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Global Trends in Exchanges and Implications for Exchanges in ASEAN Countries

Introduction

The power structure of the world's exchanges has been changed dramatically by international restructurings that have taken place since around the turn of this century. More recent exchange restructurings, such as the 2012 acquisition of the London Metal Exchange by Hong Kong Exchanges and Clearing and the 2013 purchase of NYSE Euronext by Intercontinental Exchange, indicate that restructuring is being motivated not simply by a desire to expand scale but also by a need to diversify business portfolios. This need reflects slow growth of trading volumes on cash equity exchanges and increasing competition among the world's exchanges. As a result, cash equity transactions now account for a smaller share of exchange revenues while more profitable derivative trading is accounting for a higher share of those revenues. In addition, clearance and other post-trade operations are becoming more important for exchanges. Regulatory reforms of the over-the-counter (OTC) derivatives market following the financial crisis triggered by the collapse of Lehman Brothers in 2008 have included mandatory clearing of standardized OTC derivative contracts by a central counterparty.

That said, cash equities remain an important source of revenues for exchanges. A look at the current scale of the world's cash equity markets reveals an ongoing shift in power from markets in the West to those in the East. According to the World Federation of Exchanges (WFE), the Asia Pacific region accounted for only 21 percent of global market capitalization at end-2003, compared with 51 percent for the US and 28 percent for EMEA. However, the Asia Pacific region's share has risen to 36 percent at end-2017. This trend is expected to continue, supported by the sustained strong economic growth of countries in that region. Exchanges in China have been the major contributor to the Asia Pacific exchanges' growing share of global market capitalization. Meanwhile, exchanges in ASEAN countries account for only three percent of global market capitalization despite their steady expansion.

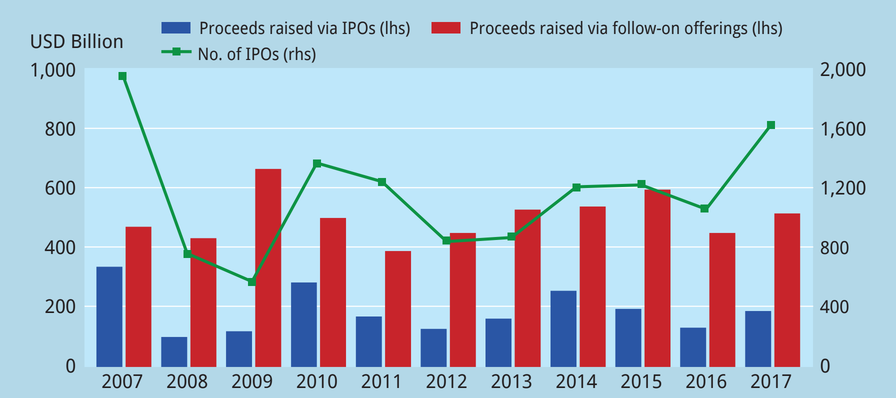
In addition to being small in scale, exchanges in ASEAN countries tend to lack depth and are behind the curve in financial infrastructure development. However, viewed from a more optimistic, forward-looking perspective, these shortcomings indicate huge growth potential. The advances being made by the world's leading exchanges include many initiatives that will be useful examples for the future development of exchanges in ASEAN countries. Considering the current state of capital markets in ASEAN countries, this article focuses on the cash markets and in particular on three trends that have implications for exchanges in the region: (1) strengthening of initiatives promoting so-called ESG investment focused on environmental, social and governance factors, (2) promotion of the ETF market, and (3) development of blockchain-based financial market infrastructure.

Strengthening Initiatives Promoting ESG Investment

Exchanges have been strengthening their promotion of ESG investments in recent years. We see two main factors supporting this trend.

