and the Bonds Automated Trading System (BATS)[76], which provides trading platform for corporate debt instruments *(e.g. term finance certificates, corporate bonds, sukuk etc.)* and government debt securities *(e.g. Treasury-bills, Pakistan Investment Bonds, Government of Pakistan Ijara Sukuk etc.)*.

[76] Electronification of debt securities in Pakistan dates back to 2010 when the State Bank of Pakistan launched a Bloomberg-based electronic trading platform, E-bond, for fixed income securities with the intention of improving the functioning and profundity of primary and secondary markets of sovereign bonds (Rehman & Khilji, 2017).

KATS is PSX's in-house developed trading solution that has been providing a uniform platform for the electronic trading of equities, derivatives, bills/bonds and leveraged trading with a seamless vertical integration since 2002. BATS is also an in-house product developed in 2014.

3.1.3.6. Azerbaijan

In 2016, BSE has launched a single trading, post-trading and regulatory system, namely Centralised Trading Exchange system (CETA). The new trading system was developed by experts of the South Korean Exchange against the backdrop of general legislation enhancement and the Capital Market Modernisation Project.

CETA includes four sub-systems:

- a trading platform for BSE,
- a clearing and settlement system for NDC,
- a depository informational system for NDC,
- a supervision system for the securities market for SCS and BSE

The new trading system has an electronic interface, enhanced operating principles and works on a real time basis, which allow BSE running integration of and control over trading and post-trading client activities. As a result, CETA provides an opportunity to strengthen the control of ongoing operations and to standardise the process of receiving transaction reports. It should prevent possible manipulation and the distribution of insider information across the market.

3.2. International Experience on Electronic Trading

In this section, various electronic trading venues that have been established in different parts of the world in order to provide a common trading platform for supranational investments is illustrated. The discussion is based on two types of venues, i.e. exchange-based trading venues and platform-based trading venue.

Exchange-based trading venues can be conceptualized as regulated markets, which are more like traditional exchanges. Exchanges are the typical meeting place for investors in securities markets. They bring together buyers and sellers and establish prices to match demand with available supply. Typically defined in terms of their trading function *(or liquidity provision)* and listing services, another of their key economic functions, however, is price formation. This plays an important role for investors, by allowing them to (re)allocate their asset holdings and in turn to manage their financial risks according to their personal preferences.

Exchanges undertake various activities to deliver these functions, including creating and operating price-forming market models; setting trading rules and monitoring and enforcing compliance with these rules; investing in hardware and networks to provide for reliable markets even in times of market stress; measures to ensure the resilience of the trading systems to threats, such as cyber security; as well as offering testing, support and guidance to their members.

Exchanges have faced a number of challenges in recent years such as the decline of economic and financial barriers at the regional and international levels, the continuous emergence of innovative technology, new regulatory reforms and the evolution of investment decisions. In response to the new financial environment where competition has dramatically increased, a growing number of stock exchanges have decided to modify their strategies. Most often, they demutualize their activities and go public. Some, however, have signed memorandums of understanding with other financial markets to increase cooperation. In some cases, stock exchanges have merged with other regional and international stock exchanges, causing a wave of consolidation between exchanges. For example, the Baltic and Nordic exchanges merged to form OMX. Also in Europe, Euronext was created in 2001, as a product of the merger of stock exchanges in Paris, Amsterdam, Brussels and Lisbon. A few years later, Euronext merged with the NYSE and OMX merged with NASDAQ. More recent mergers are between the Deutsche Börse and NYSE Euronext, and between the Canadian stock exchange (TMX Group) and the London Stock Exchange (Ben Slimane, 2012).

Currently, there are about 60 major stock exchanges in the world with a total value of 69 trillion USD and 16 exchanges comprise "1 Trillion USD Club" accounting for 87% of global market capitalization[77].

On the other hand, there has been a shift in the market shares from the exchange-based trading venues towards platform-based trading venues. For example, the market share of CAC-listed shares trading on the stock exchange (Euronext) fell from 75% in 2009 to 62% in 2018, and Oslo Børs's market share of trading on OBX-listed shares dropped from 95% in 2009 to 62% in 2018. Alongside the trend of falling market shares of the traditional exchanges, there has been a growth in dark trading (Oxera, 2019).

An ETP is a non-traditional, electronic-based market for investors to trade financial instruments. These platforms are capable of matching bid-and-ask orders automatically without a human intervention. They improve the trade speed and transparency while lowering associated transaction costs (Shaik, 2014).

An envisioned infrastructure of an ETP has a threefold composition that involves the sina qua non conditions as shown in Figure 20:

Figure 20: ETP facilities
Source: *Inspired from (Korea Institute of Finance, 2014).*

[77] Please refer to http://money.visualcapitalist.com/all-of-the-worlds-stock-exchanges-by-size/ for detailed information.

In the light of Figure 20, pre-trade tools shall provide access to real-time price intelligence and accurate market data to inform trading decisions and drive improved performance. The platform shall also offer relevant trading protocols, calibrated for each marketplace. The evolution of these electronic markets reflects the needs of market participants. On the post-trade side, the ETP shall provide powerful tools to meet clients' regulatory and compliance needs, measure their electronic trading success and mitigate risks.

The following Figure 21 shows how:

- post-trade facilities form an important component in settlement of obligations entered into at trading phase

- providers of post-trade facilities handle the corporate actions initiated by issuers, for the benefit of investors.

Figure 21: Real estate securities industry value chain
Source: *(AFME, 2015).*

3.2.1 Exchange-Based Trading Venues

3.2.1.1. NASDAQ Dubai

NASDAQ Dubai is an international stock exchange regulated by DFSA and situated in the Dubai International Financial Centre, where an independent commercial legal system prevails. The majority shareholder is Dubai Financial Market with a two-thirds stake, while the remaining shares are owned by Borse Dubai.

National, regional and global investors can trade their securities including shares, bonds, ETF, derivatives *(equity derivatives or futures based on United Arab Emirates stocks)*, exchange-traded commodities, and real estate securities such as REITs and Sukuks. In order to be listed, a company must meet a number of criteria that are set out by the Dubai Financial Services Authority in line with international standards.

Total equities traded value on NASDAQ Dubai reached 1.15 billion US dollars in 2018. This constitutes a decline of 13% from 1.33 billion US dollars in 2017. Volume reached 164 million shares in all of 2018, down 40% from 273 million shares in 2017. The exchange listed 13 Sukuk with a total nominal value of 11.99 billion US dollars in 2018. This total reached 60.4 billion US dollars by the end of the year, up from 52.5 billion US dollars at the end of 2017. NASDAQ Dubai also listed five conventional bonds during 2018 with a total value of 3.7 billion US dollars (NASDAQ Dubai, 2018). Currently, there are 9 company shares including two Islamic REITs, 86 sukuks, and 31 conventional bonds *(bonds, medium term notes)* in the market whereas no funds are listed.

Trading on NASDAQ Dubai is carried out on the X-Stream trading platform, the most widely used marketplace management system that powers the world's leading exchanges as well as many of the COMCEC member countries as discussed earlier. The X-Stream technology is supplied by NASDAQ, Inc. and handles trading of a vast amount of securities a day throughout the world. X-Stream offers a powerful infrastructure for trades in a broad variety of asset classes. This provides NASDAQ Dubai with desired flexibility since it aims at improving the market by offering issuers and investors an increased level of trading alternatives. Trading in multiple languages, including Arabic, is available. X-Stream is designed to deliver enhanced performance and reduced latency, to allow for effective risk management, and to host various markets in a single platform.

Trading hours are set as 10am to 2pm *(6am to 10am GMT)* from Sunday to Thursday meaning that the exchange is often open when other markets around the world are closed. Retail and institutional investors can trade on NASDAQ Dubai using the same National Investor Number that they already use to trade. One should also appoint one of NASDAQ Dubai's authorised brokers *(22 local, 7 international)* to trade on his behalf.

The NASDAQ Dubai Murabahah Platform has been launched by NASDAQ Dubai in order to develop a more appealing option for Islamic finance transactions. The platform utilizes Shariah-compliant certificates that are based on Wakalah investments developed as the underlying asset. Total transactions on the platform since its 2014 launch reached USD 115,2 bn at the end of 2018. Transactions in 2018 on the Islamic financing platform increased by 27% to USD 36,2 bn, up from USD 28,4 bn in 2017. The platform is used by banks and other financial institutions on behalf of individual as well as corporate clients (NASDAQ Dubai, 2018).

NASDAQ Dubai has aggressively expanded its offerings as it aims to attract liquidity and bring on board new investors, which have about 75 and 25 % split in favour of institutional and retail investors, respectively. Recently, with Menacorp, one of the UAE's leading brokerages, it has announced that the two would collaborate to raise market publicity across the region. The campaign includes joint roadshows in GCC and other countries in the region as well as digital outreach to a wide range of investors. Various asset classes such as equities, Sukuk, and conventional bonds, and equity futures in particular are the hot topics of the campaign.

3.2.1.2. Bursa Malaysia-i

Bursa Malaysia-i is a fully integrated Islamic securities exchange with a broad range of pre-trade, trade and post-trade facilities, improving the existing infrastructure of Bursa Malaysia with Shariah-compliance purposes. Trading mechanism on Bursa Malaysia is displayed in Figure 22:

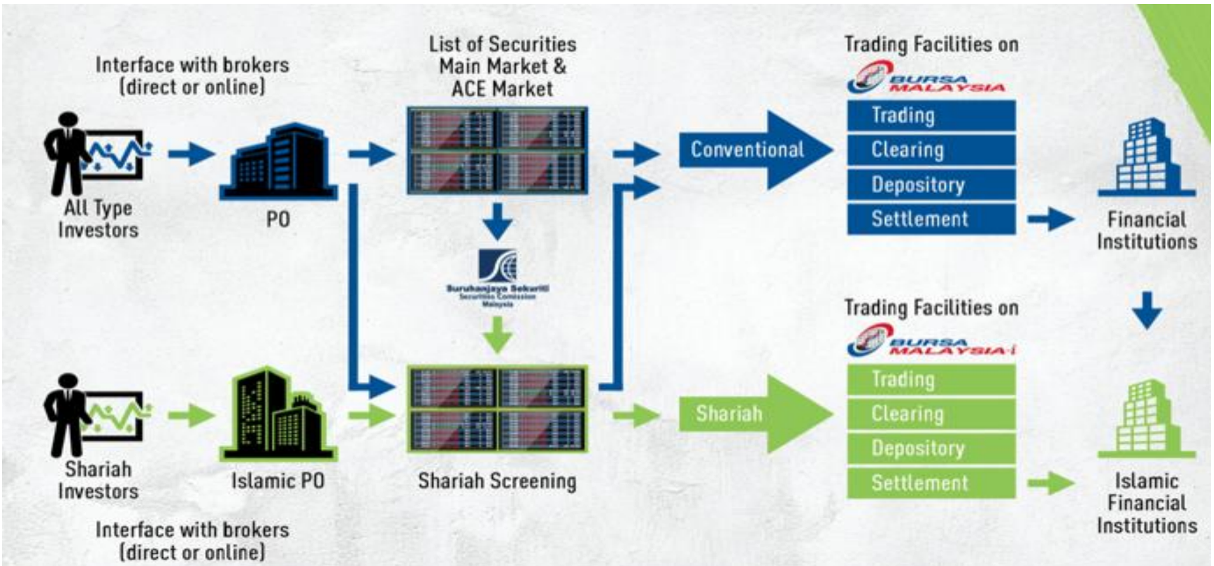

Figure 22: Shariah investing landscape on Bursa Malaysia-i
Source: *Bursa Malaysia*

Actually, Bursa Malaysia has already been offering investors the option to invest in Shariah-compliant products; but, in order to be more visible among ongoing initiatives to enhance the competitiveness of the Islamic capital market industry, the country initiated Bursa Malaysia-i as the world's first end-to-end Shariah investment platform as of 2016. It is end-to-end, because not only investment instruments are Shariah-compliant but also trading channel is segregated from conventional parties and all post-trade functions such as depository, clearing and settlement facilities are done via Islamic financial institutions.

In order to start investing on Bursa Malaysia-i, any investor can engage with an Islamic Participating Organization, a registered broker that provides Islamic stockbroking services and can register and activate a Central Depository System and Shariah trading account with it. The former account consists of an electronic book-entry system used to record, maintain and keep track of ownership and security transfers. The two accounts are then presented to a licensed broker/dealer so the investor can open an account to trade through. The broker can then enter orders for the investor on the exchange's Automated Trading System.

Shariah-compliant products in the market trade just like conventional products, subject to the same trading, payment and settlement rules *(T+3)*. The market is open until Monday to Friday and daily trading sessions are carried out between 08:30am - 12:30pm and 02:00pm - 05:00pm. The platform has 15 Islamic Participating Organisations, of which, one is full-fledged while the remainder operate on a window basis. As at 31 December 2018, there are 689 i-Stocks, 4 i-Indices *(Shariah-compliant indices)*, 6 i-ETFs *(Shariah-compliant Exchange Traded Funds)*, 4 i-REITs *(Shariah-compliant Real Estate Investment Trusts)* and 4 Exchange Traded Sukuk in the market.

As of August 2019, the end-to-end Shariah-compliant Bursa Malaysia-i platform has seen trades coming from regional peers such as Singapore, Indonesia, Brunei Darussalam, South Africa and Uzbekistan, which demonstrated interest responsibly in a Shariah-compliant manner. Bursa Malaysia-i has been working closely with its Islamic brokers and other industry partners to provide awareness and education to the investing community and retail public on Shariah investing on Bursa Malaysia-i and Shariah-compliant investment instruments.

Bursa Malaysia-i platform has reached out to all segments of the investing community by ramping up engagements with retail investors to promote Shariah investing and have rolled out various roadshows and education programmes as well as collaborated with industry partners on programmes that reached out to the public and university students. Since 2017, Bursa Malaysia-i had conducted over 300 direct engagements with market participants including fund managers, institutional investors and over 90.000 retail investors as at August 2019.

Bursa Malaysia-i platform has notes a mounting demand from international and domestic investors who are seeking Shariah-compliant offerings as a diversification option to archive insulation from the volatility of other asset classes. To this end, Bursa Malaysia-i has increased the number of engagements with market participants to increase familiarity and utilization of Sharia-compliant offerings over many jurisdictions.

Ultimately, these efforts will result in greater participation in Bursa Malaysia-i, providing opportunities for investors to trade in a comprehensive range of exchange-related facilities in accordance with Shariah principles (Ministry of Finance Malaysia, 2018).

3.2.1.3. Labuan International Financial Exchange

The LFX was launched on late 2000 as a self-regulated organisation and a wholly-owned subsidiary of Bursa Malaysia with an authorized and paid-up capital of USD 5 mn and USD 100.000, respectively. Various financial products, such as equity, debt, and derivative instruments, are able to trade on LFX on both conventional and Islamic terms.

LFX is similar to Nasdaq Dubai in that its establishment is also motivated by the idea to become an international financial centre. In this regard, the LFX operates as a one-stop financial centre all trading facilities are effectively conducted. Trading of LFX securities are not subject to any tax considerations.

Being a web-based exchange, trading is executed via an electronic bulletin board where eligible securities are posted and participants, as known as trading agents, negotiate their orders on 7/24 basis.

Thanks to its capacity to deal with multi-currency financial instruments, its duty-free transactions, accessibility, flexibility, etc., LFX caters for the need of global market investors.

To date, the exchange has zero equity listings although it is a full-fledged exchange with listing and trading facilities. It has however managed to get some companies to list debt instruments (Tan, 2018).

3.2.1.4. Bourse Régionale des Valeurs Mobilière

BRVM is the regional stock market for all the eight francophone Member States in the WAEMU, namely, Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo. The

BRVM is the only fully integrated stock market in the world shared by several countries and run totally in digital format.

The BRVM started its operations on September 16, 1998. It is mainly an electronic trading platform which moves to continuous trading since September 16, 2013.

Stocks and bonds are traded on BRVM, where recent figures prove that stock and bond market capitalizations are USD 7,9 bn and USD 6,3 bn, respectively. There are 45 listed companies ranging from financial to utilities sectors. The exchange has 29 brokerage firms. These firms are known as Management and Intermediation Companies *(Sociétés de Gestion et d'Intermédiation - SGI)*, which are a category of financial institutions approved by the Regional Council for Public Savings and Financial Markets, the market's supervisory authority, with express exemption from banking regulations. All sales of securities listed on the BRVM are carried out through a SGI. A cross-border investor should open a securities account within an SGI. Trades are cleared and settled at the Central Depository/Settlement Bank *(Dépositaire Central/Banque de Règlement S.A.- DC/BR)*.

For each transaction, the stockbroker sends out a "transaction notice", a document attesting that the order has been executed properly. This document shows the number of securities that have been bought or sold, the price at which the order was executed, the brokerage fees to be paid to the broker, the stock market trading fees due to the BRVM and to the DC/BR, and the taxes and net amount of the transaction. The BRVM operates on a cash based market: the buyer must have liquid cash before making a sale and the seller must have securities before proceeding with sales.

BRVM holds the vice-presidency of the Executive Committee of the African Securities Exchanges Association *(ASEA)* and is member of the West African Capital Markets Integration Council *(WACMIC)*[78]. Since November 2016, it has been included in the MSCI Frontier Markets Index.

3.2.2. Platform-Based Trading Venues

3.2.2.1. Alternative Trading Systems

An ATS is a regulated trading venue under the Regulation ATS[79] of SEC, which serves as an alternative to trading at a public exchange. It meets the definition of "exchange" under federal securities laws but is not required to register as a national securities exchange provided that the ATS is subject to the exemption under Exchange Act Rule 3a1-1(a). An ATS must operate in line with the requirements set forth in Rules 300-303 of Regulation ATS in order to benefit from this exemption. To comply with Regulation ATS, an ATS must first register as a broker-dealer and file an initial operation report with the SEC on Form ATS before commencing operations.

[78] WACMIC was inaugurated on 18th January 2013 as the governing body for the integration of capital markets in the Economic Community of West African States. The over-arching objective of the Council is to set up a harmonized legislative framework for the financial securities transactions throughout the region. WACMIC comprises the region's Commissions and securities exchanges in WAEMU, Ghana, Nigeria, Sierra Leone and Cape Verde. WACMIC addresses three phases of integration in the West African market. The first phase, involving sponsored access for brokerage firms, is already in place. The second phase will see a "common passport", giving a regional stockbroker direct access to any market. The third and final phase will emulate the Euronext model, with a single trading platform and a single order book for all the markets.
[79] Please refer to https://www.sec.gov/rules/final/34-40760.txt for detailed information.

The conceptual framework and operational procedures of ATS has already been deliberated in a previous COMCEC report comprehensively. For this reason, this sub-section contents with various quotes that are selected in respect of their relevance with the aim of the report.

"It is mainly defined as an electronic trading system that automatically match buy and sell orders at specified price. Many ATSs are specifically designed to match buyers and sellers who trade in very large quantities (primarily professional traders and investors). Also, institutions will often use an ATS to find counterparties for transactions, instead of trading large blocks of shares on the normal exchange, a practice that can skew the market price in a particular direction, depending on a particular share's market capitalization and trading volume." (COMCEC CMR Forum Real Estate Working Group, 2015)

"Under SEC rules, any system exercising self- regulatory powers, such as regulating its members' or subscribers' conduct when engaged in activities outside of that trading system, must register as an exchange or be operated by a national securities association. This is because self-regulatory activities in the securities markets must be subject to the relevant regulatory authority's oversight. Thus any system exercising self-regulatory powers will not be permitted the option of registering as a broker-dealer." (COMCEC CMR Forum Real Estate Working Group, 2015)

"Also according to SEC regulations, an ATS system would have to use established, non-discretionary methods, under which such orders interact with each other and the buyers and sellers entering orders agree to the terms of the trade. A system uses established non-discretionary methods either by providing a trading facility or by setting rules governing trading among subscribers. For example, traditional exchanges' rules of priority, parity, and precedence are "established non-discretionary methods," as are the trading algorithms of electronic systems. Similarly, systems that determine the trading price at some designated future date on the basis of pre-established criteria (such as the weighted average trading price for the security on the specified date in a specified market or markets) are using established, non-discretionary methods." (COMCEC CMR Forum Real Estate Working Group, 2015)

"Adding to this, a trading system that uses established, non-discretionary methods would include a traditional exchange floor where specialists are responsible for executing orders. It would also include a computer system (whether comprised of software, hardware, protocols, or any combination thereof) through which orders interact, or any other trading mechanism that provides a means or location for the bringing together and execution of orders." (COMCEC CMR Forum Real Estate Working Group, 2015)

"ATSs have two major types as ECN and "dark pool". An ECN is basically a computerized stock exchange that offers stock traders an alternative to traditional exchanges like the New York Stock Exchange. The ECNs as a whole are known as the "lit" or "light pool" markets. The opposite of lit markets are "dark pool" markets. The difference between dark and lit trading lies in the transparency of trade information. Conceptually speaking, the distinctive character of dark trading is that there is no pre-trade transparency with respect to buyer and seller interests." (COMCEC CMR Forum Real Estate Working Group, 2015)

"The benefits of transacting over an ECN vs. a traditional exchange market are evident for a stock trader. An ECN seeks to remove the middleman by allowing a transaction to occur directly between market participants. ATSs have been credited with the massive reduction in trading transaction costs over time. Electronic exchanges removed the need for a trader to be on an

exchange floor, so besides saving transaction costs, they also opened up market access to millions of traders who now only need a computer and an internet connection to participate in trading. If a trader subscribes to an ECN, not only is he/she allowed to transact over the network, but she is also able to see the shares available to buy and sell on the ECN's order books. This allows a trader to get an idea of buy interest vs. sell interest in a stock and can give a trader a read on the likely near term price movement." (COMCEC CMR Forum Real Estate Working Group, 2015)

"ECNs do not function primarily as dark pools, where bids and offers for blocks of stock are matched anonymously. A dark pool is the name given to a network that allow traders to buy or sell large orders without running the risk other traders will work out what is going on and put the price up, or down, to take advantage of the order. They have been criticized for their lack of transparency and because the inevitable fragmentation of trading could lead to less efficient pricing in traditional open stock exchanges." (COMCEC CMR Forum Real Estate Working Group, 2015)

They were also connected with a widespread discussion about the implications of vital market features, such as investor fairness between investors, level playing field among venues and conflicts of interest between service providers and clients. However, the market share of ATSs in the form of lit ECNs is not significant when its total trading is considered (OECD, 2016).

As of April 2019, there are 54 ATSs, including off-exchange visible trading venues *(i.e. ECNs)* and dark pools (SEC, 2019).

3.2.2.2. Multilateral Trading Facilities

An ATS is known as an MTF in Europe where increased transaction velocity, reduced costs and incentivized trading have helped them gain traction. With the advent of MTFs, financial markets have become even more fragmented because single securities can now be listed at various venues.

MTF pursuant to MiFID II[80] means *"a multilateral system operated by an investment firm or market operator (Operators), which brings together multiple third-party buying and selling interests in financial instruments in the system, in accordance with non-discretionary rules, in a way that results in a contract in accordance with the provisions of Title II of the MiFID II[81]"*. Both equity-like products *(shares, depository receipts, ETFs, and other similar financial instruments)* and non-equity products *(bonds, structured finance products, emission allowances and derivatives)* are traded in MTFs. In accordance with provisions of MiFID II, Operators at least shall:

[80] Please refer to https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32014L0065&from=EN for detailed information.

[81] MiFID II also regulates Organized Trading Facilities (OTF), which is defined as *"a multilateral system which is not a regulated market (such as London Stock Exchange Main Market) or an MTF and in which multiple third-party buying and selling interests in bonds, structured finance products, emission allowances or derivatives are able to interact in the system in a way that results in a contract in accordance with Title II of the MiFID II"*. Unlike regulated markets and MTFs, Operators of OTFs will have discretion as to how to execute orders, subject to pre-transparency and best execution obligations. By definition, OTFs are introduced as a new type of trading venue to capture multilateral trading in non-equity instruments that currently take place outside of regulated markets and MTFs.

“

(...)

- *establish transparent rules and procedures for fair and orderly trading and establish objective criteria for the efficient execution of orders (Article 18/1).*

- *have arrangements for the sound management of the technical operations of the facility, including the establishment of effective contingency arrangements to cope with risks of systems disruption (Article 18/1).*

- *establish transparent rules regarding the criteria for determining the financial instruments that can be traded under its systems (Article 18/2).*

- *provide that there is access to, sufficient publicly available information to enable its users to form an investment judgement, taking into account both the nature of the users and the types of instruments traded (Article 18/2).*

- *establish, publish and maintain and implement transparent and non-discriminatory rules, based on objective criteria, governing access to its facility (Article 18/3).*

- *have arrangements to identify clearly and manage the potential adverse consequences for the operation of the MTF or for the members or participants and users, of any conflict of interest between the interest of the MTF, their owners or the Operators and the sound functioning of the MTF (Article 18/4).*

- *clearly inform its members or participants of their respective responsibilities for the settlement of the transactions executed in that facility (Article 18/6).*

- *have put in place the necessary arrangements to facilitate the efficient settlement of the transactions concluded under the systems of that MTF (Article 18/6).*

- *have at least three materially active members or users, each having the opportunity to interact with all the others in respect to price formation (Article 18/7).*

- *establish and implement non-discretionary rules for the execution of orders in the system (Article 19/1).*

- *have arrangements (Article 19/3):*

    - *to be adequately equipped to manage the risks to which it is exposed, to implement appropriate arrangements and systems to identify all significant risks to its operation, and to put in place effective measures to mitigate those risks;*

    - *to have effective arrangements to facilitate the efficient and timely finalisation of the transactions executed under its systems; and*

    - *to have available, at the time of authorisation and on an ongoing basis, sufficient financial resources to facilitate its orderly functioning, having regard to the* *nature and extent of the transactions concluded on the market and the range and degree of the risks to which it is exposed.*

(...)

"

In MTFs traders usually submit orders via an extremely speedy electronic system, where a sophisticated matching algorithm software engine pairs buyers with sellers. Brokers offer smart order routing and other strategies to secure the best price between many venues. In that way, investors who make a high volume of trades can benefit from a faster execution of orders than a traditional exchange.

Lastly, dark and lit trading fragmentation in the market is also a valid argument for Europe financial markets (OECD, 2016, pp. 126-130). For instance, UBS MTF utilizes two order books including the Dark Order Book and the Periodic Auction Order Book[82].

Most recently, there are 66 MTFs throughout Europe where 53 of them are located in the UK; and the rest is located in in Cyprus (1), Ireland (4), Italy (7), and Luxembourg (1)[83]. The largest MTF in Europe for listed securities is Euro MTF, which is discussed in Table 49, below. Apart from Euro MTF, some investment banks have also converted their internal systems into MTFs in recent years. For instance, UBS Group AG launched its own MTF that operates in conjunction with its internal crossing systems, while other international investment banks project to introduce their own MTFs as well. More recently, financial data and media company Bloomberg announced that it received authorization from the Netherlands Authority for the Financial Markets to operate an MTF, alongside its UK MTF, from Amsterdam throughout the EU[84].

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[82] Please refer to https://www.ubs.com/global/en/investment-bank/ib/multilateral-trading-facility.html for detailed information.
[83] Please refer to https://registers.esma.europa.eu/publication/searchRegister?core=esma_registers_upreg&keyword=MTF for detailed information.
[84] https://investinholland.com/bloomberg-receives-authorisation-from-the-dutch-authority-for-the-financial-markets/

Table 49: Euro MTF

Euro MTF is an exchange-regulated market, which the Luxembourg Stock Exchange (LuxSE) operates. When listing on the Euro MTF market, LuxSE is in charge of prospectus approval and the prospectus is drawn up according to under its own[85] "Rules & Regulations".

Euro MTF being exempted from a number of EU regulations *(e.g. the IAS Regulation[86] and both the Prospectus and Transparency Obligation Directives)* provides lighter transparency and ongoing disclosure obligations and issuers on this market are bound by cheaper and less stringent criteria for financial reporting. Both language and exchange regime are flexible in that multiple languages *(i.e. English, German, French, and Luxemburgish)* and multiple currencies are prevalent.

Launched in 2005, the Euro MTF market was the first MTF in Europe. In 2007, it combined the listing and trading activities for the very first time in the history of the LuxSE. As a wholly recognized market, Euro MTF welcomes any international issuer be it an emerging market sovereign or a major financial institution. Since LuxSE is solely responsible for the approval and listing process, the market provides a flexible solution for issuers. Today, Euro MTF represents 40% of all the securities listed on LuxSE. It has also seen a double-digit growth since 2013. As Figure 23 suggests, the last 10 years have proved that, even in times of crisis, Euro MTF is a feasible listing solution

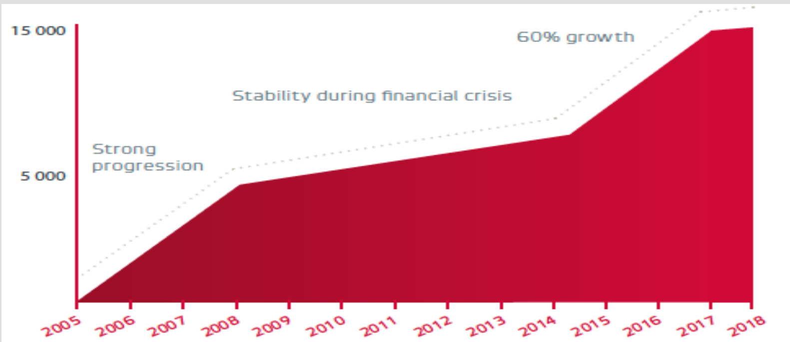

Figure 23: Number of listings in Euro MTF

As of 2018 year-end, securities listed in the Euro MTF market are composed of shares (1%), warrants (16%), investment funds (21%), and bonds (62%).

Source: *(Picco & Oly, 2018).*

3.2.2.3. ASEAN Trading Link

The ASEAN Trading Link was launched in September 2012 as a key milestone towards breaking down the barriers to cross-border stock trade and offering a single entry-point access to stock markets in the ASEAN region.

Its origination finds its roots in a commitment of ASEAN's member countries to an economic integration process through the introduction of a single market, namely the AEC in 2007. The

[85] LuxSE also operates Bourse de Luxembourg (BdL), which is an EU-regulated market. In that sense, when listing on the BdL market, Luxembourg's financial regulator, the Commission de Surveillance du Secteur Financier (CSSF), reviews and approves a prospectus.

[86] Financial reporting is in line with IFRS. However, other accounting standards, such as local Generally Accepted Accounting Principles (GAAP), are also accepted.

AEC had prioritized the goal of regional economic integration in its ASEAN Economic Community Blueprint of 2008 also known as "the AEC Blueprint" by 2015, including the free flow of goods, services, labour and capital between ASEAN member states (FTSE Russell, 2015).

In order to promote a single capital market that could compete with the larger likes of China and India, the goals of the AEC were threefold:

- Introducing ASEAN as a distinct asset class to retail and institutional investors,
- Reducing the cost of capital for issuers, and
- Enhancing the efficiency of trade and reducing local and overseas transaction costs.

As part of this process, firstly, ASEAN Exchanges started in 2011 with the collaboration of Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam Stock Exchanges, and secondly, the three markets of Malaysia *(Bursa Malaysia Berhad)*, Singapore *(Singapore Exchange Ltd.)* and Thailand *(the Stock Exchange of Thailand)* served as the foundation of the link. Jointly these three markets then offered nearly 3.000 listed companies with a market capitalisation of USD 1.4 tn. Together they accounted for some 70% of the total market capitalisation of ASEAN. Bourses in Vietnam, the Philippines and Indonesia were expected to eventually take part as well (SunGard, 2011).

The link was initially established to set up a trading community to mirror that of Europe under MiFID and was seen as an excellent conduit to explore the development opportunities of the region since it facilitated investors' access to a broader range of investment options throughout the participant markets. It would also boost business opportunities for brokers and listed companies.

The link was supposed to offer unique opportunities for retail investors and brokers especially in reducing costs and complexities of cross-border trading (Atan, 2012). More specifically, the link was structured in a way to allow brokers and international investors to connect directly and unlimitedly to the markets through one sole broker that offers a variety of investment options to clients in any of the three countries. Before the link's introduction, the broker had to set up a unilateral relationship with a series of vendors in different countries they would like to invest in. An additional broker would mean an increase in the network costs and new hardware for order routing, which in turn would increase the fees that eventually put a burden on the client's budget.

Table 50: Mechanics of the ASEAN Trading Link

The link has three main elements. The most important of these is a fibre network, known as the Intra-ASEAN network (IAN), which is the common hub connecting the various national exchanges. Each segment of the network has been built by local providers in each of the respective countries but owned by the ASEAN members and managed entirely by SunGard *(provider of the link)*. ASEAN Common Exchange (ACE) gateways, a series of hubs located at each exchange, provide the connecting point between the exchanges. The ACE is the point at which the local broker and the local exchange is connected. Although the local broker already connected to the exchanges own API, in order for the local broker to send and receive trades to the link partners they must be connected via the ACE. Each ACE is housed in a data centre either collocated with the exchange or within close proximity to the exchange at a telco. The final element is the Neutral Access Point (NAP) located in Singapore, which is designed to provide access for parties from overseas markets. Like the ASEAN participants these firms also need to have an account with a custodian and or an executing broker in each of the respective countries they plan to trade in. Access to the NAP can be by dedicated connectivity or via the web. Brokers are the key players acting as intermediaries for each exchange. Order routing involves local brokers *(i.e. originating brokers who are not members of the other exchange)* to have a bilateral agreement with at least one broker *(i.e. sponsoring brokers)* in the other exchange and open a trading account with them, since they are not members of that exchange. These agreements guarantee compliance and facilitate the settlement procedures. Once a trade order is submitted to a local broker, the broker submits the order to their trading floor via their local gateway. The order is then routed via the IAN hub to the foreign exchange's gateway and then to that exchange's matching platform where the order becomes the foreign broker's order, because the local broker provides the ID of their foreign broker partner while sending the order. The foreign broker executes the order on that exchange. The foreign broker can receive these orders real-time or at end-of-day. The local broker remains informed with the status of the order, which flows opposite to the trade's route. The gateways also act as the transfer point for the market data, which also flows opposite to the trade's route. In the settlement phase, the custodian handles the transfer of cash and securities just as it does in any cross-border trade, including currency conversion. As far as risk is concerned, the foreign broker tells the local broker of their risk requirements. On this basis, the local broker assigns their clients the same risk parameters. Naturally, according to their local compliance, each broker has their own risk requirements. An overseas institutional investor is also subject to the same process, except that the link is facilitated via the NAP. Again, the firms would require a custodian account or an executing broker in the relevant markets they intend to trade. The FIX[87] network helps in vendor neutrality, as it is common among global institutional investors today. Hence, the link welcomes orders based on FIX. For instance, since algorithms of most of the brokers in the region rely on FIX protocol, their trading algorithms can be easily provided to clients.

Source: *(SunGard, 2011; Steve, 2012; Aiyer, 2017)*

[87] The Financial Information eXchange (FIX) protocol is an electronic communications protocol introduced in 1992 for international real-time information exchange associated with the securities transactions and markets.

Overall flow of the link is portrayed as follows:

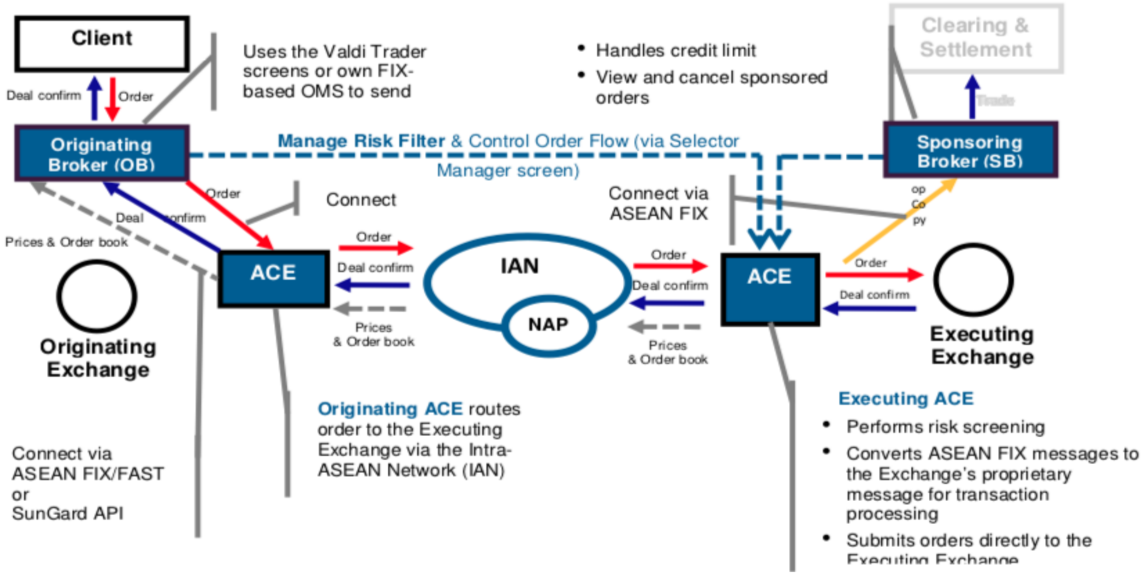

Figure 24: Workflow of ASEAN Trading Link
Source: *(SunGard, 2011; Steve, 2012; Aiyer, 2017)*

In this respect, main expectation was increased liquidity and volume based on the potential increase in investor access. However, the link did not make much of difference when compared to brokerage firms already had their own access to multiple markets and only Thailand saw an initial increase in liquidity as depicted in Figure 25 below:

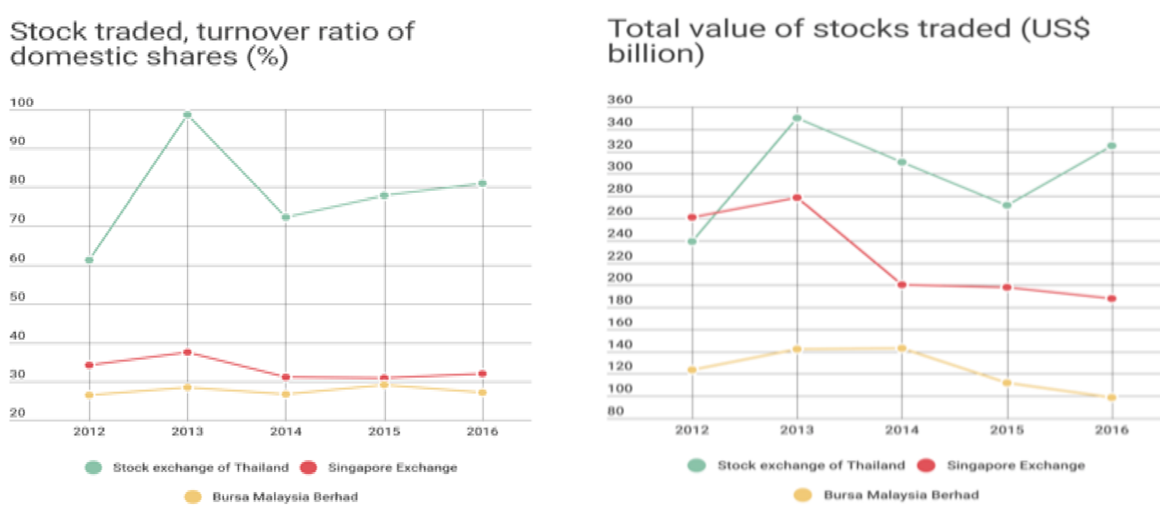

Figure 25: Stock traded data of the Link
Source: *(Ward, 2017)*

There were several inconveniences to the link. The lack of post-trade linkages such as a centralised clearing, settlement and custody system meant that it was not a fully operational end-to-end platform. This rendered it unwanted for day-trading investors. Furthermore, there was also a problem with the absence of regulatory harmonisation in the market. For each market, different capital controls and exchange jurisdictions dissuaded global institutional investors. Another significant weakness was argued to be its convoluted structure (Menon, 2018). That some countries postponed their participation was also a bad impression. For instance, IDX delayed its participation due to infrastructural reasons. As a consequence, the termination of the link was publicized by Singapore Exchange in one of its consultation paper[88] in October 2017.

But had the link been given the opportunity for reworking, the long-term effects could have been highly positive. There have already been certain initiatives to tackle with the problems. In 2015, Singapore, Malaysia and Thailand launched a mutual recognition framework for CIS in order to provide fund managers with a simplified process of authorisation for cross-border funds offerings in an attempt to increase harmonisation. Additionally, the three countries signed an agreement to launch a streamlined review framework for the ASEAN Common Prospectus, which would promote equity or debt securities offerings in multiple jurisdictions, provided that the prospectus is compiled in accordance with the ASEAN Disclosure Standards, thereby shortening the process, and removing the uncertainty of market timing for issuers (Ng, 2015). Clearing and settlement procedures were also on the table. In 2014, the ASEAN exchanges appointed Deutsche Bank as the clearing body to centralize the clearing services before launching an ASEAN clearinghouse in the future (Ward, 2017).

Overall, the link was an exciting opportunity to start the single market transformation. It did not have much time to achieve integration, which is a slow and gradual process but brings with it a wealth of possibilities. In other words, the platform needed the time to develop a supranational regulatory body like the MiFID. With a central regulatory body and legal harmonisation, the ASEAN Trade Link could have competed for global investment in the Asia-Pacific region. Aligning settlement systems, trading hours and company disclosure requirements would have attracted more retail brokers and channelled more international funds into the ASEAN markets.

Today, the integration of ASEAN's capital markets starts from scratch again. Singapore and Malaysia recently announced plans for a new trading link between their stock markets by the end of 2019 that will help lower trading costs and encourage cross-border investments. The new trade link between the two countries' exchanges is expected to allow investors to trade and settle shares listed on each other's stock market in a more convenient and cost efficient manner, benefiting retail investors, regulators of both countries said in a joint statement. The link would enable seamless access between the markets, which have a combined market capitalization of more than $1.2 trillion and about 1,600 public listed companies as well as covers post-trade arrangements such as clearing and settlement of the stocks traded. The Monetary Authority of Singapore (MAS) and MSC will set up cross-border supervisory and enforcement arrangements (Menon, 2018).

[88] There was no official announcement. The consultation paper only involved the statement: *"15.4(b) (...) With effect October 6, 2017, the ASEAN trading linkage will no longer be in operation"* (Singapore Exchange Limited, 2017).

3.2.2.4. Latin American Integrated Market

The Latin American Integrated Market *(Mercado Integrado Latinoamericano - MILA)* is the outcome of an agreement signed by the Santiago, Colombia and Lima Stock Exchanges in 2009 in order to set up a regional market for Chilean, Colombian, and Peruvian investors to make cross-border transactions of equities.

MILA began operating in 2011. In June 2014, within the framework of a meeting of the Pacific Alliance, Mexican Stock Exchange and INDEVAL officially joined MILA, making the first transaction with this market, December 2, 2014.

MILA, in this regard, virtually integrates the stock markets of 4 Latin American countries and defines eligible assets as well as qualified brokers in each of these markets. Currently, there are 473 firm shares from the Chilean market, 90 firm shares from the Colombian market, 182 firm shares from the Mexican market, and 284 firm shares from the Peruvian market, which are approved to be eligible[89]. There are bilateral agreements between the brokers of each market as shown in Table 51 below.

Table 51: Bilateral Agreements Between Qualified Brokers in MILA

MILA Countries	Chile	Colombia	Mexico	Peru
Chile		9	2	9
Colombia	9		3	10
Mexico	2	2		2
Peru	8	8	2	

Source: *Author's own work based on Mercado MILA.*

In conclusion, the impact that MILA had at the beginning of the integration process would not have been as expected from an empirical point of view. In concrete terms, the profitability, risk and correlation effects were marginal, while the volume effect was negative (Bolaños et al., 2015).

While the MILA exchange is currently the largest exchange in Latin America, trade volume is substantially lower than that of Brazil's and even that of Chile and Mexico. The project has experienced problems in overcoming obstacles in the alignment of tax and legal systems and exchange rates. Proponents would like to see reduced transaction costs and enhanced trade efficiencies lead to a market where listing a security in any of the participating exchange will allow immediate recognition in all of them. Freeing up each country's national pension funds to invest in the securities of other country's is another issue.

Participants are thus concentrated on addressing various items such as the absence of harmonized and common regulatory framework for taxation, CIS operations and post-trade facilities; legal restrictions on the regional and cross- border involvement of institutional investors; and the trading model (*such as order routing through local brokers, as opposed to direct (remote) access for regional participants)*, as the most important impediments to integrate further (Peterhoff et al., 2016).

[89] Please refer to http://mercadomila.com/en/issuers/ for detailed information.

3.2.2.5. Stock Connect & Bond Connect

<u>Stock Connect</u>[90]

Stock Connect is a collaboration between SEHK, SSE and SZSE that enables overseas *(including Hong Kong investors)* and Mainland Chinese investors to trade securities in each other's markets through the trading and clearing facilities of their home exchange. It involves two programs, "Shanghai-Hong Kong Stock Connect" and "Shenzhen-Hong Kong Stock Connect", which commenced trading in 2014 and 2016, respectively. Both Stock Connects are securities trading and clearing linked programs developed by HKEx, SSE/SZSE and ChinaClear. HKSCC and ChinaClear are responsible for post-trade facilities associated with the trading activities performed by market participants.

The Shanghai-Hong Kong Stock Connect includes a northbound and a southbound connectivity. Under the former, overseas investors, via their Hong Kong brokers and a financial intermediary registered with the SEHK can trade SSE-listed eligible China A-Shares[91] by routing orders to SSE. In terms of the latter, however, PRC investors can trade certain SEHK-listed stocks listed.

The Shenzhen-Hong Kong Stock Connect comprises a Northbound and a Southbound Trading Link as well. The links' trading processes are similar to those of the Shanghai-Hong Kong Stock Connect.

Trading under both Stock Connects are subject to a daily quota[92]. The daily quota limits the maximum net buy value of cross-border trades under the Stock Connects each day.

[90] The term "Stock Connect" is not a term specific to the Chinese market indeed. It can be used for all multilateral linkage initiatives and it is expected to gain traction in the world. Most recently, Shanghai-London Stock Connect has been developed jointly by SSE and London Stock Exchange Group, with the support of both the UK and Chinese governments and in collaboration with regulatory authorities. This Stock Connect allows eligible companies listed in each market to issue, on the other exchange, a depository receipt that can be traded under local rules in the local time zone. Please refer to https://www.lseg.com/markets-products-and-services/our-markets/shanghai-london-stock-connect/how-it-works for detailed information.

[91] These are the shares of mainland China-based companies that trade on the two Chinese stock exchanges, i.e. SSE and SZSE. Historically, these shares were only available for mainland investors due to foreign investment constraints. However, since 2003, selected foreign institutions have been able to buy these shares through the Qualified Foreign Institutional Investor scheme. Established in 2002, this system allows specified licensed international investors to trade on mainland China's stock exchanges. Stock Connect gives international investors an opportunity to buy A-shares without such restrictions they come with.

[92] In order to prevent the risk of large cross-border fund flows, a daily quota is set for both Stock Connects. That is, RMB 13 billion *(about USD 2 bn)* for the Northbound Trading and RMB 10,5 billion *(about USD 1,7 bn)* for the Southbound Trading.