The first is the growing tendency among the world's pension funds, investment trusts, insurance companies and other institutional investors to base investment decisions not only on financial data but also on ESG factors. The United Nations introduced its Principles for Responsible Investment in 2006, and we have seen a heightened awareness of ESG investment starting from around 2010. According to the Global Sustainable Investment Alliance (GSIA), an international organization that gathers data on ESG investment around the globe, total assets of socially responsible

Figure 1: Global IPOs and Follow-on Offerings



Source: EY, Thomson Reuters

investment (SRI) increased from USD 18.3 trillion in 2014 to USD 22.9 trillion in 2016.*[1] A geographical breakdown shows Europe leading the way in SRI, with assets totaling USD 12.0 trillion (52.6 percent of the total), followed by the US at USD 8.7 trillion (38.1 percent). SRI assets are still rather small in the Asia Pacific region.

With institutional investors in the US and Europe showing greater interest in ESG investment, exchanges in those parts of the world have introduced ESG indices. In addition to exchange-developed indices, ESG indices have been developed by such major index providers as FTSE-Russell, MSCI, Standard & Poor's and Thomson Reuters. According to the WFE and the United Nations Conference on Trade and Development (UNCTAD), as of September 2017 there were more than 100 ESG indices in use on 38 exchanges around the world. In this environment, the number of institutional investors using ESG indices is growing. For example, Japan's Government Pension Investment Fund (GPIF), the world's largest pension fund, announced in July 2017 that it had begun passive investment in Japanese equities that tracked three selected ESG indices.

The second factor encouraging exchanges to strengthen initiatives promoting ESG investment has been a relatively low level of corporate fundraising through initial public offerings (IPOs) and follow-on offerings. The number of IPOs and the proceeds raised both fell drastically during the global financial crisis that followed the collapse of Lehman Brothers in 2008, and while they have since been in a recovery trend, neither has returned to the levels seen in 2007 (Figure 1). Proceeds raised through follow-on offerings peaked in 2009 and has since followed an up-and-down pattern that lacks any signs of turning into a strong upward trend.

In this environment, efforts to improve ESG disclosure and performance have become increasingly important for exchanges as a means of enhancing the value of their most important product – listed companies – and attracting investors. According to a joint survey by the WFE and UNCTAD, 32 exchanges were providing guidance on ESG reporting to their listed companies as of September 2017, and that number is expected to increase.*[2]

Needing to expand their offerings of listed products, the exchanges are also actively promoting the listing of so-called green bonds, the proceeds of which must be used to finance businesses or projects that are environmentally friendly. Green bonds have attracted greater attention around the world against the backdrop of stronger efforts to respond to climate change since the 1992 adoption of the United Nations Framework Convention on Climate Change, an international treaty targeted at reducing greenhouse gas emissions.*[3] According to the Climate Bonds Initiative, a nonprofit international organization that is establishing industry standards, green bond issuance has increased rapidly in recent years and outstanding issues as of end-2016 reached more than USD 874 billion. Of this total, unlabeled bonds that earmark proceeds for climate or environmental projects but have not been labeled as green by the issuer amounted to more than USD 694 billion, while the outstanding balance of labeled bonds that the issuer declared would be used for green projects was USD 180 billion. Forty-four percent of the unlabeled bonds and 72 percent of the labeled bonds were listed on exchanges.*[4] The world's first green bond was officially issued by the European Investment Bank and listed on the Luxembourg Stock Exchange in 2007. Today, a number of exchanges, including the Luxembourg, London, Oslo and Stockholm exchanges, have established dedicated green bond markets.

Another ESG initiative supported by participating exchanges is the Sustainable Stock Exchange (SSE) Initiative. The SSE Initiative was launched in 2009 by the United Nations with the aim of strengthening collaboration between exchanges and investors, corporations, and regulatory authorities. As of end-2017, 68 exchanges were participating in the Initiative, which holds its SSE Global Dialogues every two years to promote common best practices for ESG initiatives. SSE Initiative partner exchanges also conduct joint research aimed at contributing to the development of sustainable and transparent capital markets worldwide. In the years ahead, we think exchanges can be expected to strengthen their ESG-related efforts.