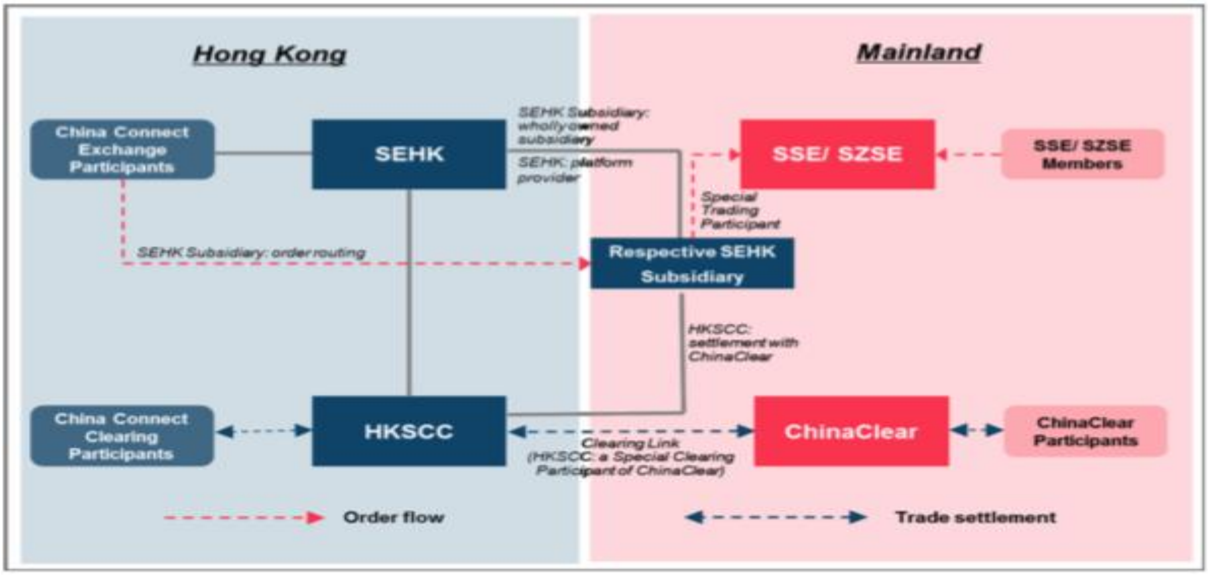

Figure 26: Overview of northbound trading and clearing in Stock Connect
Source: *(HKEX, 2018)*

Settlement process flow is as follows:

- Once a transaction is matched, HKSCC will put on-hold[93] the relevant securities in the relevant stock account of the delivering CCP.

- Meanwhile, HKSCC will issue a payment instruction to the designated bank of the CCP for money settlement. The designated bank of the receiving CCP will have to instruct payment to the designated bank of delivering CCP via the real-time gross settlement system

- Upon receipt of payment confirmation from Hong Kong Interbank Clearing Limited, HKSCC will effect the delivery of the relevant securities from the delivering CCP to the receiving CCP immediately.

Investing through the Stock Connects are exposed to following risks[94]:

Quota Limitations

As mentioned, trading under both Stock Connects are subject to a daily quota. When it is exceeded, only sell orders would be permitted while buy orders would be rejected. Therefore, such limitations may restrict the relevant investor's ability to invest in cross-border securities on a timely basis.

[93] HKSCC holds them by means of an omnibus account in its name registered with ChinaClear for both Stock Connects.
[94] These are risks commonly emphasized for and disclosed to investors in prospectuses of major funds. Please refer to https://solutions.vwdservices.com/products/documents/5B56224C-F323-4070-A1EB-7D5252DF8F4C for one of these prospectuses.

Clearing and Settlement Risk

HKSCC and ChinaClear developed connections for clearing and made relevant arrangements for mutually participation in each other's systems to promote cross-border trade clearing and settlement. With respect to cross-border trades initiated in a market, the clearing body of that market would on the one side clear and settle with its own clearing members, and on the other side undertake to fulfil the clearing and settlement obligations of its clearing members with the counterparty clearing body.

ChinaClear, as the national CCP of the PRC's securities market supervised by the China Securities Regulatory Commission, handles a broad network of clearing, settlement and depository infrastructure under a comprehensive risk management scheme. In the remote event of a ChinaClear default, HKSCC would only assist its clearing participants in recovering of their outstanding stocks and funds from ChinaClear subject to legal availabilities. In such a case, investors may suffer delays or their losses even may not be fully compensated by ChinaClear.

Suspension Risk

SEHK, SSE and SZSE can suspend trading when they deem necessary for the sake of achieving conditions for an orderly and fair market. In that case, investors would experience difficulties in accessing the PRC market.

Differences in Trading Days

Investors are able to carry out their transactions through the Stock Connects only when both connecting markets are available for trade and when corresponding banks are open on settlement days. Hence, investors may adversely affect from price fluctuations when any of the Stock Connects is out of trade.

Operational Risk

The Stock Connects rely on the proper operational functioning of their corresponding market participants. In other words, market participants should meet a certain level of information technology capacity, risk management and other pre-determined criteria. When these operational systems do not function properly or are not adapted to changes and developments in both markets, trading through the program could be disrupted.

Regulatory Risk

Since the Stock Connects are newly established, the legal framework is subject to change from time to time which may have adverse effects for investors.

Recalling of Eligible Stocks

When a stock is not treated as an eligible stock anymore, it can only be subject to sale but restricted from being purchased which may impact the investment decisions of investors.

Disclosure Requirements

Under Stock Connect, trading is subject to market rules and disclosure requirements in the PRC stock market. Any changes in these rules and requirements regarding China A-Shares market may affect stock prices. According to prevailing PRC rules, an investor, who retains more than 5% of the shares in a SSE- or SZSE-listed company, is obliged to make a disclosure within 3 business days and during times of trade suspensions. She is also obliged to notify the public with any shareholding changes and comply with related trading constraints under PRC rules.

No Protection by Investor Compensation Fund

Trading on SSE and SZSE shares via the Stock Connects is executed by brokers who may default in settling their obligations. Since such default matters in relation to SSE and SZSE shares via Stock Connects do not involve products listed or traded in SEHK or Hong Kong Futures Exchange Limited, investments are out of the scope of the Hong Kong's Investor Compensation Fund, which compensates any investor who incurs losses in case of default of a licensed financial service provider associated with exchange-traded products in Hong Kong, Thus, investors are subject to the risks of broker default in its trading in China A-Shares through the Stock Connects.

Conversion Risk

The investor, whose base currency is not Renminbi, may be exposed to exchange rate risk arising from the need to use Renminbi for SSE and SZSE securities investments through the Stock Connects. During this process, investors may incur costs of conversion. The currency may fluctuate and where Renminbi has depreciated, investors may end up with loss when it converts their funds arising from transaction of SSE and SZSE securities into its base currency.

Transaction Costs

Adding to trade charges and stamp duties in relation to trading of shares within Stock Connects, investors executing their trade through Stock Connects should also keep in mind any potential portfolio fees, dividend or income taxes that would be enforced by relevant authorities.

Taxation

Dividends and interest paid by PRC companies as well as capital gains associated with PRC securities are subject to a tax of 10%. Nevertheless, China A-Shares have been exempted from capital gains tax temporarily since 2014. Such uncertainties, alongside the likelihood of any potential change in legal provisions may be treated retrospectively, may have adverse affects on investors.

Bond Connect

Bond Connect is another novel mutual market access system that enables Mainland China and overseas investors to trade in the bond markets of each other via links established between relevant Chinese and Hong Kong counterparties. It simply connects CIBM with overseas investors. Northbound Trading kicked off in 2017, allowing overseas investors to trade on the CIBM via mutual access trading, custody and settlement agreements. Southbound Trading will be explored at a later stage.

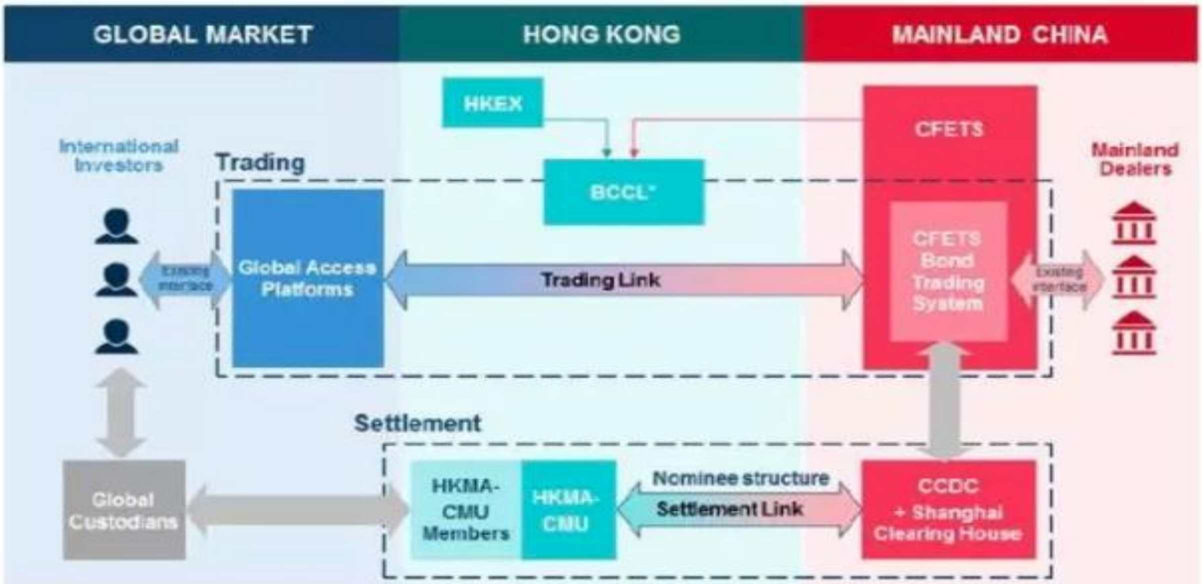

Figure 27: Overview of northbound trading and clearing in Bond Connect
Source: *(HKEX, 2018)*

Bond Connect intends to improve the investment efficiency and flexibility in the CIBM. This is achieved by facilitating the market access criteria, using the Hong Kong trading infrastructure to connect to CFETS, removing the investment quota and bond settlement agent, all of which are necessary conditions for direct investments in the CIBM.

Participants to Bond Connect may even register with an ETP, such as TradeWeb, which connects directly into CFETS. Such platforms would enable trading with designated onshore Bond Connect market makers using relevant trading protocols such as the RFQ. These market makers provide tradable prices through CFETS.

Settlement is executed through the link between the CMU and the ChinaClear. For DvP transactions:

- Settlement information must be matched and confirmed in the ChinaClear system by 10:00, where securities are tagged for the transaction and blocked.

- Mainland China trading counterparty *(the buyer)* provides with the settlement funds to CMU by 13:00.

- After 17:00 once fund receipt is confirmed by CMU, China Central Depository and Clearing Co., Ltd., the national central depository, will send the securities to the Mainland China bond dealers. This is when CMU transfers the settlement funds to the sub-custodian for further credit to Global Custodian’s account.

Investors are subject to volatility and liquidity risks because of inadequate trading volumes of specific debt instruments in the CIBM, which may cause substantial price fluctuations. Other main types of risks differing from those associated with Stock Connects listed as follows[95]:

Asset Segregation

Bonds purchased are kept in a three-level segregation structure through the onshore and offshore CSDs in three levels. They are held onshore with the ChinaClear in the name of the Hong Kong Monetary Authority *(HKMA)*. Investors, therefore, are the beneficial owners in the CMU.

Clearing and Settlement Risk

CMU and ChinaClear have established clearing links and they have become a participant of each other to promote clearing and settlement of cross-border trades.

ChinaClear has introduced its framework for risk management under the supervision of the People's Bank of China. In the remote event of a default, CMU would only assist its clearing participants in recovering of their outstanding bonds and cash from ChinaClear by means of legal channels available. In such a case, investors may suffer delays or even may not obtain a full recovery for the losses from ChinaClear.

Regulatory Risk

Since the Bond Connect is newly established, the legal framework is subject to change from time to time which may have adverse effects for investors. Moreover, economic policy uncertainties might have sizeable impacts on interest rates, which in turn cause challenges in portfolio management.

Taxation

Investors may be subject to taxation risks due to uncertainties in collection process for taxes and potential changes in current tax regime.

3.2.2.6. The Central and Eastern Europe Stock Exchange Group

Central and Eastern Europe *(CEE)* Project is the outcome of agreement between Budapest, Ljubljana, Prague and Vienna Stock Exchanges, which collaboratively founded the CEE Stock Exchange Group *(CEESEG)*. The strategy of this integration was originated by the market operator of Vienna Stock Exchange *(Wiener Börse)* in an attempt to strengthen its international role and to improve liquidity and trading volumes. In line with this strategy, it acquired the majority interests of Budapest Stock Exchange together with an Austrian banking consortium in 2004. In 2008, Wiener Börse expanded its network in the region by acquiring majority interests of Ljubljana and Prague Stock Exchanges and by building close relationships with central European stock markets. In 2009, CEESEG AG, the new joint activities company, was launched, taking four member exchanges of CEESEG under its wings (Dorodnykh, 2013). The

[95] These are risks commonly emphasized for and disclosed to investors in prospectuses of major funds. Please refer https://solutions.vwdservices.com/products/documents/5B56224C-F323-4070-A1EB-7D5252DF8F4C for one of these prospectuses.

company is responsible for CEESEG's strategic and financial management and the administration of its majority-owned subsidiaries. The business operations of the regional markets are run by member exchanges.

Essential drivers of the integration were the initiation of the common trading platform based on Xetra *(provided by Deutsche Börse)*[96] and the introduction of a joint clearing system. CEESEG is a naive illustration of network integration, bringing members of CEESEG closer to each other for the sake of full integration. Sharing the same trading engine has made regional markets simple to access through a single platform (Dorodnykh, 2013).

In 2015, however, CEESEG AG sold its stakes in Budapest and Ljubljana[97] stock exchanges to Hungarian National Bank and Zagreb Stock Exchange respectively, as part of its plans to focus on a new strategy based on ICT and data service provision (Resch & Kuhtic Nalis, 2015; Resch, 2015; Bakie, 2015).

As of May, 2019 domestic market capitalization of CEESEG with 773 listed companies is EUR 143 bn *(main contribution comes from Wiener Börse with a market cap of EUR 119,1 bn raised by 719 firms)* (CEESEG AG, 2019).

CEESEG have always evaluated the possibilities of setting up a common clearing system for all CEESEG members, since the long-term goal has been to harmonize the market segments, the general terms and conditions of business as well as clearing and settlement. However, the stock exchanges remaining in the group, i.e. Wiener Börse and Prague Stock Exchange, continue to utilize their own country's post-trade facilities. For the former, clearing and settlement of all trades is provided by Central Counterparty Austria GmbH, whereas these services are performed by the Central Securities Depository Prague for the latter case. This is still a consideration for related parties in that it is strongly recommended that they should actively work in a joined approach towards the implementation of a CCP (Nießen & Schuh, 2018).

3.2.2.7. The South Eastern Europe Link

The South Eastern Europe Link *(SEE Link)* is an innovative regional platform initially linking exchanges in Bulgaria, Croatia and Macedonia[98]. The SEE Link is in effect a joint stock company *(just like CEESEG AG)* founded in Macedonia in 2014.

The conceptual framework of this cross-border project relies on the integration of regional stock markets without merger or business combination, using only technology that allows participating exchanges to maintain their independence and to enable investors to approach those markets more easily and efficiently through a local broker.

[96] Xetra is a fully electronic trading venue for trading on the cash market *(equities, bonds and structured products)*. It has recently migrated cash market trading to the modern trading infrastructure T7. The migration to T7 is the implementation of a brand new trading system representing reduced latency, increased throughput and strengthened flexibility for the participants.
[97] Ljubljana Stock Exchange is now a member of SEE Link as will be discussed in the next sub-section.
[98] SEE Link initiative is fully supported by EBRD via its shareholders special fund providing a EUR 540.000 funding to launch an electronic system for order routing. The SEE Link company originally was held by three founder exchanges with an equal share of ownership. Then, newly participating stock exchanges extended EUR 80.000 in capital, which increased the financial capacity of the link.

Today, it has combined stock market capitalization of over USD 50 bn allowing order routing of more than 1.200 securities listed on Bulgarian *(BSE)*, Bosnia and Herzegovina *(BLSE and SASE)*, Croatian *(ZSE)*, Macedonian *(MSE)*, Serbian *(BELEX)*, Slovenian *(LJSE)* and Greece *(ASE)* Stock Exchanges.

Through any of the more than 30 registered brokers in each of these eight exchanges, an investor can easily access a wide range of financial instruments via the link. This option enables the investors to trade on member exchanges efficiently without opening an account in the relevant country. Trade orders in can be routed by means of one single broker who is the member of the link.

Two types of brokerage exist. Executing brokers have rights to trade on local markets of the SEE Link. They receive orders from Originating brokers through the system and send these orders to local exchanges in order to be executed provided that mandatory checks are conducted. Executing brokers disseminate relevant information into the SEE Link system immediately after the trade is executed. Originating brokers is entitled to obtain real-time market data through the system on behalf of the Executing broker. From a legal perspective, both brokers must enter into bi-lateral agreements with each other as well as the SEE Link.

The order routing system of SEE Link is based on a FIX protocol approach[99] which offers a single entry point feature for sharing messages among participants with different profiles, information admissions and rights. The system's primary goal is to promote order-routing for cross-border trades between financial service providers from multiple countries.

Figure 28 portrays conceptual framework of the model:

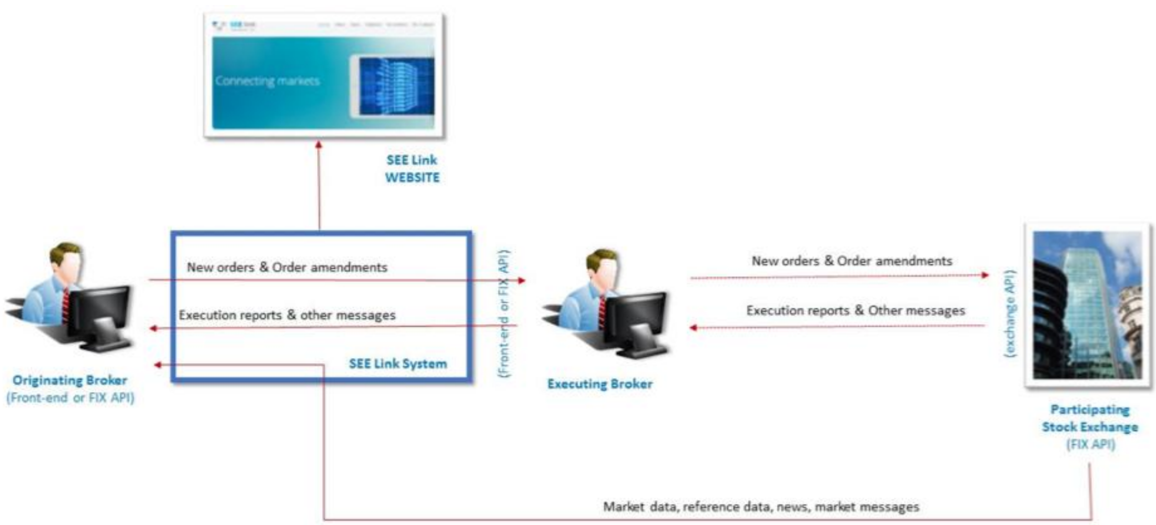

Figure 28: SEE Link Model
Source: *(SEE Link, 2016)*

[99] Please refer to http://www.see-link.net/UserDocsImages/documents/FIX_Interface_20160322.pdf and http://www.see-link.net/UserDocsImages/news/04122014/SEELINK_handouts-FINAL.pdf for detailed information.

The primary set of instruments the link provides is common and preferred shares, subscription rights and government bonds. The link currently allows only for market, limit and iceberg of orders.

While initially focusing on bringing more exchanges to the SEE Link, the platform is now in the phase of connecting more brokers, and increasing the number of trades. The integration of the trade environment is almost completed and linking the post-trade environment in the SEE Link countries is one of the logical next steps to improve market liquidity. The feedback received from the market participants clearly showed that the specific clearing and settlement solutions, which vary from country to country, are seen as the major impediment for the further development of the SEE Link markets. Currently, there is no direct link between the post-trade institutions in the SEE Link countries in place. For this reason, settlement and clearing facilities are provided through executing brokers.

In this regard, SEE Link recently intended to deploy an innovative solution for settling cross-border trades developed by Vienna-based Raiffeisen Bank International (RBI), one of the leading custodian banks in CEE. RBI's Group Securities Services Operations Centre will act as settlement engine for trades executed on SEE Link. The bank has already linked up with ten CSDs in ten countries of the region to provide its clients with easy access to those markets. Its solution is expected to enable SEE Link to overcome settlement and asset servicing challenges caused by different currencies and legislations across participating countries (SEE Link, 2019).

In this setting, however, the impact on overall turnover in the markets has not lend itself to the project's objectives. High trading costs as well as complicated clearing and settlement facilities have been considered as the primary reasons of why participant countries have not grasped the benefits of the SEE Link yet (World Bank, 2019).

3.2.2.8. The African Exchanges Linkage Project

While Africa's capital market potentials are still unexplored, several initiatives aimed at embarking market reform, liquidity, integration, and technical development are on the way. One of these programmes is the African Exchanges Linkage Project (AELP) initiative[100].

The AELP is a joint undertaking by the ASEA and the African Development Bank (AfDB). It is aimed at addressing the lack of depth and liquidity and promoting information sharing in the African capital markets. It is envisaged that AELP would allow cross-border visibility, open up markets for investors to trade in any of the linked markets, and lead the way for innovations that support diversification needs of investors.

[100] Another initiative is undertaken by the Committee of Southern African Development Stock Exchanges *(CoSSE)* fostering the integration of capital markets among South African Development Community member countries by promoting the harmonisation of trading, clearance and settlement procedures. CoSSE was established to drive the development of a harmonised, integrated and credible regional securities/capital market capable of mobilising capital to address the sustainability challenges of smaller national markets. However, minimal progress has been achieved yet due to financial and capacity concerns. There are currently no networks or relationships among SADC stockbrokers that foster exposure and facilitate access to other African markets. As a result, most stockbrokers do not trade with other African stocks on their exchanges, owing to a lack of demand and interest from their clientele. The region also does not have the infrastructure to enable the automated cross-border trading that the proposed interconnectivity project aims to achieve. Another constraint is that the costs associated with executing cross-border trading may increase overall transaction costs; and the existence of tight controls by central banks lengthens turnaround times, resulting in a loss of trading times for stockbrokers (Shipalana & Moshoeshoe, 2019; Mahabirsingh, 2010).

AELP initially comprised of six pilot stock exchanges, namely Nairobi Securities Exchange, Nigerian Stock Exchange, Johannesburg Stock Exchange, Stock Exchange of Mauritius, Casablanca Stock Exchange, and BRVM. EGX recently joined the AELP to foster greater integration (Reuters, 2019). These seven exchanges collectively have a market capitalization of over USD 1,4 tn representing more than 90% of Africa's stock markets capitalization.

Benefits anticipated from the AELP include;

- Increased liquidity
- Enhanced market openness
- Increased foreign participation
- Increased domestic institutional participation across Africa
- African issuers raising capital and floating issues across the continent
- Creation of a bigger financial market
- Convergence towards international standards
- Capacity Building and information sharing

The AELP would link all brokerage firms in securities markets in order to increase cooperation between the African exchanges.

The AELP was officially introduced in 2015 and in its initial phase, launched a Steering Committee involving Principals of the Exchanges and Officials from the AfDB and a Technical Committee, involving technical experts from the Exchanges and their CSD counterparts, as well as a sub-technical committee made up of legal experts. Recently, the project has drafted a feasibility study and an Economic Sector Work report; execution of a non-disclosure agreement by all participants; a number of technical workshops; and widespread national consultation efforts. It is expected a project management office is set up to ensure the projects stays on course, and the successful application for funding from the capital market division of the AfDB (ThisDay, 2017).