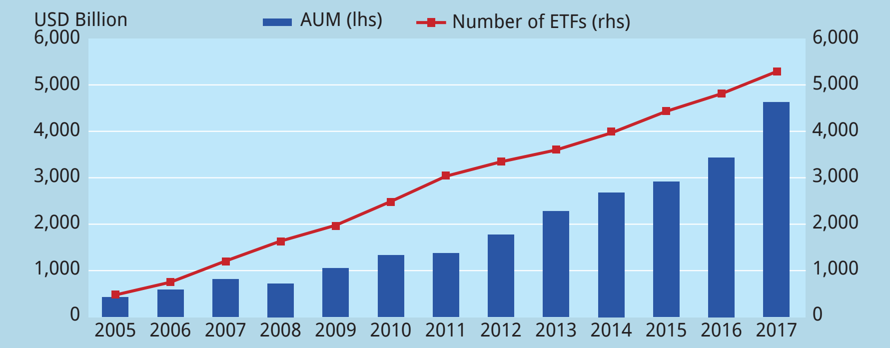
Promoting the Development of the ETF Market

Investors have shown an increasing interest in low-cost, highly liquid and highly transparent exchange traded funds (ETFs) since the global financial crisis. Securities firms, which previously had not promoted these funds very aggressively, have come to regard them as a more strategic product offering. Investors' increasing needs for more diversified and sophisticated portfolio allocation have spurred the development of a wide variety of ETF types and driven the growth of a global ETF market.*[5] The wide variety of ETFs available today include leveraged ETFs constructed to generate a multiple return on the tracked index, actively managed ETFs that undergo portfolio adjustments targeted at outperforming the tracked index, target-date ETFs that undergo automatic portfolio revisions at a specified future date, and smart-beta ETFs that add value, scale and other factors into their index-based portfolio construction. Institutional investors that aim to generate excess returns while relying on index-based investments are expanding investment in smart-beta ETFs in particular.

According to ETFGI, an independent research firm covering the ETF market, total assets under management (AUM) of ETFs have expanded from USD 417 billion at end-2005 to USD 4.7 trillion at end-2017 (Figure 2). The US accounts for 71 percent of this global ETF market, followed by Europe at 16 percent. Expansion of the ETF market is an important source of revenues for exchanges as it leads to an increase in listing fees, trading commissions, and fees charged for the provision of index and market data. Major exchanges are therefore aggressively promoting the development of the ETF market. For example, the Japan Exchange Group (JPX) has positioned ETFs as an important financial product for expanding the base of individual investors and has undertaken various initiatives to foster the growth of the ETF market, including (1) expanding its ETF offerings, (2) developing new indices, such as a smart-beta index, and (3) examining and introducing measures to increase its liquidity.

The increased focus on ESG investment which was noted earlier has led to the introduction of ETFs linked to ESG indices. Going forward, exchanges' need to expand listed product offerings and investors' need for more diversified and sophisticated investment instruments are likely to propel the global growth of ESG-linked ETFs.

Figure 2: Number of ETFs Listed on Global Markets and Total AUM



Source: ETFGI

Development of Blockchain-based Financial Market Infrastructure

While Bitcoin and other cryptocurrencies have been taking the world by storm in recent years, their underlying blockchain technology is finding applications beyond the realm of cryptocurrencies.*6 According to a Goldman Sachs report, the application of blockchain technology to post-trade settlement and clearing processes in the world's cash equities markets could generate annual savings of more than USD 6 billion.*7

That prospect has an increasing number of exchanges looking into the potential application of financial market infrastructure that makes use of blockchain technology (Table 1). For example, in December 2015 Nasdaq announced that its Nasdaq Linq blockchain technology enabled an issuer to successfully complete and record a private securities transaction, and it is now testing a fund trading platform based on that technology. In February 2016, JPX began experimenting with blockchain technology with the aim of achieving more efficient post-trade settlement and clearing processes. Elsewhere, the Australian Securities Exchange in January 2016 began cooperating with a startup on R&D of blockchain technology that it now plans to use in a new clearing and settlement system scheduled for introduction by March 2018.

Of course, in practice, blockchain technology will need to be accompanied by measures to prevent potential risks. For one, exchanges will need to be prepared to respond to system risks. In addition to responding promptly to network breakdowns caused by system failures, the exchanges will need to secure their systems against cyberattacks and to establish IT governance frameworks. Another important response will be compliance with regulatory frameworks. The exchanges will need to ensure that systems based on blockchain technology are in compliance with each country's existing regulations, including laws protecting confidential information, intellectual property and investor privacy. However, the huge potential benefits of blockchains seem to outweigh these risks and challeng-

Table 1: Major Exchanges' Blockchain Initiatives for Financial Market Infrastructure

Exchange	Initiatives
Nasdaq	– Announced that an issuer was able to use its Nasdaq Linq blockchain technology to successfully complete and record a private securities transaction (December 2015). – Announced a new integrated payment solution by connecting the Linq Platform to the CitiConnect® for Blockchain connectivity platform (May 2017). – Initiated a joint project with Nordic financial services group SEB to test a new fund trading platform based on blockchain technology (September 2017).
Japan Exchange Group	– Announced an agreement to test the potential of blockchain technology in cooperation with IBM Japan (February 2016). – Published a working paper on the potential application of blockchain technology to financial market infrastructure (August 2016). – Published a working paper on the trend for exploring use of blockchain technology in the financial market (September 2017).
London Stock Exchange Group	– Group member Borsa Italiana teamed up with IBM to build a blockchain solution digitizing the issuance of securities for small and medium-sized enterprises in Europe (September 2017).
Deutsche Börse Group	– Presented a functional prototype for the blockchain technology-based settlement of securities in cooperation with the Deutsche Bundesbank (November 2016). – Developed a concept for riskless transfer of commercial bank money for post-trade processing via an infrastructure based on blockchain technology (January 2017).
Korea Exchange	– Opened Korea Startup Market (KSM) with blockchain technology for document and identity authentication in partnership with a blockchain startup Blocko (November 2016).
Australian Securities Exchange	– Announced tie-up with US-based Digital Asset Holdings (DAH) to develop solutions for the Australian equity market utilizing blockchain technology (January 2016). – Announced a plan to replace its decades-old settlement and clearing system, using blockchain technology developed by DAH (December 2017).

Source: Exchanges' press releases

es. We therefore expect exchanges to step up their promotion of the use of blockchain technology to improve the financial market infrastructure.

Implications for Exchanges in ASEAN Countries

This section considers the state of ASEAN exchanges' efforts in the three trend areas discussed above and presents some implications based on the initiatives being taken by the world's leading exchanges.

Starting with ESG-related efforts, the ASEAN exchanges recognize the importance of ESG investment although it is not yet mainstream. The region's exchanges have been promoting stronger ESG-related disclosure from listed companies, and several have been rising in global rankings for ESG disclosure. The progress made by the Stock Exchange of Thailand (SET) is particularly notable (Table 2). In addition, some of the ASEAN exchanges are participating in the SSE Initiative.

Regional financial regulatory authorities are also promoting ESG investment. The ASEAN Capital Market Forum (ACMF), an organization comprising the financial regulators from all ASEAN countries, introduced the ASEAN Corporate Governance Scorecard in 2012, with the cooperation of the Asian Development Bank (ADB). The scorecard assigns scores to listed companies in five areas: shareholder rights, equitable treatment of shareholders, role of stakeholders, disclosure and transparency, and responsibilities of the board of directors. The six main ASEAN countries have seen their scores improve since the scorecard was introduced. The ACMF also announced the ASEAN Green Bond Standard in November 2017. The standard conforms to the Green Bond Principles introduced by the International Capital Market Association in January 2014. At the national level, the Monetary Authority of Singapore (MAS) in June 2017 introduced a grant scheme aimed at promoting the issuance of green bonds, and in July 2017 Malaysia saw the issuance of the world's first green Sukuk (Islamic bond) under the Sustainable & Responsible Investment Sukuk Framework established jointly by the Securities Commission (SC) Malaysia, Bank Negara Malaysia and the World Bank. With financial regulatory authorities supporting the issuance of ESG-related financial products as shown above, ASEAN exchanges can be expected to play a greater role in promoting ESG investment by domestic and overseas investors, including efforts to develop and provide ESG indices.