Evaluative Summary

Takeaway #1 – While various initiatives take place throughout the world in order to achieve financial integration, electronic trading platforms based on the interconnectivity of stock exchanges via a hub and spoke model, wherein the hub is the platform and spokes are the national exchanges, is gaining traction especially in emerging markets.

- Deepening financial links by harmonising various national policies, unifying existing financial institutions and/or developing new ones to facilitate collective goals in real estate securities markets could prove to be a real hurdle for cooperation and progress among the COMCEC member countries (Shipalana & Moshoeshoe, 2019).

- A simple model of integration that involves installing common electronic trading platforms by using technology would fit properly to cross-border investments since it would be possible for any investor to trade real estate securities in any other COMCEC member country market from home through their national stock exchange. This report names that model as the CRESCENT Link, which provides connectivity in hub and spoke topology.

Takeaway #2 – For such a massive technological undertaking, the order router network systems require a fit with existing technological systems in use in stock exchanges; compliance with the global standards for pre-trade orders *(FIX protocol)*; and the existing networks already used by local and foreign investment institutions and stockbrokers.

- Many COMCEC member countries already have automated systems in their stock exchanges. However, stock exchanges, as the ICT providers, would have to upgrade their interfaces to the specified model. Moreover, appropriate bi-lateral contracts, MoUs and protocols would have to be signed among parties in due course.

- A technical due diligence study would be required with respect to the types of real estate securities that would be traded via the link, potential parties that would assume responsibility by becoming early adopters, and specifications of standard operating procedures that would be common for all participants.

Takeaway #3 – Clearing and settlement should be handled with care as most of the initiatives aiming financial integration have suffered from the lack of inadequate post-trade facilities.

- There is a growing need to make use of global clearing houses *(i.e. CCP)*, to implement a common settlement cycle, and for all exchanges to have electronic settlement systems in place. Absence of a common framework for post-trade facilities *(i.e. an inadequate level of integration of clearing, settlement, and operational process)* has often been an impediment in the market.

- In any case, it is important to have effectively managed and robustly supervised clearing and settlement processes in place. Thus, these processes must be subject to bi-lateral arrangements which are signed by counterparties of the COMCEC member countries.

4. A COMMON TRADING LINK FOR CONNECTIVITY: A FEASIBILITY STUDY

" Deep capital markets and integrated financial systems can help to raise funding for countries' long-term infrastructure and social development programmes through stocks, bonds and other investment offerings. In this respect, a modern and integrated supranational economy could be achieved by means of sustainable capital market development.
Efforts could be made to increase the cohesion of individual capital markets' regulatory frameworks, operational structures and information systems with the view to achieving a seamless regional market. This in turn could allow disparate national market entities to begin functioning as a single regional entity. Nevertheless, local markets are best suited to meet the needs of local economies, especially as the use of technology to create linkages between national exchanges can improve the offering to local users. Exchanges could also continue to operate different platforms, regulate their own listings and regulate their own trading, but with interconnectivity and accessibility of trading on others." (Shipalana & Moshoeshoe, 2019).

An integrated secondary market for securities, if formalized as a stock exchange or an ETP, with its lexical meaning, would require, even pressurize for, a full harmonization of rules, regulations, policies and procedures to achieve a financial integration at one extreme. Such an integration would be criticized on the grounds that it would reduce a country's national sovereignty in case countries', especially the ones with smaller economies, concessions do not constitute a mutually beneficial deal (Jovanovic, 2014).

At the other extreme, however, employing a hub and spoke model that allows easy access to multiple markets with low regulatory prerequisites would also be a feasible integration solution. Since such a model would be based on the mutual recognition of partner countries' qualifications granted by national authorities, no national authorities would become powerful over the other. In this manner, each individual stock exchange would turn into a point of access to an international market via a network consisting of a series of links among stock exchanges upon a hub, which allow trading of securities internationally.

In this context, evaluations of previous chapters reveal that real estate securities would be an important means for attracting foreign investment in the COMCEC member countries, where demand for real estate is expected to grow. Hence, it is important to establish secondary markets for these securities to provide liquidity into the system. Given the fact that, countries differ significantly in legal and institutional frameworks, a one-size-fits-all approach that intends to employ a strict form of regulatory harmonization does not seem to be appropriate. Rather, a simple electronic trading platform based on the interconnectivity of stock exchanges via a hub and spoke model, in which real estate securities in one market could be accessed and traded from another market, is a more convenient option, provided that pre-trade, trade and post-trade facilities are well-designed.

At this point, it would be timely to remind that according to a previous COMCEC study regarding the feasibility of realizing a secondary market for real estate securities, which was built on the findings of a comprehensive survey, the option of establishing an ETP have found to be the most convenient type of venue with its practicalities associated with trading, disclosure, listing, clearing and settlement requirements (COMCEC, 2016). The survey that this report is built on reveals similar findings upon questioning the most suitable structure for a common trading venue among the COMCEC member states. On the other hand, as discussed earlier, the COMCEC member countries propose an ETP that has an exchange-like structure encompassing a wide range of harmonized rules and regulations.

In this study, however, the term "ETP" is simply defined as a platform where the transfer of ownership of real estate securities and the matching of bid and ask orders is executed by an electronic system. This very definition is used to define the CRESCENT Link, a simple trading platform where investors are provided simultaneous and real-time remote access or connectivity to a variety of real estate securities already listed and traded in several countries who mutually recognize each other's rules and regulations.

Indeed, there are many forces that provide support for the CRESCENT Link. These could be grouped in a threefold manner: (i) ongoing ICT developments which lower costs; (ii) specific market infrastructure that trigger demand; and (iii) the legal and institutional framework leading to changes in business models of dealers (BIS, 2016). A linking structure has numerous advantages in terms of robustness, flexibility, cost and performance. The question is: is launching the link dedicated to real estate securities feasible?

Answering this question is a major challenge for a number of reasons. First, it is an important decision, which will likely involve significant investment of time and money. Second, there are several factors to consider including capabilities, ICT, regulations, staffing, legal and compliance. Third, but not last, understanding the differing capabilities of the link is the first step to choosing the best execution venue or information network available in the market (Scheck, 2015).

As a starting point for discussion toward the integration, a comprehensive SWOT analysis is introduced in this chapter in order to assess the feasibility of establishing an electronically integrated marketplace for trading real estate securities. As the strong and the weak components, which part of such an infrastructure is well functioning and which part is not is evaluated. As the opportunity and the threat components, which part can expect to positively or negatively affect the real estate securities market in the future is looked for, respectively. At the second stage, the technical infrastructure of the link is built.

4.1. SWOT Analysis

SWOT analysis is a versatile technique for understanding strengths and weaknesses, and for identifying both the opportunities and the threats identified in a project. Each step of the SWOT analysis should be thoroughly analysed rather than hastily filling it out (Krogerus & Tschäppeler, 2008). SWOT analysis can help uncover strengths to be emphasized and opportunities to be maximized. And by understanding the weaknesses, one can protect the project against threats.

Therefore, based on SWOT analysis, a set of guidelines is discussed which are intended to provide a framework for developing the CRESCENT Link as a hub and spoke connectivity model for the COMCEC member countries to achieve further financial integration.

4.1.1. Strengths

4.1.1.1. Portfolio Diversification

A broad range of investors has been considering real estate securities as an alternative asset class for the purpose of portfolio diversification. In this regard, taking advantage of moves in different markets can be just as important for traders as it is for long-term investors International capital flows, enhanced with integrated trading platforms, expand portfolio diversification possibilities and thus enable investors to obtain higher risk-adjusted rates of return (Fischer, 1998).

Investment features such as active trading and trading platforms may affect portfolio diversification as shown by research as well. One recent study reveals that investors who use Internet and telephone as the main channel of trading tend to diversify their portfolio better than those who visit the financial service provider in person to place their orders (Khan et al., 2017).

A natural extension to this would be that the more actively trading is possible the more portfolio diversification is improved. Since a trading link would make it more convenient for investors to actively track and back test their own strategies involving securities across a number of different asset classes, portfolio diversification objective is easier to achieve. This is because, a link can easily offer a variety of professional tools such as the advanced screener, stock price alert, streaming watch list to assist investors in building their investment portfolios. This facilitates global investment opportunities in one place, i.e. equity, debt and reward-based from all industries, currencies and countries. In fact, Goh, Nassir, & Ashhari (2014) evaluate the value of diversification that could be gained by Malaysian investors utilizing the ASEAN Trading Link facility and discover that they benefit from a broader ASEAN level of diversification compared to portfolios diversified with domestic investments.

From a real estate investment perspective, such a platform would also provide access to a wider and more varied list of real estate securities listed across participating countries' exchanges, thereby helping to diversify portfolios, increase exposure to new countries, industries and sectors, and mitigate risk. In other words, a single trading link would allow investors to diversify their portfolios into real estate, and to diversify their investments within real estate asset class from all around the world.

4.1.1.2. Cost Reduction

Research indicates that successful ecosystems on the capital markets contribute to economic growth by reducing the cost of capital and improving access to finance. In this regard, the trading link would be an opportunity for the COMCEC member countries where capital markets are inefficient due to low levels of market capitalisation, liquidity, and trading volumes and unattractive to investors given their high transaction costs and the high cost of capital for issuers.

Moreover, regulatory improvements such as the case with MiFID lead the way for more intensified competition in financial markets and technology becomes the main instrument in gaining comparative advantage in this competition. Technological advancement eventually leads to more cost-effective technologies and hopefully, investors, issuers and brokers get/provide more quality service at lower costs. For instance, in a standard trade, brokers have to set up one-to-one connections with their counterparts in foreign markets, meaning that the entire network costs will be on them, and they will have to manage the technology. In addition, technology reduces the cost of labour and facility size over trading pits therefore reducing operating cost. Currently disclosure, clearing and settlement after the trade are also coming to the fore.

A trading link would offer substantial cost savings and would make the business feasible for participating parties. Requirements for the technology are primarily managed by the supplier of that technology, which has demonstrated a number of trader front-ends, risk and post-trade software, and algorithmic trading products to various exchanges. Thus, instead of heavily investing in technology, parties can turn their investment focus to their key competences[101]. Recent developments have also lowered the fixed cost of constructing new trading systems, reducing the entry barriers for new platform suppliers.

Such reduction in costs would be reflected in lowered trading costs which would encourage more cross-border investments and increase liquidity of country's securities, since there is a larger pool of potential investors.

Although this would not be a case for real estate securities in its early stages, a trading link would also allow for algorithms with focus in the reduction of the market impact, execution cost and prevention against transitory volatility. Indeed, most strategies referred to as algorithmic trading fall into the cost-reduction category. The fundamental concept is to split a sizeable order into small pieces and execute them in the market over time. Algorithm selection depends on different variables and the most essential ones are volatility and liquidity. For instance, for a security that is highly illiquid, algorithms attempt to match any order that has a favourable price, called liquidity-seeking algorithms. Aitken et al. (2004) provides evidence of a contraction in bid-ask spreads, which is a proxy for liquidity, following the launch of electronic trading, having controlled for price volatility and trading volume changes. This supports the proposition that the link can promote improved liquidity and reduced transaction costs compared to floor-traded markets.

With the platform, access to information will also be less costly since investors often have the convenience to access their account information, order status, option chains and most updated market news via online or mobile devices at anywhere, anytime. As Rochet & Tirole (2006) argues, concentrating a trade at one place and time reduces search costs and intensifies competition over price.

4.1.1.3. Lower Latency

It is hard to maintain pace with the increasing complexity of current financial markets and growing demands on trading infrastructure. Abundance of data, increase in speed and vibrancy of markets add to the time, cost and complexity of keeping a platform and infrastructure for high-performance trading. In order to help solve for this challenge, cost-effective low latency electronic trading platforms are required.

[101] Obviously, there would be costs incurred. For instance, existing interfaces would have to be upgraded to support the new technology.

Latency is typically defined as the amount of time a trader would need to obtain feedback on a placed order. Accordingly, for a marketable buy order, latency is the amount of time elapsing between placing the order and receiving confirmation that the order was executed at predetermined terms. In an electronic trading platform, latency is determined completely by the ICT systems and algorithms that support the exchange operations (Riordan & Storkenmaier, 2012).

The concept of latency in modern electronic securities markets is very important and its reduction is one of the issues, since it may call for infrastructures of direct connectivity and colocation data centres[102]. In this context, lower latency is often associated with HFT strategies.

A trading link, however, may also allow for ultra-low and low latency fiber and wireless networks linking market participants, service providers, exchanges and liquidity venues globally. More concretely, such a platform may simplify lowest-latency direct market access[103] and ensure best order routing and trade execution with more efficient approaches to market access infrastructure. It may provide a single point of access to the global financial markets, enabling investing/trading parties to substantially reduce their costs of market access and data, decrease the complexity of data infrastructure and operations, and maintain high performance. With lowest-latency direct connectivity and integrated access to exchange gateways, matching engines and data feeds across leading global venues, parties would be able to reduce infrastructure complexity and costs, while keeping high performance.

It is also worth to emphasize that lower latency allows certain traders to extract information from the order flow on the primary exchange and quickly submit informative quotes on the link, which means that the link can contribute to price formation, even with lower levels of activity (Ibikunle, 2018).

4.1.1.4. Liquidity Improvement

Many cross-border investors wish to differentiate mature, more stable economies with deeper, more developed capital markets from other countries with relatively underdeveloped markets and infrastructure for trading (FTSE Russell, 2015; WFE, 2018a). In that respect, investors search for liquidity in deep markets where the trade can be executed regardless of a considerable price concession.

Liquidity has an impact on various market actors other than investors as well. Liquid markets are more attractive to the issuers, as cost of capital is lower and share price valuations are more accurate. Improved attractiveness results in greater market utilization, higher trust, increased ability to appeal new stakeholders, and to do business, which generates direct *(trading fees)* and indirect *(extending securities offering)* revenues. As ability to access capital

[102] Colocation data centers involve servers that are placed in rented rack of the trading center with the intention to minimize potential latency and maximize data transfer speed between trading server and exchange server. For instance, Borsa Istanbul Colocation service enables its clients to place their equipment at Borsa İstanbul Data Center in which the exchange's market systems are also located. Thereby clients have the opportunity to access the market systems in a faster and more reliable manner (https://www.borsaistanbul.com/en/products-and-markets/technology-services/colocation).

[103] When an investor makes use of DMA, his orders are no longer touched by the broker, but rather forwarded directly to the markets through the broker's infrastructure. One key characteristic of DMA presents the fact that the respective broker can conduct pre-trade risk checks (Gomber et al., 2011).

at favourable costs improves, subsequent corporate investments increases and a high level of employment is achieved, the overall economy would benefit (Peterhoff et al, 2016).

Given the fact that technology is the only way to enable market participants to uncover available liquidity, the link can bring together a large and diverse pool of participants, thus reducing the need for intermediaries that match bid and ask orders between segmented traders. Such a facility would deepen the current liquidity, thereby allowing for sizeable trade executions. It would also provide support for additional volumes, which may not exist currently because of execution issues.

A vast amount of research has been devoted to provide support for the impact of ETPs on market liquidity, most of which have found that platforms offer superior liquidity (Mizrach & Neely, 2006; Hendershott, Jones, & Menkveld, 2011; Yılmaz et al., 2015).

The crucial success of networked ETPs, which could be applied to the properties of the link as well, relies on improving efficiency and transparency, speeding up executions, and reducing costs that can appeal a critical mass of order-flows and produce additional liquidity to the market. The exact impact of liquidity, however, is determined the network's size and scope that requires compatible technologies for trading (Dorodnykh, 2013).

Thereby, the link as an order routing vehicle has the potential to build sufficient critical mass by increasing trading volumes and improving liquidity of real estate securities in the COMCEC member country stock exchanges. It would also broaden the investor base in the respective countries involved in the link.

4.1.1.5. Mutual Recognition

Mutual recognition is an important tool to establish links between markets. Under a mutual recognition scheme, a regulator in one country agrees to accept an entity subject to the regulator in another country and vice versa, meaning that secondary market regulations by one single national regulator are accepted among the countries in the region. Mutual recognition allows existing national institutions to remain (Romero-Torres, Wells, & Selwyn-Khan, 2013).

In the mutual recognition framework, the hub and spoke model envisaged would provide connectivity among participant countries and at the same time would allow the different national stock exchanges to remain independent with their systems. But the model would allow investors to access all the member exchanges as well.

Hence in the model national stock exchanges would operate different trading, clearing and settlement platforms. They would maintain and comply with individual country legislation and regulate their own listings and trading rules. More concretely, there would be no need to have harmonized trading and settlement rules, regulations and operational procedures. There would be no need to change existing ones as well. Brokers would act as advisors and facilitators to their local clients and carry out real estate securities transactions on different exchanges.

4.1.2. Weaknesses

4.1.2.1. Inadequate Financial Markets

Real estate markets and real estate securities markets in most of the COMCEC member countries are still underdeveloped. Governments have been taking necessary actions in order to improve the markets, particularly, by inducing construction facilities regarding affordable housing and infrastructural developments, by providing more convenient finance for the parties involved in transactions, and by developing schemes to protect investors and customers. However, there is still a limited, ready pool of assets, and a lack of liquidity and volume in the market. This is the case in the whole capital markets as well. Since markets are in the early stage and has limited number of listed companies both with a narrow investor base and lacking institutional investors, not only capital market infrastructure but also capital market products are very limited. This is important for investors, since they generally need a minimum market or company size and/or minimum market and/or company liquidity *(e.g. having a minimum average daily turnover of 1 million USD)* to invest (WFE, 2018a).

Absence of a robust framework for investor protection can also be considered as a weakness in operating the link. Investors are very conscious that some of the challenges of investing in emerging markets exacerbated the risks they faced as minority shareholders. Consequently, investors often favour investment in companies where they are able to have an impact. They therefore view access to company management as critical and are very focused on the existence of appropriate minority shareholder protections (WFE, 2018a). World Bank attaches weight to protecting minority investors in its Doing Business reports. In its most recent report, the COMCEC member countries' ranking ranges between 2 and 173 and hits number 64 on average among 190 countries[104].

Therefore, the link may not provide investors the benefits of portfolio diversification, which requires securities to be spread among several different sectors and industries and even countries. In this situation, the link may not be the exact solution for real estate securities, particularly for illiquid ones, for which, there may still be a role for bilateral dealer-client relationships.

4.1.2.2. Technological Coherence

Technology is a double-edged sword. The COMCEC member country markets have diverse levels of maturity and best practices in terms of their trading platforms, ICT support and redundancy levels at a time when more and more regional exchanges relinquish their role as provider of ETPs, which are cumbersome to update or maintain amid rapid technological changes.

For instance, Malaysia is among the first to liberalise DMA, allowing brokerage firms to choose their own suppliers for platform development provided that it plugs in seamlessly to the matching engine of the exchange. Indeed, Bursa Malaysia ceased to provide maintenance and technological support for these firms allowing them to use a new ETP to manage risks better and for their end-clients to trade better online. Indonesia, as another example, upgraded their

[104] Above average countries are Saudi Arabia, Bahrain, Djibouti, Nigeria, Indonesia, Turkey, Malaysia, Pakistan and Azerbaijan.

stock exchange trading system in 2009 by launching JATS-NextG *(a system developed by NASDAQ)*. Through this system, not only the ability to process securities improved, but also Indonesian stock exchange can have the ability to trade all financial products including stocks, derivatives and mutual funds in a single platform.

But in most of the countries, there may be a broad gap in the level of ripeness of business owners to roll out such new technologies. It may be a major challenge to ensure that most securities firms in the COMCEC member countries have a basic standard of competency and support systems.

Another consideration would be that the simplification of the link infrastructure by means of a hub and spoke model would be offset by a greater vulnerability of the system. In fact, with the setting up a single sorting infrastructure there would the risk of a total block of the market should the hub be blocked (Carretta & Nicolini, 2006). This is true for any inter-operability form. Hence, it is essential to consider that it is likely that problems might easily spread to other members in any form of integration. Consequently, clear responsibilities for market infrastructure and a robust legislative framework is required to be in effect so as to remove any potential confusions. For instance, it would be necessary to clearly define the legal status of instructions in case of a system failure in the messaging hub.

4.1.2.3. Inability to Make a Difference

The link may create redundancy unless it serves a function that is not met currently, since most stockbroking firms throughout the COMCEC member countries may have already maintained links to their own counterparties prior to the conceptualisation of the CRESCENT Link. Thus, most international investors, particularly institutional ones, can access and handle transactions of real estate securities through broker-dealers and other parties in member countries in their own good time.

Moreover, as the larger players already have their own regional networks, they would not prefer order routings via the CRESCENT Link. Therefore, although the link might be considered as a provision of infrastructure that is more relevant and beneficial to medium-sized brokers who have better credentials, it would lack the regional infrastructure to reach beyond their own borders.

In this regard, trading volume would need to be of a certain level before switching away from their existing stockbroking arrangements would be worth the trouble. Otherwise, market participants, particularly investors and brokers cannot clearly identify what difference the link would make.

This being the case, as discussed earlier, the initiative does not address solely institutional investors. Indeed, it is likely that the link would benefit retail participants more than institutional investors. These types of investors may not have a bargaining power on the transaction costs. For instance, investors in Turkey would have to trade through a broker who has an account opened with a Kuwaiti broker. Depending on the broker used, fees and charges may be higher as the investor may have to pay two sets of charges - not to mention exchange related-costs. By means of the link, these costs would be handled easily because the participants of the link, let's say, would be employing standard fees. In addition to that, the trading link may lower the entry barriers for small and medium-sized brokers who otherwise would have to incur a relatively high cost of infrastructure for cross-border trade themselves (Hsu & Kien, 2015). Not only the trading cost but post-trading facilities should also be considered in that investors would essentially be able to trade securities from another market, and settle in local currency, as if they are trading in a local market.

A nationwide investor education and engagement campaign would be needed as well to develop the investment culture and to share with investors about the unique laws and business operations of each country so that investors will feel confident in trying their hand at purchasing securities from across the causeway. But what is more important, the link initiative should not only come from national-level, rather it should be driven from market forces as well in order to inspire confidence and to have longevity.

4.1.2.4. Lack of Human Capital

Most governments in the COMCEC member countries are eager to develop the capital market more rapidly. So, they increase their investment to expand market infrastructure and try to establish better regulatory framework. For most of the cases, these improvements extends for the real estate securities market as well. However, one of obstacles is that the human capital for the market is insufficient. In our questionnaire, shortage of qualified personnel in the market and lack of familiarity with international capital markets have been evaluated as major impediments that discourage issuers from accessing ETP in order to make public offerings or private placements[105]. Over and above this, there is the possibility of lacking local expertise in the capital markets industry, which forces a lot of activities being outsourced. Since human capital cannot accumulate in a short time, there is a risk that new link infrastructure may not establish or work efficiently. Development of the local market is indeed as important as attracting international investors and can in fact assist in attracting these investors.

4.1.2.5. Real Estate Security Characteristics

ETPs generally allow trading of only standard products, since the potential for economies of scale to be achieved is higher for these frequently-traded products or for a market with a large number and wide range of investors. Given the high degree of opaqueness and heterogeneity of many real estate securities *(with an exception for cash equities, e.g. REIT shares)* and the often very low frequency at which they trade, electronic trading would not offer a proper fit for real estate securities market. While trading via electronic venues has recently picked up, there is the possibility that most electronic trades stay relatively at small in size, with large trades still conducted primarily using traditional voice-quoted means (BIS, 2016).

On the other hand, in order to evolve into a central marketplace for such heterogeneous real estate securities, the link needs to appeal sponsors, advisers/investors and market makers for more than just transactional purposes. Market participants, be it individual or institutional, need to be motivated for the adoption of the technology and leverage the platform day-by-day. Establishing this network ecosystem is, in a number of ways, more important than the site's technological underpinnings. Critical mass of participants is achieved by offering important, concrete advantages in terms of transparency, discovery and real-time pricing. These features can be applied to a wide range of real estate securities even for the most illiquid ones such as non-traded REITs (Haahr & Haahr Jr., 2018).