Turning to the second global trend, the ASEAN countries have been behind the curve in the promotion of ETF markets, which are still rather new and of small scale in ASEAN countries. Singapore with the largest ETF market in the region has grown its market by listing foreign domiciled ETFs, but its AUM was still only USD 3.3 billion at end-2017. The ETF market in ASEAN countries has failed to expand for three main reasons; (1) Financial institutions have little incentive to sell ETFs because of low sales commission rates, (2) Efforts to educate local investors about ETFs have been insufficient and, as a result, local investors are largely unaware of ETFs, (3) Low commission rates for asset managers provide them with little incentive for launching new ETFs.

In this environment, talk about developing the ETF market has picked up steam in Malaysia recently. An ETF task force chaired by SC and comprising Bursa Malaysia and other market participants issued a set of key recommendations to enhance the ecosystem and drive further growth of the ETF industry. They recommended that the issuance process be simplified, distribution channels expanded, new types of ETFs introduced, and incentive schemes for market makers added. In the US and Japan for instance, the push to establish ETF markets with rich content was led by securities firms and institutional investors. Individual investors jumped on the bandwagon later, helping to drive market expansion. Considering this experience, active participation of securities firms and institutional investors will be crucial to the early stages of the development of the ETF market in ASEAN countries. Over the longer term, however, expanding the individual investor base will play an important role in ETF market development. Toward that end, exchanges will be expected to take the lead in educating investors about ETFs.

Lastly, the application of blockchain technology has already proven to be useful in financial transactions such as interbank transfers, trade finance, and verification of customer identity when opening bank accounts. However, there are as yet only a few examples of blockchain technology being used for capital market transactions. One such example is a MAS-supported project at the Singapore Exchange focused on using blockchain technology to realize a more efficient transaction and settlement cycle for fixed income securities. In addition, the SET is preparing to launch LIVE, a blockchain-based fund-raising platform for startups. The new platform is expected to begin operating in the first half of 2018.

Improving the efficiency of financial market infrastructure is important for all market participants regardless of the degree of development and scale of the individual capital market. The concrete benefits and risks of using blockchain technology are not entirely clear at this point in time, but from a longer-term perspective exploring the possibilities of blockchain technology while observing the more advanced initiatives of the world's major exchanges should have great significance for exchanges in ASEAN countries.

Table 2: ASEAN Exchanges' Global Ranking on ESG Disclosure

Exchange	2013	2014	2015	2016	2017
The Stock Exchange of Thailand	40	27	17	13	10
Bursa Malaysia	24	23	19	17	15
Singapore Exchange	18	22	15	18	16
Indonesia Stock Exchange	37	38	31	34	25
The Philippine Stock Exchange	39	33	28	32	29
Hochiminh Stock Exchange	N/A	N/A	N/A	N/A	53

Note: A total of 55 exchanges were included in the 2017 rankings.
Source: Corporate Knights

Local and Regional Perspective

As discussed above, the further development of exchanges in ASEAN countries can draw many lessons from the initiatives being undertaken in the world's leading exchanges. At the same time, however, it will be important for each country's exchange to maintain a local and regional perspective.

One area where this perspective will be important is the effort to increase IPOs. Increasing the number of listed companies is one of the most important issues facing ASEAN exchanges, and they accordingly are pursuing a variety of initiatives to promote IPOs. However, IPOs on ASEAN exchanges are not only fewer in number than in the mature equity markets of advanced countries but are also smaller in scale, with few large IPOs. Meanwhile, some countries in the region still have many state-owned enterprises (SOEs) with a majority or all of their shares owned by the government. These SOEs include some large unlisted companies. The listing of such companies on the exchange could not only enhance their management efficiency and transparency but could also contribute to expanding the investor base, a major aim for the capital markets of ASEAN countries. In addition to promoting large-scale IPOs that result in the privatization of SOEs, exchanges in the region have an important role to play in supporting improvements in corporate governance and disclosure.