[105] See Figure 12.

4.1.2.6. Lacking Centralized Post-Trade Services

A number of important post-trade services should be conducted subsequent to trade execution. These primarily include clearing, settlement, and custody, which are provided by financial market institutions such as CCPs, clearinghouses and CSDs, as well as by intermediating banks *(including custodians)* and brokers.

International investors generally base their decisions on a given market's ability in offering such post-trade services. For instance, a recent survey reveals that an ETP, even with such technical capabilities, is only a nice feature to have in a market, but what are most critical for investors are found to be existence of a DvP settlement system[106] and presence of global custodians. In addition, there is a strong preference for a T+2 settlement system due to lower costs, mitigation of counterparty risks and reduced margin requirements for clearing participants (WFE, 2018a).

Most costly and least automated component of the trading all around the world is the post trade. Hence, efforts to establish a common market infrastructure would be hindered by opaque clearing mechanisms and inefficient exchange matching systems. Unfortunately, this might be the case with the link initiative as well.

The integration of trading structures via the link would not be matched by that of clearing and settlement systems, which would remain domestically entrenched. The challenge in that respect would be that existing systems would use distinct technologies and have been originally designed to comply with local markets' specific needs. It may be expensive and/or result in inadequate services to upgrade current systems, which usually focus on multiple asset markets and use distinct technologies or to introduce a new system capable of satisfying all participants' needs.

This fragmentation would reduce market liquidity, increase counterparty and operational risks, and contribute to increased costs for cross-border trade, especially since local systems are linked via free-of-payment links instead of safer and more efficient DvP links.

Clearing and settlement procedures are closely related to the denomination of the trade and they should handle multiple currencies which is inevitable in cross-border securities transactions. As discussed earlier, the COMCEC member countries use a variety of currencies, but this does not represent a technical problem for cross-border trade. Even some of the exchanges provide the opportunity to trade in foreign currencies. However, fragmentation would increase costs and complexity, likely contributing eventually to a bias in investment decisions toward domestic markets.

Excessive costs related to this fragmentation are difficult to gauge but could be significant. Post-trade facilities comprise of multiple tasks and several institutions and fee structures. However, clearing and settlement costs in the COMCEC member countries may have wide disparities across each other, reflecting in part structural diversities with CSDs and the variety of services they provide.

[106] DvP is a simultaneous electronic system, which ensures that neither party can end up with both the securities and the cash, with the other party holding nothing.

Efficiencies can be achieved by means of connections between CSDs. Such connections would be established based either on simple arrangements among CSDs to promote direct or indirect cross-participation in each of the CSDs, or on more complex interoperability arrangements including technical interfaces between the separate operating platforms. Links are frequently set up between a local CSD and one of the global CSDs *(e.g. Euroclear Bank or Clearstream Banking Luxembourg)* to enable global CSD members to settle transactions in local securities with local financial service providers which have accounts in the local CSD and vice versa. In the case of MILA as well, Chilean, Colombian, Mexican and Peruvian CSDs are connected via mutual memberships in each other. Additionally, a recent proposal of the Asian Development Bank to link up the current CSDs in the region constitutes an opportunity for an increased integration of Asian capital markets. The proposal follows the example of the European "Link Up Markets", in which eight European CSDs provide direct access to their markets through a common gateway to lower post-trade processing costs arising from cross-border trade in Europe (Wendt, Katz, & Zanza, 2018).

In this framework, a hub and spoke model would also be feasible to link stock exchanges' CSDs in the future. Mutual securities settlement accounts would be opened by CSDs. Home country CSD would still keep relevant records for securities held overseas by each of its participants. A technologically-centralized message hub could act as a "message translator", thus addressing the "spaghetti effect" potentially caused by various message formats and instructions that would need to flow through multiple CSDs. Such a hub may become a storage and transmitter of corporate action events across members as well (Chan, 2013).

Moreover, low number of CCPs exists for transactions, which could entail a dissuasion for major participants to get involved. Even though CCPs do not constitute the sole possible answer for risk mitigation issues related to securities trade, they are increasingly considered as among the most effective and comprehensive options. But even CCPs are established in national markets, there would be integration issues again. Hence, in order not to lead the way for a tangled and highly opaque picture of a purely bilateral market. i.e. spaghetti effect, a neat hub and spoke network in which a CCP is buyer to every seller, and seller to every buyer, allowing netting and greater transparency for participants and regulators alike would be a solution.

On the other hand, the complexities which would exist in any CCP- or CSD-linked model would involve the different currency and liquidity in the COMCEC member country markets, different permissibility around position netting and segregation, as well as the related scope and availability of eligible collaterals. Any CCP link would require consideration on how to interact with CSDs. It is necessary to analyse the direct impacts and benefits to the broker and post-trade communities, which could be substantial (Chan, 2013).

In the future, anyway, setting up clearing, settlement and custody connections would make the platform a full-fledged end-to-end one across the COMCEC member countries. A common CCP would assist in strengthening and fastening platform improvements, as it would act as a central counterpart for cross-border trades and establish depository links for cross-border settlement and custody. Such a structure is discussed in further sections below.

4.1.3. Opportunities

4.1.3.1. Financial Integration, Development and More Visibility

Governments of the COMCEC member countries are focused on developing their financial markets by building capacity and laying the long-term infrastructure to achieve integration of their financial markets with other countries. Some countries have also tried to more open capital market to the foreign investors and strengthen domestic industries.

Financial development is an ongoing process in the COMCEC member countries based on a huge potential of investors and issuers. Although, the size of both has not been large enough yet, it is expected to grow as middle class within the population continues to increase and the ability of companies to go public improves. Market players, *e.g. brokerage firms etc.*, will inevitably be affected by changing conditions. Medium-sized ones would need to establish joint-ventures or strategic alliances as soon as possible, while the small-sized ones could even decide that it would be more reasonable to be acquired than to invest heavily to compete.

All of these progressive reforms will provide support for the link, which may have lots of benefits including a larger presence in the global arena, stronger intercontinental relations and assistance for the emerging markets. The CRESCENT Link infrastructure would be one of the best ways to get visibility[107] from global institutions. Thus, it would have a multiplier effect of sorts. For instance, new indices would be created to act as the COMCEC real estate securities, by acting as an underlying for mutual funds, ETFs, derivatives etc. Moreover, CIS structures would allow investors to gain exposure to the largest securities in the COMCEC member country markets. This move of funds is generally achieved especially by passive investment vehicles *(e.g. ETFs, indices etc.)* in emerging markets. One striking example is the S&P/OIC COMCEC 50 Shariah Index, designed to provide investors with a Shariah-compliant benchmark that measures the performance of leading companies from the OIC member states. The index includes 50 shares from 19 OIC countries and intends to increase awareness about OIC markets, enhance collaboration among OIC exchanges, provide a benchmark for OIC market performance, and create alternative financial instruments for OIC markets[108]. Lastly, recent data show that, inflows into emerging market equity exchange traded products reached USD 51 billion in 2017 with associated assets under management of USD 371 billion (WFE, 2018a). This growing reliance on indices for purposes of passive investment makes index inclusion that much more important for emerging markets in that index providers seeking for ease of access increasingly determine how capital is allocated.

The link's participant exchanges that are more liquid and sizeable would benefit, as they can act as regional trading centre. For instance, a member country can invest in a new trade-matching platform, colocation centre, and access points in major financial centres around the world. These would enable investors of those countries link to that member's exchange directly, and local investors enter into global markets.

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[107] In order to provide instant recognition and visibility around the world, an international brand name may provide support for the ETP just as in the case of NASDAQ Dubai.

[108] https://eu.spindices.com/indices/equity/sp-oic-comcec-50-shariah

4.1.3.2. Investor Appetite

Attracting foreign investors not only improves a country's market vibrancy, but also contributes to the national growth agenda by drawing higher levels of foreign investment onto nations' shores. Consequently, access to capital by local companies for growth purposes would be boosted, which in turn enable the market to reach a desired level of financial development and the investment environment to improve at national level.

The link would be able to attract both retail and institutional investors in this regard. Investors would be able to make a direct connection via the link, to the COMCEC member states' real estate securities. In other words, they would have easy access to a broader range of securities for investment purposes.

Following the entry of the investors' order to the system, ensuring that the orders transmitted via the link to the relevant country market, will be executed in a transparent manner. As dark pools are a moot point around financial markets, primarily in terms of such transparency in the context of establishing a real estate based link, a system working like a "lit market" would be attractive for investors. As a result, there would be an increase in the liquidity and in the international demand for real estate based capital market instruments.

More specifically, the convenience of holding cross-border securities arising from the trading link would be likely to generate interest particularly among retail investors, who unlike funds, may not already have their own access to multiple markets through existing channels. Institutional investors already tend to prefer to invest abroad rather than within their home countries. Therefore, the link would provide them a convenient means for cross-border investments.

4.1.3.3. FinTech Developments

The usage of a particular ETP may also depend on its ancillary benefits, such as its capacity to provide solutions for FinTech. Technology is the greatest accelerator to help ETP fulfils its functions. One and probably the most important developments affecting financial markets is the blockchain technology. Blockchain can be defined as a decentralized, continuously growing public ledger of records, called "blocks," which are connected and secured by means of cryptography. Each block includes information that sits below a distributed ledger, behaving like a way to confirm transactions sent by adding a new block to the chain. The technology allows transactions entered by parties recorded in an efficient, verifiable, permanent and secured manner. Today, innovative market participants launch various blockchain-based products or platforms[109].

Blockchain technology has the potential to create a liquid secondary market for real estate by means of a process known as "tokenization". In broad terms, this process involves the registration of an asset and its rights on a digital token, which is then recorded on a shared

[109] In the real estate finance world, for instance, Tokenestate is based in Switzerland and founded in 2018, is developing a platform to make it faster, cheaper and easier to invest in companies in real estate by using blockchain technology and digital signatures (https://tokenestate.io/index.html). Smartlands is another platform that is designed to bring together asset managers/owners and investors by creating low-risk blockchain-based securities backed by assets in real estate sector (https://smartlands.io). Lastly, Extauri is Europe's legally compliant trading platform for tokenized assets, including real estate (https://www.extauri.com).

electronic recording device like blockchain. In real estate terms, however, it is the process of representing with a token the property or part of it in a real estate. A token represent ownership, the right to receive income or even ownership of a security associated with the real estate (Verbiest & Richebourg, 2019).

With tokenization, real estate could become tradable investments freeing up much needed capital in an otherwise illiquid market. Real estate tokens registered on the blockchain could be traded in the same way as shares, with greater trading velocity, lower lock-up periods and greater control for investors. By using blockchain technology, it is possible to register fractional ownership in a transparent, trustworthy and auditable way (Sullivan, 2019). In this way, risks and uncertainties associated with the simple use of paper while retaining the properties and characteristics of the transferred real estate asset would be eliminated.

What's more is that tokenization can be adopted for not only for real estate in the primary market but also for real estate securities in the secondary market. Real estate securities can be issued in the form of tokens registered on a blockchain where all rights associated with the relevant security are associated with the relevant token *(i.e. security token offering)*. When this is achieved, security-backed tokens would be tradable on regulated platforms that operate 24 hours a day, 7 days a week and there would be no need for post-trade services such as clearing, settlement and custody.

Further, the link would open the window of opportunity for crowdfunding transactions[110] in the future considering the crowdfunding industry's inability to raise capital in scale due to illiquidity. Indeed, liquidity is a frequently discussed topic regarding both un-listed early stage firms and other traditionally illiquid assets. Today, several initiatives are on the way for such transactions in the international markets.

For instance, Property Partner, a real estate crowdfunding platform, appears to have provided an effective solution for individuals investing in property assets on their platform. The company has recently reported that over GBP 30 mn in shares of residential, student and commercial property have been traded on its marketplace, representing almost 38% of the GBP 80 mn equity raised. Property Partner states that investors may choose to sell their securities at a price they select. In January 2018, Property Partner reports it was granted the first MTF licence issued by the UK Financial Conduct Authority to a crowdfunding platform under the EU's MiFID II regulations. HLeBroking's web-based trading platform is also available for Android and iOS devices and features charting, real live-streaming quotes, an equity tracker and a mobile trading app.

Malaysia considers a property crowdfunding platform indeed. SC is currently working on introducing property crowdfunding into the market. The establishment of the property crowdfunding platforms was announced in Budget 2019 to balance the promotion of innovation with ensuring proper safeguards to protect the integrity of the scheme and investors' interest. MSC, in its support of innovative ideas that tap on the transformative power of technology to democratise investments will be reviewing details of the proposed structure and its guidelines to facilitate the establishment of the proposed crowdfunding framework. The property crowdfunding framework is expected to allow more financing options for

[110] Iran, as a respondent country to the questionnaire, suggested that real estates can be listed in crowdfunding platforms in equity-based model.

Malaysians to buy their first homes and enhance their socio-economic well-being. MSC will engage the relevant stakeholders through industry consultations prior to issuing the regulations. To ensure proper governance of this alternative home ownership-financing scheme, platform operators are required to register with the SC and fulfil the eligibility, transparency and financial requirements.

4.1.3.4. Room for Harmonization

As discussed earlier, an ETP would require significant reforms on legal and institutional frameworks, rules on fair level playing field, and harmonization throughout the COMCEC member countries.

Unless information flow is more or less standardised across borders, it could stymie the growth of trading flows and liquidity, even with the best technology. In this regard, regulatory standardization associated with the legal aspects of the trade cycle, foreign ownership, settlement processes, taxation, fund transfer and so on is sine qua non for an ETP facility. The maturity of regulations throughout the COMCEC member countries are have different spans, and the set of guidelines usually vary across the countries. Achieving a harmonized framework is a big challenge.

The COMCEC member markets are fragmented, with broad diversity in terms of market sizes, level of economic development, legal and regulatory systems, etc. Regulations may pose a challenge in front of an ETP initiative. Every jurisdiction has its own legislative framework to control and maintain the integrity of their respective capital markets. Hence, foreign retail or qualified investors would be subject to different guidelines when accessed the markets. There may also exist capital controls and exchange jurisdictions within member countries, including diversities in tax regimes. Such fragmentation may raise operational and investment costs of an ETP alternative. Hence, unless a common legal and institutional infrastructure which deliver enhanced consistency between the COMCEC member country markets is adopted, linking costs may be high and thus barriers for cross-border investors to enter in these markets would be increased.

In this framework, the envisaged hub and spoke model could be a starting point for the countries and further could turn into an ETP structure in the future step-by-step with necessary regulatory harmonization. At that time, the ETP would be fully integrated since all potential market participants would be abide by a common set of rules, would have equal access to instruments and services, and would enjoy equal treatment in their trades. Because, the link would have the potential to create understanding and motivation for the COMCEC member country exchanges to move towards harmonization of market operations, rules, regulations and procedures in the long-term.

In the future, there would be potential to establish or appoint a central regulatory body to govern the member countries real estate securities markets and to take necessary actions in harmonising trading hours, allowing for streamlined trade orders instead of local specialties, and creating a single set of listing and disclosure requirements. More specifically, a CIS framework with simplified authorisation procedures for cross-border funds offerings could be set. Furthermore, a framework for a common prospectus could be established to streamline the review process for securities offering in multiple venues where the prospectus is compatible with harmonized standards.

With such legal harmonisation aiming to achieve greater standardisation, flexibility in the language and legal requirements for securities issuance, the ETP would compete for global investment, attract more retail brokers, and channel more international funds into the COMCEC member markets. In so doing, investors would access the ETP more easily, irrespective of the need to relearn each individual COMCEC member market.

4.1.4. Threats

4.1.4.1. Development Costs

One of the constraints in the establishment of an ETP may involve the platform establishment and maintenance costs. Some of the major costs of maintaining such a system would include at least the following (Råberg, 2013):

- Data center *(e.g. premises, power and cooling, physical security, data backup, disaster recovery)*,
- Hardware servers *(e.g. computers and peripherals, operating system licenses, support agreements for replacement and repair)*,
- Data storage *(e.g. solutions fulfilling regulatory requirements)*,
- Network *(e.g. installation and recurring line costs, network equipment and management software)*,
- Third party applications *(e.g. project, license and support costs for externally developed systems, layered software used in applications)*, and
- Staff *(e.g. data center, network, system management, application management, customer interface, development, IT management and project)*.

Aside from these costs, the participants of the ETP must devote considerable time and effort to maintain arrangements to provide sufficient publicly available information to enable the users of the ETP to form investment judgments, taking into account both the nature of the users and the types of securities traded.

When considered with market fears discussed further, it is possible to argue that more fundamental issues should be addressed before investing in the link infrastructure even it could contribute positively to the overall market development.

On the other hand, the cost of any marketplace technology must be weighed against the proposed business model. For real estate securities, for instance, a trading engine does not have to be able to operate with the volumes and transaction speeds that probably are not expected for the market. Ultra-low latency would not be that much relevant for many applications in this context.

There is also the reality that technological capacity is worth investment regarding the business environment of the exchange industry shaped by competitive pressures exerted by other exchanges and new trading schemes (Yılmaz et al., 2015).

4.1.4.2. Lack of Demand

Another constraint may be the absence of demand by market players, which continue to have preference to trade bilaterally. This may be mostly because market players may be of the view that there is a need to guarantee adequate liquidity in the real estate securities market in advance of the introduction of the link. In the absence of a sufficient level of liquidity, the link introduced may not be able to achieve economies of scale and maximize efficiencies given the fixed costs involved in adopting and operating the platforms. In fact, liquidity is regarded as the most relevant market feature for investors in their investment decision-making unless they adopt a long-term investment strategy (WFE, 2018a). Especially in emerging markets, institutional investment may be conditional on the availability of liquidity. ETPs are able to lower the cost of search and transaction to the extent that they provide liquidity feature by means of pooling transactions, lowering market fragmentation and promoting competition among market participants. Overall, a lack of liquidity would hamper the development efforts.

Insufficient liquidity and volume levels have been significant drawbacks of the ASEAN Trading Link, which has eventually ceased its activities, as discussed earlier in Section 3.1.2.1. However, there are successful examples as well. For instance, Mainland China trading through Stock Connect, as discussed in Section 3.2.2.5., increased from 2.4 % of the daily trading volume in 2015 to 7% in 2017. More than 1 trillion USD of shares were traded through the link since its launch. Hence, with sound cooperation and collaboration, the CRESCENT link may achieve similar goals. Besides, even the link structure does not attract investors into the market at first step; it will improve perceptions of a market in line with the previous discussions of visibility and in some instances may make one market more attractive than another, which in turn may increase competition.

Furthermore, that the absence of the ability to short-sell, market makers, and the ability to engage in securities lending and borrowing, and suitable derivatives etc., especially due to Shariah-compliance reasons, may cause hesitancy for market players, as they may have to leave their position risks not managed properly. However, it is important to keep in mind that, though important in increasing especially foreign trading activity (WFE, 2018b), absence of these features would not prevent investment (WFE, 2018a).

Taken together, the link can suffer from illiquidity feature of real estate securities, but this problem can be handled with proper mechanisms. A recent study, for instance, finds that ETPs can increase the quality of equity markets for illiquid stocks (Gregoriou, 2015).

4.1.4.3. Off-Venue Trading

It is observed that there is an increasing trend among emerging markets to improve the OTC trade transparency using, among others current ICT regardless of a need to resort to ETPs. The main reason is the dominant market share of institutional investors who wish to trade large and complex transactions directly with dealers. For instance, if we suppose that general market practice in the COMCEC member countries require the majority of real estate security trading takes place OTC and settlements are done on a bilateral basis, then there would be no intervention of trustable parties, *e.g. central clearing counterparties*, which would be a weakness in the market.

This growth is consistent with the recent rise of both dark trading on authorized venues as well as trades executed away from venues entirely, OTC. Indeed, off-venue trading is also increasingly taking market share away from the types of trade that would have traditionally occurred on the primary exchanges (Oxera, 2019). This situation can be justified by providing examples from the COMCEC member countries. For instance, although the Saudi Stock Exchange launched an electronic trading platform for bonds and sukuks in 2009, the market activity have remained at negligible levels, with most of the demand for these securities met on an off-venue basis[111] (Oxford Business Group, 2019).

This being the case, a major problem in the OTC market is that obtaining executable pre-trade information is often time consuming and/or costly. Dealers' bid and ask quotes are very often only indicative, thus it requires contacting several dealers to get the best, executable quotes for the trade size and direction a trader or investor wants to have. This process often corresponds with high direct and opportunity costs *(e.g. traders' time, lost opportunity)*, while also limiting liquidity due to the capacity of the market to trade. The link, which facilitates price discovery and trade execution, can be a solution (World Bank, 2013).

4.1.4.4. Small Market Fears

Popularity of relatively large exchanges of the COMCEC member countries may arise fears of the smaller exchanges losing business to the larger ones, which would become a possible reason for them to delay joining on the link. The link, in this regard, may not help increase overall volumes, which would help make up the loss of local business. This would eventually have a negative impact on the visibility of the link initiative. As mentioned earlier, the IDX has advised that it will delay its participation in the ASEAN Trading Link project until further notice sighting infrastructure unreadiness as the reason[112].

This has grounds in the literature as well. For instance, the European Economic and Monetary Union has been beneficial in terms of increasing real estate market integration among member countries with more advanced industrial structures (Yang, W. Kolari, & Zhu, 2005).

Smaller exchanges within the COMCEC members may be unwilling to join the link as they may hesitate that trading volumes would flee to larger exchanges, and that they are crowded out. Developing markets may focus more on improving their national exchanges first, before they expand. In this view, the priority of achieving a single objective may not be equally aligned throughout the exchanges.

[111] Saudi government has moved to invigorate the market by listing a number of its own debt instruments, with this process completing in 2017. The arrival of these instruments on the exchange has greatly increased offerings available to investors in the secondary market: some 60 of the 65 sukuk listed on the exchange were government debt instruments as of early 2019.

[112] Not only IDX, but also the Philippine Stock Exchange had similar hesitations. It disclosed that it would delay its plans to jump on the board arguing that the local brokerage industry and investing public had not been as supportive of entering the arrangement as initially anticipated. It also announced that the exchange would join in the future but felt the more technically developed exchanges should be the first to see whether they can bring the project to market. The exchange upgraded their matching engine in 2010 using NYSE Technologies products. There was also a belief that the economic and financial industry potential would outstrip the rest of the ASEAN members and that connecting to the link may not be necessary.

Moreover, small markets would wait for several important issues to be addressed first and assess whether the model is beneficial to their exchanges or not. Another reason for smaller markets to watch-and-wait is the setup costs, which might be prohibitive in that there is no chance for going back to the drawing board once investments are executed.

Small market fear is also associated with the market participants. To illustrate, each country's individual brokers would need to look for their own counterparties from another country to sponsor and clear trades. The smaller brokers would have a great deal of difficulties in obtaining counterparty sponsorship since the level of confidence needs to be individually justified and agreed between both parties. These brokers generally lack the volume to appeal sponsors while larger ones often demand higher volumes and stronger credentials to legitimize the risk and administration.

4.1.4.5. Political Uncertainty

A great majority of the COMCEC member countries tend to export safe capital while import risk capital and imported risk capital would outflow in a short time if there were a crisis. This leads to fragility of the economy as a whole. Today, it would not be a wrong argument that the COMCEC member counties are still vulnerable to volatile capital flows. Although there is a proper infrastructure in effect, the potential of a sudden government intervention in business either to restrain capital influx or to stem its outflow in times of economic or political turbulences could prove to be a stumbling block.

In order to avoid this vulnerability, capital markets should be more deepening and broadening. Corporate governance and transparency should be more improved and regulatory and supervisory frameworks should be more strengthened. Otherwise, any presence of capital controls, exchange restrictions, differences in tax regimes, uneven development, portfolio restrictions on institutional investors, differences in product range, large differences in regulatory regimes, and differences in corporate governance standards would be an impediment for the facility.