A local and regional perspective is also important to the promotion of fundraising by small and medium-sized enterprises (SMEs) from the capital markets. Financial services for SMEs in the ASEAN region are insufficient, and various measures to improve this situation are under consideration. Exchanges are expected to contribute to these efforts by improving access to the capital markets. Exchanges could reap huge benefits from their efforts to support fundraising by SMEs if they result in an increase in IPOs. In July 2017, Bursa Malaysia launched the Leading Entrepreneur Accelerator Platform (LEAP) Market to expand fundraising options for SMEs in Malaysia. As previously noted, the SET is preparing to launch its LIVE platform, and other bourses in the region are considering introducing new financing platforms for startups.

While these developments are most welcome, attention must also be paid to the need to ensure investor protection and enhance corporate governance at SMEs. ASEAN countries have many family-owned enterprises that are inclined to avoid calls for more proactive disclosure. In addition, some startups may prefer not to raise funds through IPOs. In this environment, interest in methods that enable quick and efficient financing directly from investors is on the rise. One such method is equity crowdfunding (ECF). ECF in the region is still small in scale based on a study that estimates total funds raised in the region via ECF at about USD 56 million in 2016.*[8] However, the regulatory framework for ECF in the region is a rather recent development of the past two to three years. If more companies begin operating the ECF platform and financing volume increases as a result, it can become a competitive challenge to the exchanges' dedicated platforms for SMEs.

A third area where a local and regional perspective will be important is the strengthening of collaborations among exchanges. One of the initiatives under the ACMF is the ASEAN Trading Link launched in 2012 by ASEAN Exchanges, a collaboration of seven exchanges in six ASEAN countries. However, this link has unfortunately not produced the expected result of facilitating cross-border trading across the connected exchanges. At present, it would be difficult to describe the collaborative effort by the exchanges as sufficient for promoting cross-border investments in the region. Furthermore, to attract investors from outside the region, the exchanges need to raise the value of the "ASEAN" asset class and strengthen collaborative efforts. For example, the exchanges could engage in joint development of new products in the high-growth ESG domain and undertake joint FinTech projects.

Lastly, the longer-term development of ASEAN capital markets will require greater efforts to increase the numbers of listed companies and investors, and the role played by the exchanges in achieving these goals will only grow larger. Going forward, how each country's exchange fulfills this role while maintaining a balance between global and local/regional perspectives will merit close monitoring.

Notes

*1 Global Sustainable Investment Alliance. (2017) "2016 Global Sustainable Investment Review."

*2 World Federation of Exchanges and United Nations Conference on Trade and Development. (2017) "The Role of Stock Exchanges in Fostering Economic Growth and Sustainable Development."

*3 The Paris Agreement that was adopted in December 2015 and put into effect in November 2016 aims to hold the increase in the global average temperature to well below 2 degrees above pre-industrial levels.

*4 Climate Bonds Initiative. (2017) "The Role of Exchanges in Accelerating the Growth of the Green Bond Market."

*5 Another factor contributing the expansion of the ETF market has been the proliferation of robo-advisors, a service that uses algorithms to propose portfolios that meet the needs of investors and often focus on the ETF asset class.

*6 Blockchain technology is a foundational technology that mutually authenticates the transfer of rights among participants in a peer-to-peer network and uses encryption to enable the sharing of ledgers in a form that cannot be altered.

*7 The Goldman Sachs Group. (2016) "Profiles in Innovation – Blockchain Putting Theory into Practice."

*8 Cambridge Centre for Alternative Finance at University of Cambridge, Australian Centre for Financial Studies at Monash University, and Tsinghua University. (2017) "Cultivating Growth: The 2nd Asia Pacific Region Alternative Finance Industry Report."

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