While investors are aware and keep track of economic and political issues, the notion of policy certainty is considered as more important than these specific features. They rather suggest the content of individual economic policy or political decisions was less important than being certain as to what the policy was, thereby allowing them to assess how it impacted their investment decisions (WFE, 2018a).

4.2. Building Ecosystem

Thus far, the paper discussed the need and requirements and pros and cons of the link structure as an electronic trading facility for real estate securities. But, a trading venue determines only how the parties meet. Hereafter, a trading model that determines how the market price is formed, matched, executed and settled is specified.

The lifeblood of an ETP would be its technology make up. As an analogy, the trading engine would be the heart. The IT architecture would be the circulatory system that connects to the various internal organs, such as the surveillance and risk management platforms, and to the gateways to external vendors, traders, market data feeds and clearing platforms. Each organ provides basic functionality, but it's how they interact that ultimately determines speed, capacity and robustness. The technical make up of the ETP would depend on its business goals and regulatory requirements (Råberg, 2013).

In view of the extent of the legal and institutional diversity and the amount of effort that needs to be devoted, it would not be a preferred option to develop a single pan-COMCEC ETP dedicated to real estate securities, which involves all trading, clearing and settlement facilities vertically or horizontally[113] in an end-to-end structure. Further, an ETP structure would suffer from the fact that electronic trading is most developed in markets where assets are highly standardised and liquid and that electronic trading in fixed income[114] markets still remains less important relative to other asset types *(e.g. equities, derivatives etc.)*.

On the other hand, the development of modern ICT allows the COMCEC member country exchanges to take the advantage of enjoying "home rules apply"[115] cross-border connections *(i.e. trading link)*, while tackling institutional disparities.

At this juncture, as mentioned, a technically simple trading model for real estate securities for the COMCEC member countries is highly recommended in order to bring its strengths and opportunities forward and to keep away from its weaknesses and threats as far as possible. Main goal of this simple link should be establishing the ways for easy access to real estate securities, for improved liquidity and for secure transactions.

This goal may be achieved by establishing the CRESCENT Link formalized as a hub and spoke order routing model to provide a standard trading interface with a single connection point for market information and order routing at the first step, then by allowing it to evolve gradually into an end-to-end and all-to-all comprehensive platform, even a market, which provides support for the COMCEC member country needs across all aspects of the trade cycle - from price discovery to flexible execution to post-trade analysis and reporting. A simple model would be flexible to adjust not only new technologies but also new products and asset classes easily. A more comprehensive model supporting market makers, facilitating various order types and providing the ability to support local market rules may be developed as a further step in the future. Further integration would bring deepening and interlinked capital markets by progressing towards more connectivity in clearing settlement and custody linkages to facilitate investment among the COMCEC member countries, and allow investors and issuers to tap cross-border capital markets efficiently.

At this point, however, it is worth to discuss the legal status of the CRESCENT Link. Two models could be specified in this regard. First, it could be a joint venture which the COMCEC member countries have equal shares in, just as in the case of the SEE Link, Bond Connect, or ASEAN Trading Link. In this case, the operational guidelines, such as supervision, control, management etc., of the company would have to be specified. Second, it could be operated as a

[113] Vertically, along the transaction chain managing trading clearing, settlement and depository functions in same technology in an integrated fashion; horizontally, meaning cross asset classes covering trading and clearing, including risk management and netting of cash in the same platform and potentially in the same order book.
[114] A key factor for the slower adoption of electronic trading in fixed income has been the greater complexity of the asset class *(e.g. different coupons, maturities, embedded options, covenants)* and the resulting higher degree of fragmentation (BIS, 2016).
[115] This defines the condition where investors are bound by the rules and regulations of the country where traded securities are hosted (Hsu & Kien, 2015).

fully managed neutral electronic network interlinking buy-side and sell-side institutions to exchange messages based on the FIX Protocol or analogue messaging standards[116].

Overall, the initiative for the ecosystem is designed as a stepwise process of integration, where trading facility is integrated first, settlement second, and clearing third. This phase-in approach is displayed in Figure 29:

- Cross-border trading is done by partnering sponsored brokers
- Orders are executed through local systems
- Home rules apply

- Cross-border trading is done by partnering sponsored brokers
- A hub and spoke model is used
- Orders are executed by originating broker via the CRESCENT Link
- Clearing and settlement remains the same

- Cross-border trading is done by partnering sponsored brokers
- Orders are executed by originating broker via the CRESCENT Link
- A bank as global custodian performs settlement
- Sponsor banks still do the clearing

- Cross-border trading is done by partnering sponsored brokers
- Orders are executed by originating broker via the CRESCENT Link
- The COMCEC clearing houses become members of each other, and handles clearing and settlement

Figure 29: An incremental development strategy
Source: *Inspired from (Hsu & Kien, 2015)*

Original cross-border trade is performed through an "inter-broker system", a scheme in which an originating broker who does not have an exchange member status in the country of execution is obliged to enter into a bi-lateral agreement with a sponsoring/executing broker

[116] Please refer, for instance, to https://www.fixhub.net/what-we-offer/fix-based-trading-network/ for detailed information.

who is registered as the exchange member in that country. This procedure allows investors to evade legal problems that would emerge if a direct connection was built up by enabling brokers in one country to execute trades through their licensed counterparties in another country. The responsibility for understanding the local guidelines rests with the originating country investors.

The operational flow of an original cross-border trading is depicted in Figure 30:

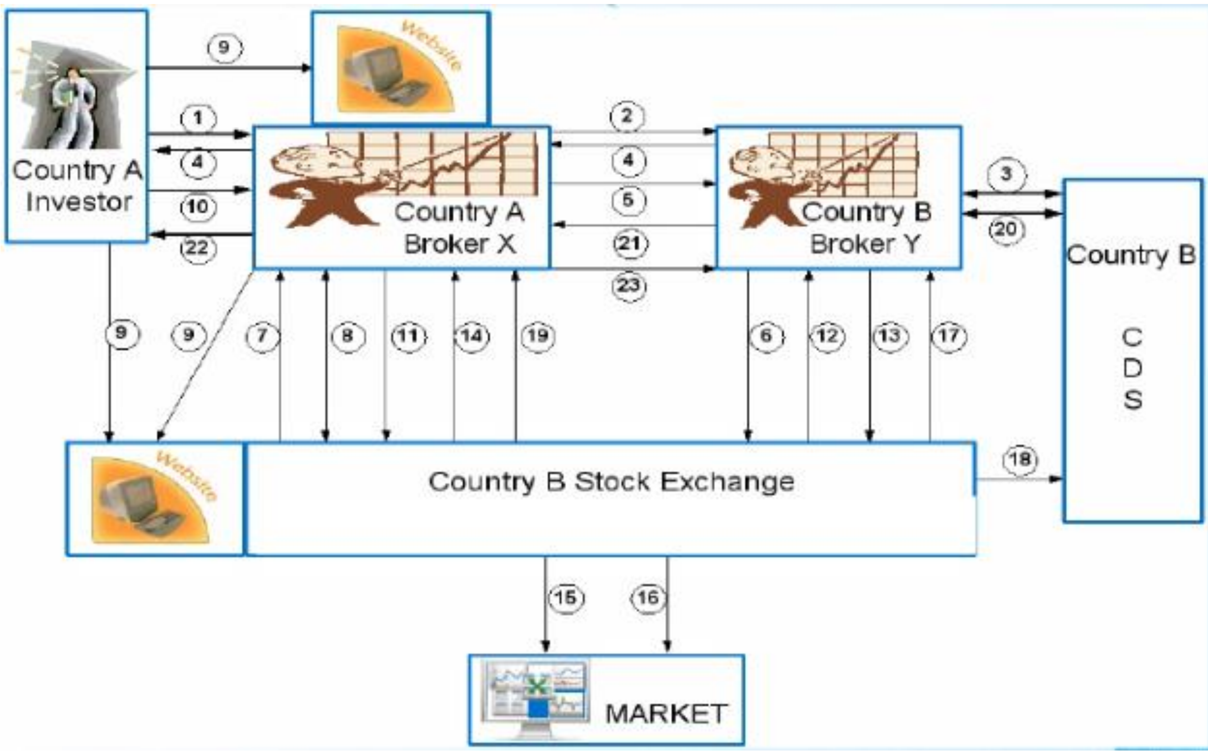

Figure 30: Operational flow of original cross-border trading
Source: *(SEM, 2010)*

The numbers in Figure 30 above stand for the procedural steps in the cross-border transaction. In this regards, numbers 1 to 4 show the process of opening an investment account in the foreign country. Here, the local broker, namely the originating broker, facilitates the process by means of its bi-lateral agreement with its counterparty, i.e. sponsoring/executing broker, located abroad. Numbers 5 to 9 are procedures required for applications to obtain access to the market. Numbers 10 to 19 demonstrate the process of order placement and routing as well as matching. Lastly, numbers 20 to 23 are for clearing and settlement transactions. In concrete terms, lets assume that an investor in Turkey wants to buy real estate securities on Bursa Malaysia. First of all, the investor would have to open an investment account in a Turkish bank[117]. Then, her Turkish broker would execute the order by using a correspondent broker in Malaysia who has probably signed a bi-lateral contract with the Turkish counterparty as a member of Bursa Malaysia. The Malaysian broker would execute

[117] Indeed it is possible to open an offshore account in order to invest abroad, but this option is rarely used especially for retail investors.

the trade and provide clearing and related post-trade services for the Turkish correspondent broker. Some rules may apply in terms of minimum limit for investment, single currency use, commissions and fees to be paid.

Phase 1 refers to the trading link, i.e. the CRESCENT Link, envisaged. The link would not only streamline broker trading agreements, but also reduce the costs of investment and operating to access the real estate securities trading on exchanges in the COMCEC member countries, especially for small and medium sized brokers as well as retail investors. It would be a "plug and play" infrastructure based on hub and spoke arrangements[118]. These brokers need only be linked to their corresponding exchanges, which would deal with the technological infrastructure and provide access to other exchanges for their members.

The hub and spoke model that is designed for the CRESCENT Link would resemble the one pictured in Figure 31 as follows:

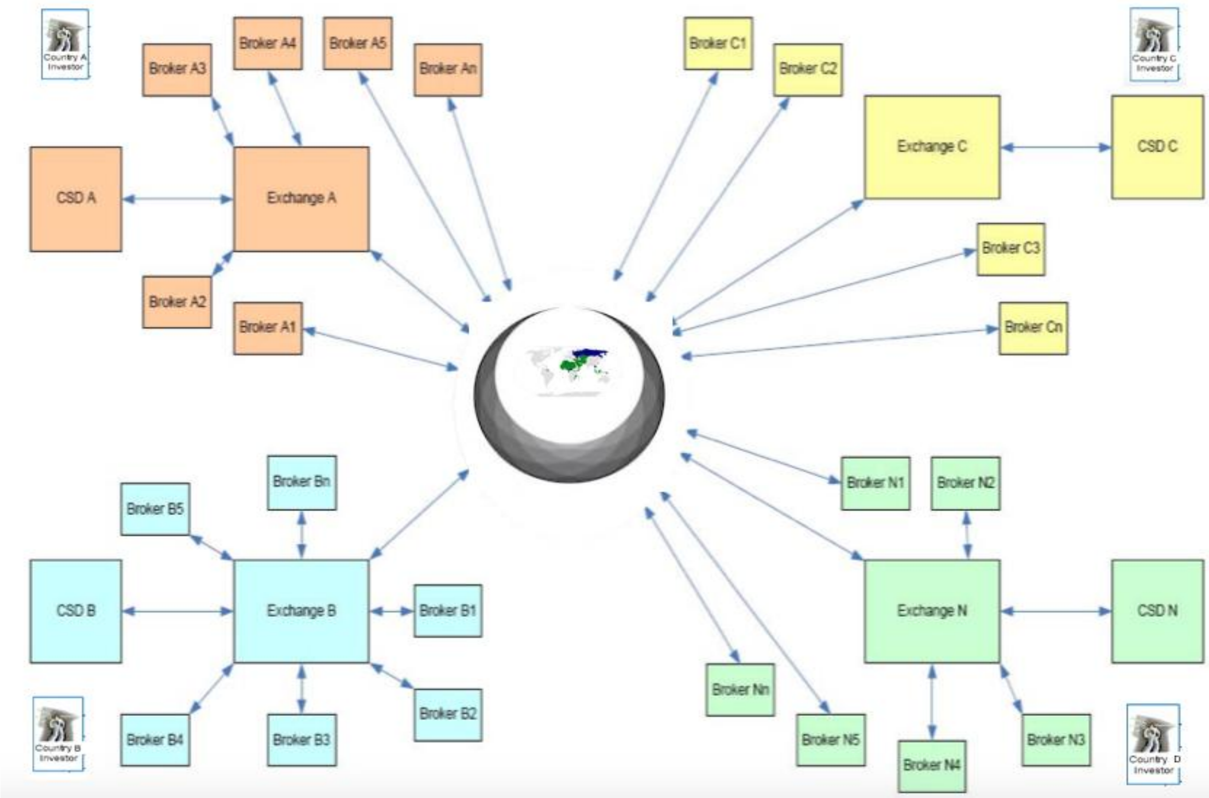

Figure 31: Operational flow of the CRESCENT Link (Phase 1)
Source: *Inspired from (Mahabirsingh, 2010)*

[118] A hub and spoke arrangement is the arrangement in which all transaction traffic moves along spokes connected to the hub at the centre. The hub is a single centralized operation centre. The nodes are the points of delivery and the spokes are the communication routes between the nodes and the hub. There are variations, but in its most simple form, there are no point to point routes directly between nodes and all transaction traffic must go through the hub and then out again. ASEAN Trading Link is an electronic hub and spoke arrangement (World Bank, 2014).

In operational terms, the originating broker in a country need to have a bi-lateral agreement with an executing broker in another country in order to assist in pre-trade, trade and post-trade facilities. The originating broker would receive an order from its clients to purchase securities trading in another country exchange. Market information would be accessible for the link participants. The originating broker would then forward the order to the gateway hosted by their local exchange, as if they perform a typical cross-border trade portrayed in Figure 30. In the following step, the order would be submitted via the network where it is then received at the gateway of the executing broker's exchange and then proceeds to the matching engine of that exchange. The order messages are earmarked with the executing broker's membership IDs. These brokers would obtain "drop copy" feeds of the incoming orders and execution reports. The onus to handle the clearing and settlement of securities would be on the executing brokers whom the originating brokers have contractually assigned. Any acknowledgement, change, cancellation, or update is forwarded back along the gateway of executing broker's exchange over the network back to the gateway of originating broker's exchange, and then back to the originating broker. The CRESCENT Link would provide neutral access points for non-COMCEC investors to access the COMCEC orders. After the execution of the trade, clearing and settlement services would be facilitated by national CSDs and central banks as separate legal entities in its own country.

In the model, the onus of the listing facilities would be on the stock exchanges in respective jurisdictions. Any listed real estate security would be eligible for trading on the Link. Figure 32 portrays the graphical form of the horizontal and vertical integration to be achieved in Phase 1 by the foundation of the CRESCENT Link:

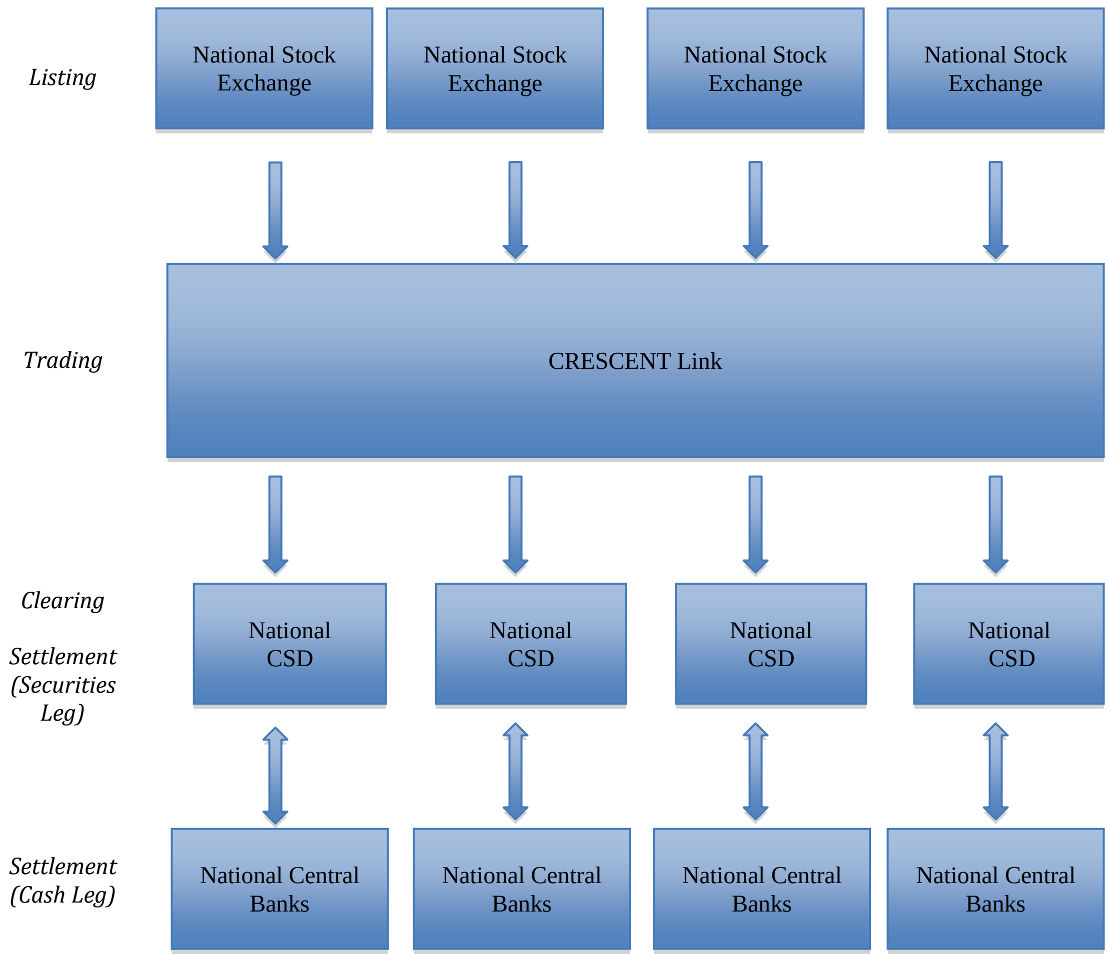

Figure 32: Financial integration with the CRESCENT Link (Phase 1)
Source: *Inspired from (World Bank, 2014).*

Phase 2 is the first phase in which post-trade facilities would be integrated. In this phase, a global payment/custodian bank model is suggested. A bank of that type would be agreed upon a contract to become the common paying agent and custodian for the pan-COMCEC trades, with its local presence in the COMCEC member countries. Following the execution of a COMCEC trade via the link, both the originating and executing depositories would submit the information regarding the settlement to this bank for cross-check purposes. On the settlement date, the executing depository would inform the bank on pre-settlement execution. The bank would then forward the information to originating broker. Once the information is received, the originating broker would submit payment instructions through the local exchange to the bank in order to be conveyed to the executing depository to execute the securities transfer. The settlement would then be linked to the bank which would update the securities account of the originating broker on the settlement date. This model would facilitate pan-COMCEC payments since it would deliver better currency rates and simplified movements of cash. It would be possible to settle the funds on a net basis. The whole system would rely on a straight-through processing. The model would simplify the procedures with subsequent corporate actions *(e.g. disclosure of information, dividend distribution, voluntary right issues)* as well, which participants often confront with difficulties.

The abovementioned operational work flow throughout the model in Phase 2 is illustrated in Figure 33:

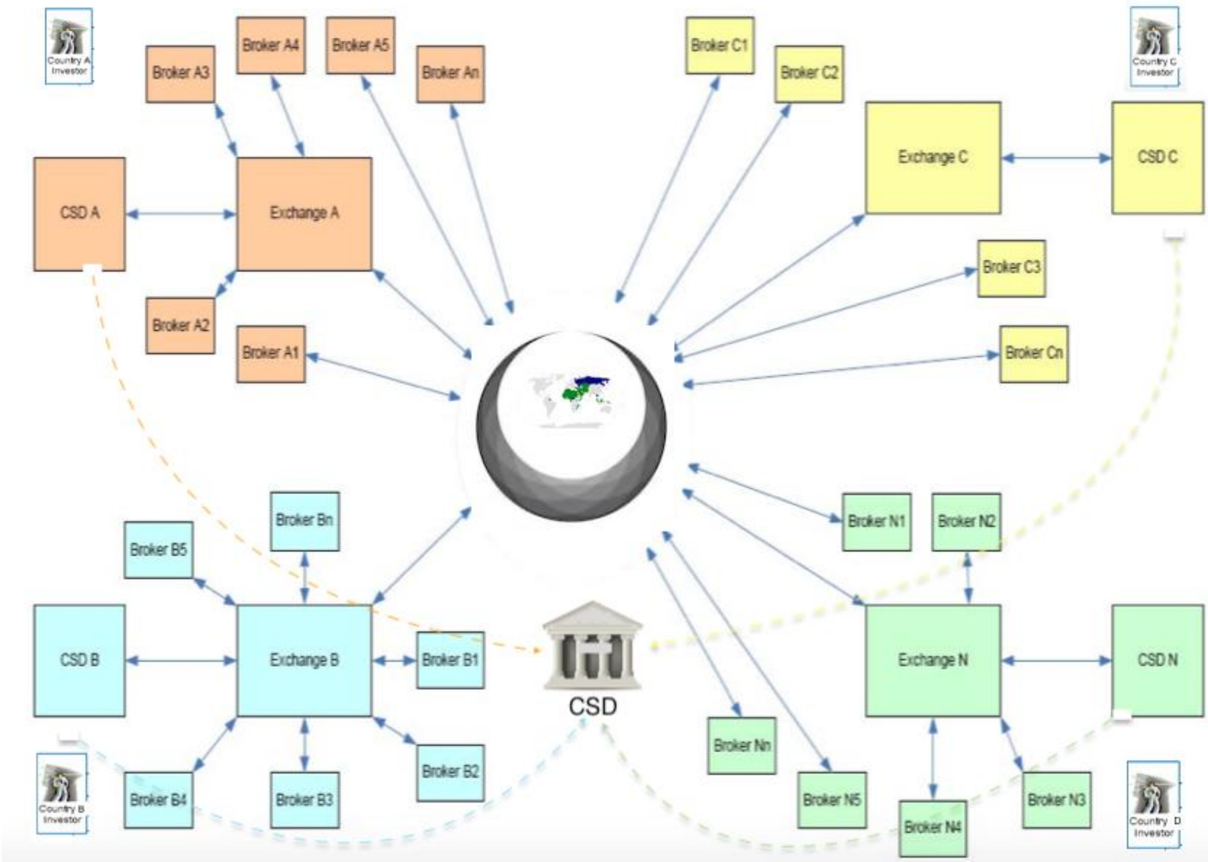

Figure 33: Operational flow of the CRESCENT Link (Phase 2)
Source: *Inspired from (Mahabirsingh, 2010; Hsu & Kien, 2015)*

The last phase, i.e. Phase 3, exemplifies a possible integrated clearing in the future. As long as the clearing mechanism would continue to be domestically handled, a greater level of integration in post-trade services would not be achieved to enhance liquidity in the COMCEC member countries markets further. Such an integration would be valuable if occurred between CCPs. In that respect, CCP links could be developed to achieve clearing integration. Such a link would be an arrangement between CCPs that allows the provision of CCP services for trades performed by the participants of those CCPs, without requiring those participants to become members of the CCPs. The link could be established in a peer-to-peer manner[119], as is the case in CSDs discussed above, in which two or more CCPs would be linked together on an equal

[119] Another option would be a participant model. In this model, one CCP is a standard clearing participant in another CCP, where the rule-book of the "parent" or host CCP applies in full to the CCP that becomes a standard participant. The parent CCP would be entitled to apply risk mitigation measures to its exposures to the subordinate CCP (World Bank, 2014).

basis *(i.e. recognize each other as CCPs)* and would generally not connect to each other using the standard service offerings for clearing participants, but rather develop dedicated operational links with specific risk management arrangements. Creating such links requires a high level of cooperation and harmonization between the linked CCPs, the need for inter-CCP change management and dispute resolution mechanisms and, where CCPs are based in different jurisdictions, the need for the CCPs to have access to and the ability to interact directly with a foreign regime and/or market (World Bank, 2014).

Ultimately, the integration in Phase 3 would look like the one suggested as follows in Figure 34:

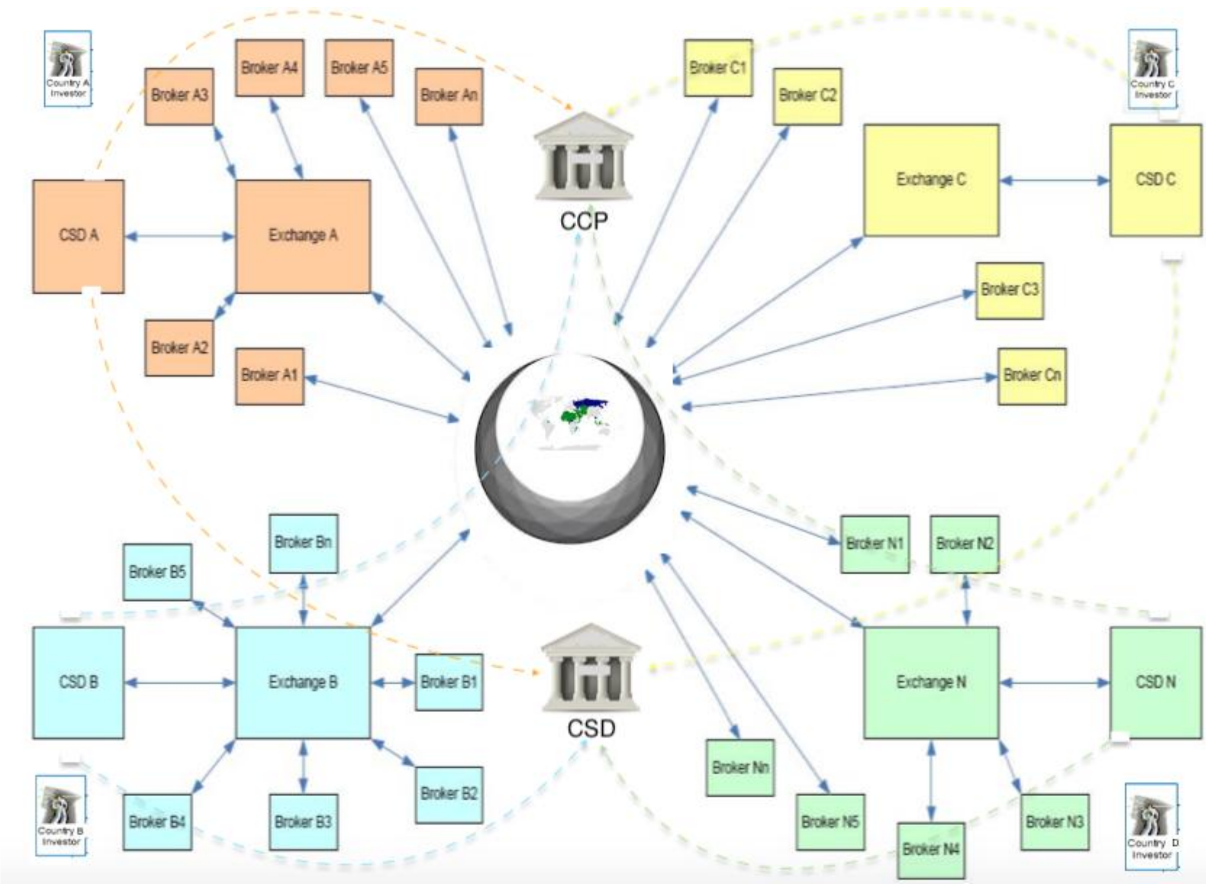

Figure 34: Operational flow of the CRESCENT Link (Phase 3)
Source: *Inspired from (Mahabirsingh, 2010; World Bank, 2014; Hsu & Kien, 2015)*

In this chapter, considering the infrastructure modelled as Phase 1 is discussed. First, pre-trade, trade and post-trade facilities are summarized, and second the requirements for the trading platform are instructed.

4.2.1. Pre-Trade Facilities

Pre-trade transparency equates to availability of reasonable bid and ask prices and depth of trading interests on a continuous basis and as close to real time as possible.

By this definition, the link shall ensure that pre-trade information in the markets is easily accessible. It could be modified to allow connectivity, as well as to facilitate automatic posting of trade information from different trading platforms. Dissemination of pre-trade information in this way brings forth transparency to the market, which in turn encourages a larger number of investors and intermediaries to participate in the market. However, as market makers would be in a position to make profit in their activities, the level of pre-trade transparency should be handled properly.

In this context, pre-trade transparency requirements would be calibrated for different types of market trading structures. For instance, as the equity products are suggested to trade mainly on a CLOB basis, market participants would be able to see the outstanding firm orders that have been submitted. For the debt products, where market making would be the means of investment, pre-trade information might be lower in that prices would be rather indicative. Moreover, there would be some cases when pre-trade transparency requirements can be waived especially for real estate securities for which there is not a liquid market.

In any case, clients shall have the opportunity to build their trade structure on the platform before trading, carrying out credit checks and other trade approval processes on indicative prices without contacting the intermediary.

4.2.2. Trade Facilities

Trading link would have two sub-platforms, one for conventional real estate securities and the other one for Islamic real estate securities. These sub-platforms would further be divided into different segments with respect to the relevant security type. In this respect, for instance, equity products and debt products would be treated separately, which means different products would correspond to different types of trading models as shown in Table 52:

Table 52: ETP types

Order-driven	Pure	CLOB	
	Hybrid	CLOB + Market makers	
Quote-driven	Global	Market makers and other participants trade on the same platform	
	Tiered:		**Two separate links** **or** **One single link** with two market segments
	Dealer-to-dealer	Market makers = Primary dealers only Market makers = Primary dealers + non-primary dealers	
	Dealer-to-client	Market makers Retail and institutional investors	

Source: *(Gemloc, World Bank, 2013)*

In an order-driven market, orders can be either submitted by any market participant to a CLOB anonymously *(i.e. pure)* and/or with market makers who commit to quote continuously firm bid and ask prices for the traded financial instruments *(i.e. hybrid)*.

In a quote-driven market, however, orders can be displayed only by market makers. Other participants are called price takers. Under the global scheme, market makers and price takers trade on the same platform. Under the tiered scheme, two segments operate: one is dealer-to-dealer segment in which the ETP is accessible only to dealers and trading is typically anonymous, whereas the other one is dealer-to-client segment in which the ETP is accessible also to end investors. It is possible to have two different schemes in one single platform.

4.2.2.1. Equity Products

Equity products are cash equities mainly Real Estate CIS shares/units. Since equity markets tend to be order-driven that fits only liquid markets in which there is a continuous flow of orders, CLOB would be the best option for modelling trade on equity products. Within this model, any participant can quote prices and originally there are no market makers. However, there is the possibility that equity products of the COMCEC member countries lack sufficient liquidity in the market, which would distort trade under CLOB model. For that reason, market making would be an optional activity for such products where market makers are expected to provide liquidity to the market on a continuous basis through their bid and ask quotations and thereby to contribute to the stability of prices in the CLOB environment. Moreover, liquidity providing services, apart from price stability, would be offered to increase liquidity and the tradability of equities.

In line with these explanations, a hybrid[120] order-driven model is recommended for equity products within the context of real estate securities is recommended. Similar models have been adopted by Turkey and Korea.

4.2.2.2. Debt Products

Debt products are mainly bonds and sukuks. A debt market generally needs a quote-driven procedure due to its relatively illiquid nature in the absence of naturally matching interests. Hence, trade on debt products would probably require market makers and/or occur on a RFQ basis. But, this would be a more valid argument when debt products are traded in a setting where retail or institutional investors are one of the trading parties *(e.g. a dealer-to-client or an all-to-all market type)*. Beyond that, an inter-dealer market, in which dealers trade with one another would be more suitable for debt products. In that situation the markets would typically operate on CLOB, provided that the debt product is liquid enough to generate high levels of transactions.

Alongside these protocols, another trading model, though not shown in Table 50, has emerged in recent years for debt products, namely, all-to-all trading. These platforms connect dealers, investors and other market participants on a centralized trading venue and allow trading between all platform members, irrespective whether a participant is a buy-side or a sell-side market player (Mattmann, 2018). Some ETPs such as MarketAxess, Bloomberg and Tradeweb have started to provide investors all-to-all solutions, which are considered to replace traditional dealer-to-dealer and dealer-to-client intermediation in the future.

[120] A recent study reveals that benefits of a hybrid market with CLOB and voluntary dealers compensate for obligatory market makers in highly illiquid equity markets (Gregoriou, 2015).

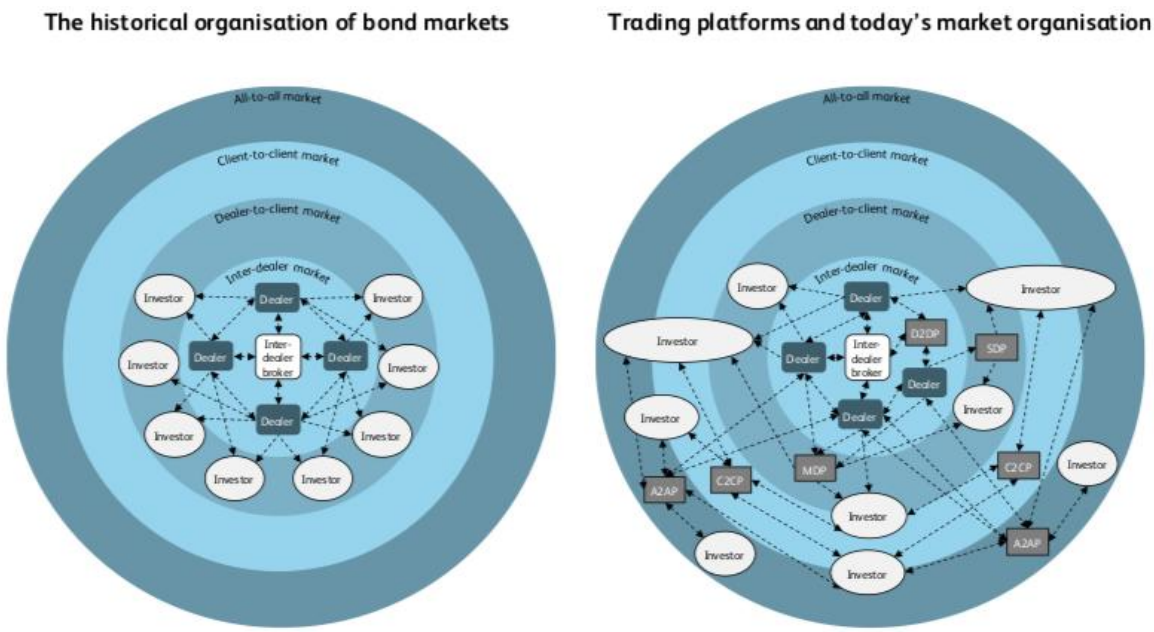

Figure 35: Where the debt market is going
Source: *(Mattmann, 2018)*
Notes: *A2AP: All-to-all platform; C2CP: Client-to-client platform; D2DP: Dealer-to-dealer platform; MDP: Multi-dealer platform; SDP: Single-dealer platform; → Price-taker; ← Price-maker.*

Even though differences do exist these protocols have the common objective of pooling liquidity and enabling the network for multilateral trading. Any combination of them would be useful from information transparency perspective, even for non-participants in respective platforms because these platforms can publish post-trade prices with minimal or no delay. Notwithstanding, given the current situation of debt products in the COMCEC member countries[121], the traditional dealer-to-dealer and dealer-to-client models are recommended in this paper. Besides, though the standard procedure has been to have two protocols on separate platforms, a single link is recommended due to its more convenient and cost-efficient solutions for all users of the link[122].

After all, the following figure would portray the CRESCENT Link structure for both equity and debt products[123]:

[121] Even this is the case in the world as a whole. Outcomes of a recent survey indicate that advanced ETPs are rarely recognized and hardly used among the responding companies. In other words, firms have not adopted these technological innovations and thus have not yet stepped into the second phase of the bond market's evolution (Mattmann, 2018).
[122] Recently, Morocco experienced one single ETP split in two market segments in its treasury markets (Gemloc, World Bank, 2013).
[123] Brokers are neglected.

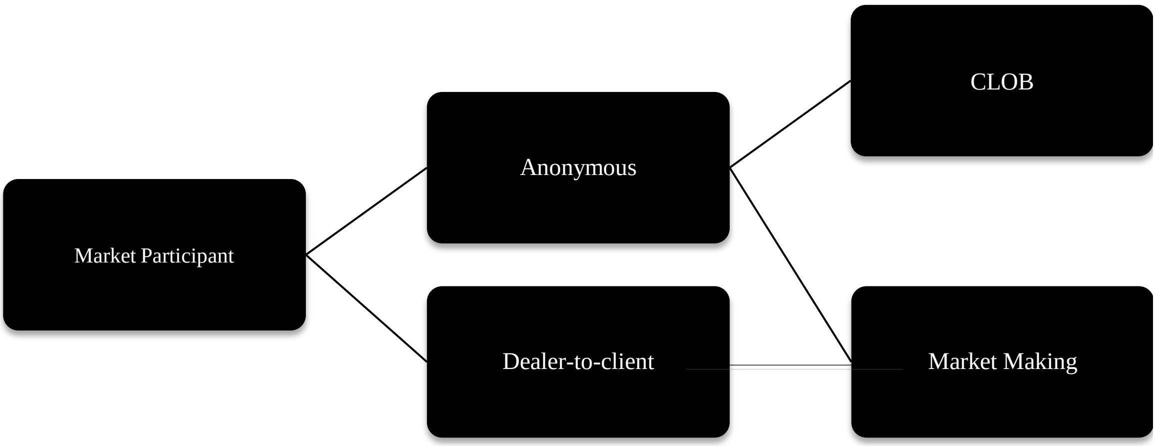

Figure 36-a: Order-driven equity product market trading structure

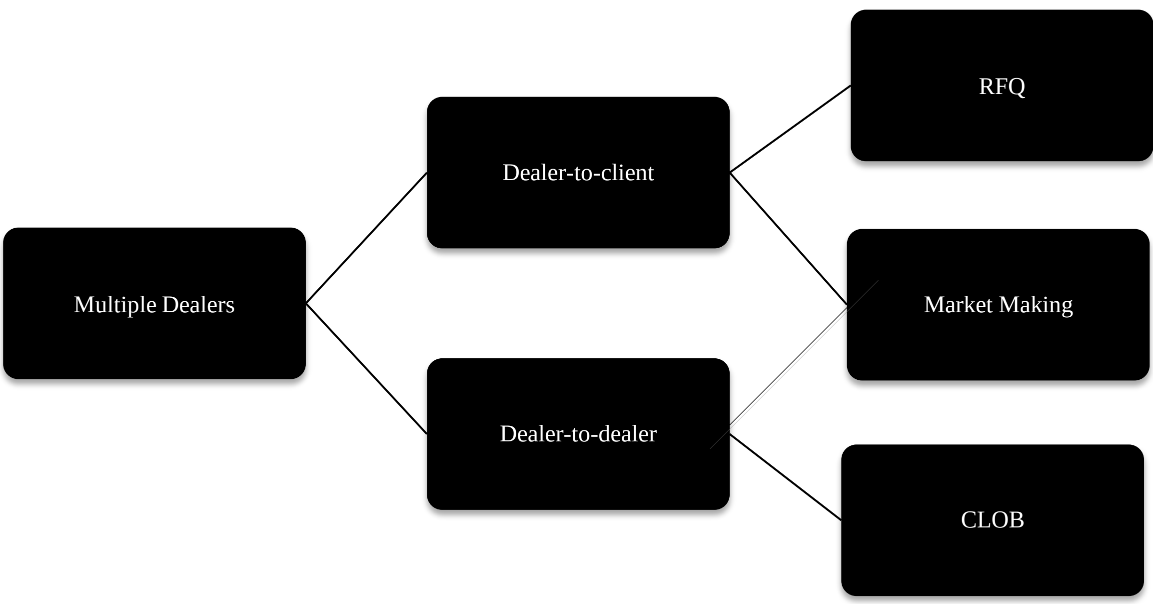

Figure 36-b: Quote-driven debt product market trading structure

4.2.3. Post-Trade Facilities

4.2.3.1. Transparency

Post-trade transparency means disclosure of trades *(e.g. transaction price, execution time, and volume data)* close to real time, except for trades in a real estate security for which there is not a liquid market and a delayed disclosure is allowed. More accurate and timely post-trade information will create a positive feedback loop as it becomes the pre-trade information for the next trade, thus encouraging more liquidity. Thanks to its transparency-friendly design on both pre-trade and post-trade basis, the link would provide better and more reliable information for supervisory/surveillance purposes as well.

4.2.3.2. Clearing

Clearing follows the trade and is the process of managing the actions between the date of execution and settlement. This process requires mutual recognition in the form of affirmation, matching or confirmation between the parties in the post-trade environment. In concrete terms, the party on the other side of the trade is unknown, meaning that executed orders are just forwarded to a clearing counterparty for matching purposes.

Clearing can be effected formally via a CCP or informally directly between the trading parties. In CCP clearing, the CCP acts as the buyer to any seller and the seller to any buyer *(a process known as 'novation')*, so the responsibility to mitigate the counterparty risk rests with the CCP rather than the trading parties. This post-trade process includes netting of receivables and payables among the market participants.

In the introduced link, the clearing process would be still performed where the real estate security is issued. However, infrastructure links would exist between any of the COMCEC member country CCPs in the future. This is crucial in increasing the interconnectedness of the markets. At first glance, it seems possible to expand the eligibility criteria of participants and setup a cross-clearing membership model enabling CCPs to become participants of each other as as clearing members.

4.2.3.3. Settlement

Following the novation and clearing of the trade, the CCP normally enters the transactions in a previously matched status into the CSD. At this the stage in the post-trade operations flow, the buyer receives the acquired securities, while the seller receives the corresponding funds. Financial intermediaries participate in the securities settlement process in the form of book entry, and in offering access to CSDs. On the settlement day, the CSD affects the ownership transfer subsequent to the smooth exchange of securities and funds between multiple parties. Thus, a CSD handles settlement risks by offering a standardised settlement processing infrastructure.

Just as in the case of clearing, the settlement process would be conducted where the security is issued. In the future, it is possible to expect that CSDs have links with each other amongst the COMCEC member countries. In that respect, it would be feasible to establish a correspondent account relationship and messaging hub in order to reduce market barriers to entry as discussed in Section 4.1.2.6.

4.2.3.4. Custody

Custody service, provided by custodian banks, comprises the safekeeping of assets by intermediary banks, brokers and CSDs on behalf of investors and executing asset servicing functions like collecting revenues, processing corporate actions, reclaiming tax and offering proxy voting services.

4.2.4. Platform Requirements

4.2.4.1. Equal Treatment

The CRESCENT Link would be an hub and spoke model relying on a mutual recognition framework. Link's computer software system for order routing would provide a structured and standardized, in technical and functional aspects, infrastructure that essentially enables eligible members, i.e. brokers. It would enable:

- giving and/or receiving orders to/from each other to buy and/or sell real estate securities traded on the securities markets organized by the relevant COMCEC member country exchanges on behalf of such members and/or their clients.

- giving and/or receiving reports on the status of execution of such orders and securities transactions before the relevant exchanges; and

- receiving real-time market data and other information such as daily reports from relevant stock exchanges concerning the real estate securities markets organized by such exchanges.

For that reason, the platform should ensure equal treatment for the participating the COMCEC member country exchanges and access to the link. The platform should also ensure equal terms are applied for all members and to the clients thereof.

Unified rules for order and message routing and objective standards, honest and impartial treatment of the platform's members and the clients thereof in respect of order and message routing on the markets organized by the exchanges should be applied. A market regulation, detailing who can access the link, which instruments can be traded, the trading rules and the supervision of the market should be introduced.

Link should provide all members with sufficient information for the effective use of the system's functionalities as well. In line with this, any technical infrastructure such as API[124], testing environment etc. should be shared.

[124] API means an application programming interface provided by technology providers to allow participants to connect their devices to a platform and to access to that platform.

4.2.4.2. Method of Access

One unique aspect of the scheme would be the method of access.

Participation in order routing sessions should be accomplished through brokers' own order management systems connected to the link via API and/or through other pre-specified means[125]. The conditions for connection of a broker's order management system and for access to the link by the broker should be established under mandatory instructions. Each member should receive unique identification numbers and passwords to access and use the link. Sending and receipt of messages to and from the system should be performed only by brokers. Hence, members should be responsible for the exercise of control over the access to all devices connected to the link, as well as for safeguarding the secrecy of the unique identification numbers and passwords assigned to such member.

Each broker that has been granted access to the link should also be responsible for the exercise of control over the access to the device assigned thereto and all electronic devices connected to the system, as well as for safeguarding the secrecy of the unique identification numbers and passwords assigned to the same.

All members should be entirely liable for all orders, transactions and messages to the link entered using the unique identification numbers assigned to them.

4.2.4.3. Alignment of trading structures

Only the orders defined should be admitted in the system. These definitions should be made with respect to the types of real estate securities to be traded on the platform. As discussed previously, equity products would require limit orders for instance, while orders on debt products occur on RFQ basis.

Apart from these, however, liquidity providing and market making procedures should also be determined considering the illiquidity nature of real estate securities. Both services would require regulation that specifies eligibility criteria for service providers.

4.2.4.4. Eligibility criteria for stock exchanges, members, and real estate securities

Only stock exchanges licensed to operate as stock exchanges under the laws of the country of their establishment should be eligible to become participating exchanges. In this regard, involving OTC markets should also be considered. As a matter of fact, some types of real estate securities, especially Sukuks, are traded OTC. Although, it would be important to involve only stock exchanges for transparency reasons in the initial stage of the platform, the link would be able to handle the OTC market integration as well. This would obviously depend on the technology to be used at the core of the system, but in practice it would be possible to support bi-directional order/message flow for different asset classes both OTC and exchange traded.

[125] For instance, the SEE Link offers a Front End Application (FEA) as a desktop application which provides order management functionalities to its members. For the originating brokers, as an example, who do not have their own API interface the FEA provides a possibility to connect to the SEE Link's system and facilitates sending various orders and requests to their contracted execution brokers and receiving confirmations and reports.

The Link should accept banks, brokerage companies, branches of brokerage companies and any other eligible companies that are licensed to perform investment intermediary services, i.e. securities services under the laws of one or more COMCEC member countries and that are admitted as members of these exchanges. However, in the long run, it would be possible to open the link for portfolio management companies or institutional investors.

Relevant authorities in each COMCEC member country should determine the eligibility criteria for the real estate securities to trade upon the CRESCENT Link. In so doing, they would allow the Link to pave the way for access directly to the pre-specified real estate securities from among other types of assets in the exchange. In this respect, each stock exchange, for instance, would set up a pooled list of their listed real estate securities for the sake of segregation. For proper execution purposes, the exchange should also classify the security considering the mode of finance *(i.e. conventional or Islamic)* and the type of the asset *(i.e. equity or debt)*. Origination of the pools of real estate securities should be orderly in that a similar methodology should apply to achieve standardization throughout the Link.

4.2.4.5. Operational considerations

The operational hours of the system should cover the trading hours of all of the COMCEC member country exchanges allowing for additional time for administrative operations and data synchronization. Operational hours should not depend on whether one or more of the participating exchanges are operational or not *(due to national holidays or other reasons).*

In that context, the link should be operational on every calendar day within the given timeframe when at least one of the participating exchanges is operational. This would be a great advantage for investors, since some countries have trading days of Sunday to Thursday while others' are Monday to Friday, meaning that the link would be available for trading almost every day in a week.

Evaluative Summary

Takeaway #1 – The rollout of the CRESCENT Link should be designed in a way that considers robustness, flexibility, cost and performance issues along with any potential constraints on resources, capabilities, and infrastructure.

- Strong components of the initiative appear to be revealing themselves in providing new opportunities for portfolio diversification, reducing transactional costs, lowering latencies in order routing, improving the liquidity of real estate securities, and supporting financial cooperation under a mutual recognition scheme. Prominent opportunities come from the window of financial integration, development and more visibility, investor appetite, FinTech developments and further harmonization.

- Possible weaknesses would be arising from the fact that real estate securities markets are relatively underdeveloped which would result in lack of human capital, relevant adoptions in technology may not be in coherence in countries, already established and inherited trading channels of market participants may avoid using the new trading link, real estate securities, particularly debt products, may not be standardized to justify the utilization of the link rather than other means of trading such as OTC, and post-trade facilities would not be centralized. Threats to be considered would be potential development costs, lack of demand, rise of off-venue trading, fears of smaller markets, and political uncertainty.

Takeaway #2 – A technically simple trading model for real estate securities for the COMCEC member countries is highly recommended in order to bring its strengths and opportunities forward and to keep away from its weaknesses and threats as far as possible.

- The CRESCENT Link should be formalized as a hub and spoke order routing model to provide a standard trading interface with a single connection point for market information and order routing at the first step.

- A simple model would be flexible to adjust not only new technologies but also new products and asset classes easily.

Takeaway #3 – The CRESCENT Link should not be viewed as a disposable product rather it should be positioned as going concern and a milestone for further financial integration among the COMCEC member countries.

- The initiative, if properly designed, would evolve gradually into an end-to-end and all-to-all comprehensive platform, even a market, which provides support for the COMCEC member country needs across all aspects of the trade cycle - from price discovery to flexible execution to post-trade analysis and reporting.

- A more comprehensive model supporting market makers, facilitating various order types and providing the ability to support local market rules may be developed as a further step in the future. Further integration would bring deepening and interlinked capital markets by progressing towards more connectivity in clearing settlement and custody linkages to facilitate investment among the COMCEC member countries, and allow investors and issuers to tap cross-border capital markets efficiently.

5. WORKSHOP AND POLICY BUILDING

This chapter portrays some to-the-point policy questions and recommendations drafted for discussions in the Workshop held on September 24-25th, 2019 at the first step. Second, it briefly summarizes the agenda and proceedings of the Workshop activity.

5.1. Policy Questions and Draft Recommendations

Following policy questions have been prepared and circulated among the participants before the Workshop activity:

1- ***Which policy actions at both national and international level should be prioritized in developing or improving real estate securities markets for further deepening and strengthening capital markets throughout the COMCEC member countries?***

In a move from the preliminary vision of this report to an actual operational and institutional arrangement, COMCEC member countries should next proceed with the endorsement of a cooperative and collective approach toward planning, designing, developing and operating the CRESCENT Link to achieve an effective integrating platform for real estate securities upon required approvals.

2- ***What specific achievements do the markets require for real estate securities in order to develop a larger domestic investor base and attract foreign investments, particularly from institutional investors, e.g. CIS?***

On the other hand, the successful initiation of the CRESCENT Link would be highly dependent on the availability of product variety and robustness of regulations, meaning that, in most of the countries, relevant progress on real estate securities, particularly Sukuks and Real Estate CIS Shares/Units, would be expected.

3- ***What kind of necessary measures should be fulfilled to ensure that the secondary markets for real estate securities meet sufficient liquidity and trading volume requirements?***

Given the fact that technology is the only way to enable market participants to uncover available liquidity, the CRESCENT Link can bring together a large and diverse pool of participants, thus reducing the need for intermediaries that match bid and ask orders between segmented traders. Such a facility would deepen the current liquidity, thereby allowing for sizeable trade executions. It would also provide support for additional volumes, which may not exist currently because of execution issues.

4- ***Should the legislative and institutional framework regarding real estate securities markets be aligned with each other based on a stringent regulatory harmonization approach or should a home-rules-apply scheme in which corresponding parties mutually recognize national rules and regulations should be followed?***

In view of the extent of the legal and institutional diversity and the amount of effort that needs to be devoted, a tight regulatory harmonization might not be a preferred option. Rather, the development of modern technology would allow the COMCEC member country exchanges to take the advantage of enjoying "home rules apply" where investors are bound by the rules and regulations of the country where traded securities are hosted, while tackling institutional disparities.

5- ***Can further cooperation and improvement among the COMCEC member countries' capital markets be reached through the use of technology that connects market participants to each other's real estate securities markets and enables them to invest in a broad range of real estate securities?***

A technically simple trading model for real estate securities for the COMCEC member countries would be a good start in order to bring its strengths and opportunities forward and to keep away from its weaknesses and threats as far as possible. Main goal of this model should be establishing the ways for easy access to real estate securities, for improved liquidity and for secure transactions. This goal may be achieved by establishing the CRESCENT Link formalized as a hub and spoke order routing model to provide a standard trading interface with a single connection point for market information and order routing at the first step, then by allowing it to evolve gradually into an end-to-end and all-to-all comprehensive platform in the future.

6- ***Should such connection be achieved by means of a stock exchange-like infrastructure where real estate securities listing and trading procedures are regulated and supervised or a dedicated multilateral link-like electronic trading platform where real estate securities that have been already listed among the COMCEC member markets are traded?***

Exchanges have faced a number of challenges in recent years such as the decline of economic and financial barriers at the regional and international levels, the continuous emergence of innovative technology, new regulatory reforms and the evolution of investment decisions. Consequently, there has been a shift in the market shares from the exchange-based trading venues towards platform-based trading venues. Furthermore, an exchange-like structure would require stringent harmonized rules and regulations, which would conflict with the home-rules-apply scheme as mentioned in Question 4 above.

7- ***Should the initiative be undertaken in a phased approach in which ripe markets within the COMCEC member countries proceed with a pilot project while others jump on the board when relevant criteria are met or in an all-at-once approach in which all the COMCEC member country markets are involved at the same time in the future?***

A number of issues should be handled in planning the initiative. Asset classes, such as real estate CIS or Sukuks that would trade within the CRESCENT Link should be clearly identified with respect to liquidity, volume and portfolio diversification requirements. Utilizing an in-house built technological infrastructure or a leased one would be another critical item to be assessed. In this respect, a plan would be proceeded with front-runner exchanges upon bilateral arrangements in a phased-in strategy rather than an all-at-once model that would be employed after relevant improvements in all markets are completed.

These policy questions were transformed into draft policy recommendations, which are listed as follows:

Draft Policy Recommendation #1

Attaining a certain level of development for the real estate securities markets to work.

- Enhancement of the institutional strength of the real estate markets by means of various measures needed for the emergence of real estate securities, such as solid property rights, precise registration procedures, reliable valuations, improved transparency, facilitated investments and increased funding capacity.

- Commitment to sound fiscal and monetary policies, more coherent industry strategies, and an enhanced investment climate.

Draft Policy Recommendation #2

Setting up a robust regulatory infrastructure through which the risks associated with real estate securities are assessed and appropriately controlled within a framework that follows best practice and international standards.

- Achievement of investor protection, market fairness, efficiency and transparency and systemic risk reduction.

- Product innovation that provides diversification opportunities in order to synchronize the market's pace with global changes.

Draft Policy Recommendation #3

Improving the ability to access capital at favourable costs.

- Provision of an enabling and supportive market infrastructure for the real estate securities market to flourish.

- Utilization of technology to bring together a large and diverse pool of market participants in order to uncover available liquidity.

Draft Policy Recommendation #4

Allowing for a functional integration to take the advantage of home-rules-apply in the short term while maintaining longer-term strategies to develop more advanced integration opportunities.

- Improvement of the capacity of each individual market by means of technology that enables them to complement each other in providing investors with an easier and more efficient approach to trade in different markets.

- Collaboration to reinforce the ground for a robust legal and institutional framework that removes disparities.

Draft Policy Recommendation #5

Providing simultaneous and real-time remote access or connectivity to a variety of real estate securities already listed and traded in member country markets.

- Development of a technically simple trading model for real estate securities that establishes the ways for easy access to cross-border markets and avoidance of embarking upon too-infeasible-to-implement policies regarding financial integration.

- Investment of a relatively low cost technology that helps parties to turn their focus to their key competences.

Draft Policy Recommendation #6

Establishing a trading link that provides a standard trading interface with a single connection point for market information and order routing.

- Adopting a hub and spoke order routing model wherein the hub is the link and spokes are the national exchanges in order for easy access to multiple real estate securities markets with low regulatory prerequisites as a first step.

- Allowing the model to evolve gradually into an end-to-end and all-to-all comprehensive platform in the future.

Draft Policy Recommendation #7

Proceeding with a feasible plan with front-runner exchanges upon bilateral arrangements in a phased-in strategy rather than an all-at-once model that would only be employed after relevant improvements in all markets are completed.

- Endorsement of a cooperative and collective approach toward planning, designing, developing and operating the link to achieve an effective integrating platform for real estate securities upon required approvals.

- Integration of only those member countries that have attained a certain degree of real estate market development and progressively increasing the numbers as more member countries' infrastructures develop.

As summarized in the next section, these policy recommendations have been a critical component of the Workshop activity in that potential comments and feedbacks would make significant contribution in designing the envisaged model in this report.

5.2. Workshop Activity

As stipulated in the Project requirements, a Workshop was held on September 24-25th, 2019 in Istanbul. The Workshop was organized by CMB under the COMCEC project funding mechanism and was dedicated to discuss real estate securities markets in the COMCEC member countries upon the findings of the Preliminary Report. Specifically, a drafted set of policy questions and recommendations aligned in the previous section were evaluated in an extensive and collaborative manner in order to identify any challenges and opportunities of the COMCEC member country real estate securities markets. Workshop sessions were designed in line with these policy questions and recommendations and a dedicated session was performed for an in-depth discussion on the basis of “technical correctness”, “administration feasibility”, and “political support”.

In this context, with the attendance of representatives from Turkey, Kuwait, Iran, Malaysia, Palestine, Maldives, Brunei Darusselam, Albania, Lebanon, Pakistan, Gambia and United Arab Emirates, the Workshop activity was successfully implemented and valuable contributions of relevant parties were obtained as anticipated by the Project guidelines.

The 2-days flow of the Workshop programme is outlined as follows:

- On the 1st day of the Workshop,

    - Following the opening speeches of Mr. Bora ORUÇ, CMB Executive Vice Chairman, and Ms. Seçil SAYIN KUTLUCA, COMCEC CMR Forum Representative and CMB Senior Legal Expert, the Preliminary Report was presented by Dr. Burak Pirgaip, the Project Coordinator, and his findings on the survey as well as his views on the Project’s feasibility were materialized.

    - Along with the presentation, Mr. Göktürk IŞIKPINAR, Chief Investment Officer Equities and Alternative Investments of Ak Asset Management, delivered a keynote speech on alternative investment instruments in Turkey, encompassing Sukuks, real estate certificates, REITs, real estate investment funds, and private equity.

    - A comprehensive panel on “Challenges and Opportunities of Integrating COMCEC Member Countries Real Estate Securities Markets” was offered as joined by panellists from Borsa Istanbul (Mr. Mustafa YILDIZ, Manager in Department of Alternative Markets), CMB (Mr. Erkan ÖZGÜÇ, CMB Deputy Head of Department of Institutional Investors), and industry (Mr. Kenan TURAN, Assistant General Manager in Ziraat Asset Management, and Mr. Murat PARMAKÇI, Founder of PRM Finans). In the panel, recent product developments, on-going regulatory work, and industrial capacity regarding real estate securities were elaborated. Moreover, a cost and benefit evaluation of the CRESCENT Link initiative in integrating COMCEC member country markets was made.

- On the 2nd day of the Workshop,

    - Ms. Dilan PAMİR, Head of Capital Markets in Investment Banking Division, delivered her keynote speech regarding the recent operations of Development and Investment Bank of Turkey in Turkish real estate securities markets.

    - Following the keynote speaker, Dr. Burak PİRGAİP, the Project Coordinator, shared the survey responses with the participants and paved the way for a dedicated policy design session with a guiding presentation. In the light of that guidance, participants were assigned to five working groups in order to discuss draft policy recommendations and submit their comments on each subject matter. Hopefully, Workshop participants have made valuable contributions suggesting, by and large, that policy recommendations should be more specific; should put more emphasis on investor protection through public disclosure and transparency as well as eligibility criteria; should provide availability for digital money transfers and tokenization considering recent FinTech developments; should take into account empirical evidence on the potential impacts of the initiative on the liquidity and trading volume in the markets and should offer convenience in terms of post-trade facilities. All of these contributions have been utilized in the process of building relevant policy recommendations, which are listed in the following chapter.

6. POLICY RECOMMENDATIONS

In this final chapter, after careful analyses of the discussion material outlined in the Workshop policy design session discussions as mentioned in the previous chapter, the following comprehensive set of policy recommendations is set out for policy-makers regarding enhancing capital flows, deepening capital markets and strengthening financial cooperation in general; and regarding the operationalization of the CRESCENT Link in particular.

Policy Recommendation #1: *Attaining a certain level of development for the real estate securities markets to work.*

COMCEC member countries should give priority to the enhancement of the institutional strength of the real estate markets by means of various measures needed for the emergence of real estate securities. These measures would at least include solid property rights, precise registration procedures, reliable pricing and valuations, improved transparency, investor protection, facilitated investments, innovation for new investment products and increased funding capacity.

Policy Recommendation #2: *Setting up a robust regulatory infrastructure through which specific portfolio characteristics associated with real estate securities (e.g. return, eligibility, and risk) are assessed and appropriately controlled within a framework that follows best practice and international standards.*

COMCEC member countries should strengthen their regulatory infrastructures through the achievement of investor protection, market fairness, efficiency and more importantly, transparency. Such an achievement could be possible if countries establish a mechanism in which all relevant information, such as taxation, dividends etc., regarding real estate securities and CIS are provided to all of the investors timely and through a guideline document. Appropriate means of full public disclosure should be laid down with this disclosure instrument. COMCEC member countries should also be open to product innovation that provides diversification opportunities in order to synchronize the market's pace with global changes. Among the universe of real estate securities, only the eligible ones should be subject to cross-border trade. A common set of eligibility criteria should be determined through an additional guideline for this specific purpose and those criteria should be prepared on the base of securities rather than issuers. Accordingly, each participant country should specify their own eligible real estate securities that would be involved in the trading link. Fully functioning of these regulatory improvements would depend on a technical standardization among member country markets, which should be required eventually to have technological upgrades and relevant adjustments to utilize the common trading platform. Furthermore, investor protection should be prioritized by entering into MOUs or twinning-like agreements for enforcement and by establishing a COMCEC-level dispute settlement scheme to deal with investor complaints.

Policy Recommendation #3: *Improving the investors' ability to access capital at favourable costs.*

COMCEC member countries should provide an enabling and supportive market infrastructure for the real estate securities market to flourish. For instance, given the possibility that real estate securities lack sufficient liquidity in the market, which would distort trade, market making would be an optional activity for such products where market makers are expected to provide liquidity to the market on a continuous basis through their bid and ask quotations and thereby to contribute to the stability of prices.

In addition, COMCEC member countries should utilize new FinTech developments in order to bring together a large and diverse pool of market participants, retail and institutional, to uncover available liquidity. Liquidity, indeed, is one of the most critical concern for the proper functioning of the CRESCENT Link. Hence, it should be dealt by means of providing some empirical evidence from the markets to be considered as potential participants of the Link. Post-trading facilities are crucial for the liquidity problem as well. All of these considerations should be carefully analyzed as they are equally important in reducing costs associated with trading via the CRESCENT Link.

Policy Recommendation #4: ***Allowing for a functional integration to take the advantage of home-rules-apply through mutual recognition in the short term while maintaining longer-term strategies to develop more advanced integration opportunities.***

A stringent harmonization framework requires higher level of cooperation practice and appears to be costly. Home-rules-apply scheme, however, is feasible. An adequate level of standardization would indeed be required as is with the case of setting eligibility criteria or drafting disclosure guidelines. Particularly, technological standardization would be a key for integration. But these should be considered as technical specifications for adaptation rather than regulatory adoptions. In order to achieve such sort of a scheme based on mutual recognition, it is important for COMCEC member countries to improve the capacity of their individual markets by means of technology that enables them to complement each other in providing investors with an easier and more efficient approach to trade in different markets. They should also continue to collaborate to reinforce the ground for a robust legal and institutional framework that removes disparities regarding the primary market (property rights, registration procedures, affordable funding, pricing and valuations etc.) and secondary market (regulatory and institutional framework, transparency, investor protection, trading platforms etc.) associated with real estate securities.

Policy Recommendation #5: ***Providing simultaneous and real-time remote access or connectivity to a variety of real estate securities already listed and traded in member country markets.***

A technically simple trading model/link for real estate securities that establishes the ways for easy access to cross-border markets should be developed. Embarking upon too-infeasible-to-implement policies regarding financial integration such as the case with regulatory harmonization approach should be avoided. A relatively low cost technology that helps parties to turn their focus to their key competences should be invested in. After the success of the simple model is justified, it could also be possible to provide alternative investment opportunities such as property crowdfunding as well as alternative payment mechanisms such as the use of a cryptocurrency. Tokenization could be considered in this respect to facilitate the operational burden and increase the innovativeness of trade on real estate securities.

Policy Recommendation #6: ***Establishing a secured trading link that provides a standard trading interface with a single connection point for market information and order routing.***

A hub and spoke order routing model wherein the hub is the link and spokes are the national exchanges should be adopted in order for easy access to multiple real estate securities markets as a first step. All COMCEC member countries would be able to reach other markets through the hub and contribute to link's development. This should be acknowledged as a kind of contract, which each country should be liable on. COMCEC member countries should then allow the model to evolve gradually into an end-to-end and all-to-all comprehensive platform in the future.

Policy Recommendation #7: ***Proceeding with a feasible plan with front-runner exchanges upon bilateral arrangements in a phased-in strategy rather than an all-at-once model that would only be employed after relevant improvements in all markets are completed.***

It would be more feasible for COMCEC member countries to follow a phased-in approach in which all countries are welcome. In this regard, COMCEC member countries should endorse a cooperative and collective approach toward planning, designing, developing and operating the link to achieve an effective integrating platform for real estate securities upon required approvals. An educational program should be delivered to the investment community to increase the level of financial literacy in general and to increase the awareness on real estate securities.

One issue would be the integration of only those member countries that have attained a certain degree of real estate market development and progressively increasing the numbers as more member countries' infrastructures develop. However, even a country with a relatively low level of development may contribute to the initiative due to the fact that the country may have a high level of savings and investment appetite for foreign investments.

CONCLUSION

Real estate investment is becoming increasingly international oriented, and so is the investment in real estate securities. As real estate industry is an integral part of the economic activity in developing nations, its secondary market where real estate securities are bought and sold should be improved in order to attract capital from both domestic and foreign retail or institutional investors. Sustained inflows of new investments and reinvestments would promote and ensure dynamic development of such economies.

This report, as funded by the COMCEC, first discusses the legislative and institutional framework for real estate securities in the COMCEC member countries. Relying on both a survey-based primary and review-based secondary source of information, the report focuses on the diversity among the COMCEC member countries, where notable differences exist in their economies, financial sectors and real estate markets. Notwithstanding, these differences are reflected in their legal and institutional frameworks regarding real estate securities. In many of the countries, primary and secondary real estate markets are relatively underdeveloped. Particularly, that secondary markets have limited number of listed companies both with a narrow investor base and lacking institutional investors, such as CIS, causes insufficient liquidity and volume in the market.

Since real estate industry is very important for development and real estate securities markets would provide a means for financial cooperation to enhance capital influx and to deepen capital markets in the COMCEC member countries, secondary market for real estate securities would be a desirable development for these countries in promoting real estate investments.

In this point of view, an initiative that aims at integrating the COMCEC member countries' real estate securities markets by means of a common trading venue, i.e. the CRESCENT Link, where trading of these securities are electronically executed would offer substantial potential from various effects. First, the venue would facilitate the free flow of capital in real estate securities. In this regard, it would provide liquidity and transactional abundance in the markets which in turn would reduce costs and increase transparency. Second, technological improvements in trading infrastructures would lead to more opportunities for future FinTech solutions and strategies. Third, competition would induce countries to make innovations in their real estate investment products to facilitate investment flow to their national markets. Fourth, the ultimate aim of more integrated markets would be accomplished in the future by designing harmonized legislative and institutional framework as motivated by the common trading venue experience.

The idea behind this cross-border initiative is to integrate the COMCEC member countries' real estate securities markets without merger or corporate integration, yet using only technology that will enable participating stock exchanges to remain independent and complement each other in providing investors with an easier and more efficient approach to trade in different markets.

However, the gains are not automatic and in order for the COMCEC member countries would benefit from deepening capital markets, careful design and sustained implementation would be necessary. It is important to start with simple structures to avoid embarking upon too-infeasible-to-implement policies regarding financial integration. The CRESCENT Link offers a simple means for trading securities among the COMCEC member countries by employing a hub and spoke model in which trade orders from investors are routed via a link and executed in any target market regardless of routine procedures associated with a typical cross-border investment in that market. Home rules would apply with respect to post-trading, namely clearing, settlement and depository facilities as integrating these services would initially require an extent of development in the liquidity and volume in the venue in order to justify the invested technology.

But, apart from the technical side, political support and capacity would have utmost importance so as to draw resources from the COMCEC member countries, even from non-COMCEC sources. Thus, at the initial stage, the COMCEC member countries should proceed with the endorsement of a cooperative and collective approach toward planning, designing, developing and operating the CRESCENT Link to achieve an effective integrating platform for real estate securities upon required approvals. At the second step, a number of issues should be handled in planning the project implementation. Asset classes, such as real estate CIS or Sukuks that would trade within the Link should be clearly identified with respect to liquidity, volume and portfolio diversification requirements. It should also be emphasized that whether the plan would be proceeded with front-runner exchanges upon bilateral arrangements in a phased-in strategy or an all-at-once model would be employed after relevant improvements in all markets are completed. Third, a well-defined and documented business framework for the operation of the project should be created based on international best practices and principles. The business model of the CRESCENT Link should be structured to reflect the strength of the Link's governance mechanism. Fourth, all potential risks that the project would face in the implementation stage should be effectively managed and mitigated. Finally, in order to enhance the sustainability of the initiative, a reasonably detailed information communication program for broader audiences including a wide range of local/foreign retail/institutional investors should be maintained. Moreover, intensive promotional and educational programmes should be organized in order for the market participants understand the goals, functions and operations of the Link and can apply that knowledge in practice in a variety of circumstances. Several measures should also be considered including granting specific incentives or exemptions for issuers/investors, allowing for multicurrency real estate securities or enjoying market making/liquidity providing services as well. These are all important steps in order to encourage liquidity and volume in the market and promote the development of a deepening and broadening investor base.

Overall, the CRESCENT Link should be positioned as going concern and a milestone for further financial integration among the COMCEC member countries, the scope of which might be broaden to comprise all types of asset classes or the model of which might be upgraded to a fully integrated end-to-end platform where all trading facilities are centralized and legislative framework is harmonized over the years.

It is believed that the substance of the CRESCENT Link would overweigh its form and would open the window of opportunities for a prospective integration strategy for the COMCEC member countries.

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