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The Role of Stock Exchanges in Fostering Economic Growth and Sustainable Development

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The World Federation of Exchanges (WFE) is the global industry association for exchanges and clearing houses. WFE exchanges are home to nearly 45,000 listed companies, and the market capitalisation of these entities is over $67.9 trillion. The WFE is the definitive source for exchange-related statistics, and publishes over 350 market data indicators. The WFE works with standard-setters, policy makers, regulators and government organisations around the world to support and promote the development of fair, transparent, stable and efficient markets.

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Preface

Economic growth and development is an aspiration: it is a mechanism to alleviate poverty, to give opportunity to those who do not yet have it, to foster equality, and to create a better society.

Well-functioning exchanges enable economic growth and development by facilitating the mobilisation of financial resources - by bringing together those who need capital to innovate and grow, with those who have resources to invest. They do this within an environment that is regulated, secure, transparent and equitable. Exchanges also seek to promote good corporate governance amongst their listed issuers, encouraging transparency, accountability and respect for the rights of shareholders and key stakeholders.

The number of countries with a stock exchange has grown dramatically over the last 40 years – from just over 50 in 1975 to over 160 in 2015. This increase is partly attributable to a growing consensus about the role of stock exchanges in promoting economic development. However, despite this growth in the number of exchanges, the link between exchanges and economic development is not widely-understood or appreciated. There are several reasons why this might be the case.

First, there is insufficient understanding outside the financial sector and certain policy and academic arenas, of what exchanges do, and how what they do contributes to positive economic and societal outcomes. Second, while the academic literature is in agreement that there is a positive link between well-functioning financial markets and economic development, there is no blueprint to guide practitioners as to what combination of policies, incentives and structures is required to produce a 'well-functioning market'.

Given the potential of exchanges in contributing to economic development, it is important to not only improve the understanding of the role of exchanges and how they operate, but to work towards the creation of environments that ensure the development of well-functioning exchanges. We believe this joint report with UNCTAD is an important first step in achieving that objective.

Nandini Sukumar

CEO, The World Federation of Exchanges

Foreword

Our objective with this joint report with the WFE is to engage with the critically important question of how stock exchanges can promote economic development and begin to explore how this can be (and is already being) expanded to address some of the twenty-first century's biggest development challenges.

In 2015, member States of the United Nations launched the Sustainable Development Goals (SDGs). These goals lay out the pathway for the future we all want and include targets like: eliminating poverty, achieving gender equality, addressing climate change, and ensuring inclusive and sustainable economic growth. Achieving these goals is in everyone's interest. Profitable exchanges, investors and companies rely on sustainable, healthy and prosperous societies.

Achieving these goals requires that we all make a contribution to building a better tomorrow. The role of the public sector in this effort is fundamental: we need smart policies, better policy coherence between ministries, and incentive structures that reward investment in sustainable businesses. But none of this will be enough without the private sector's contribution, including stock exchanges and other capital market stakeholders.

Stock exchanges can contribute in two main forms: the first is promoting good governance in business practices and the second is promoting investment in sustainable development.

Good governance in the twenty-first century means good practices on environmental, social and corporate governance issues, what many investors refer to as 'ESG' issues. Policy makers, investors and consumers increasingly demand it. Stock exchanges have a strong role to play in this area. They have traditionally been responsible for helping to form well-regulated markets with transparent, well governed companies. And today stock exchanges are helping companies adopt best practices on ESG issues.

With the right policies in place, exchanges can play an important role in fostering economic development and innovation. This is an important function by itself. However, there is increasing recognition that to address the challenges of the twenty-first century, we need economic development that is sustainable and inclusive. We also need to mobilise significant financing to achieve the SDGs. Meeting the SDGs will require massive injections of investment. In our 2014 *World Investment Report*, we estimate that global investment needs are on the order of $5 to 7 trillion per year, with about $3.3 to 4.5 trillion per year in developing countries alone. Much of this is for basic infrastructure, food security, health, education and climate change mitigation and adaptation. Stock exchanges can be instrumental in meeting these investment needs and are recognised as an important element in UNCTAD's *Investment Policy Framework for Sustainable Development*.[1]

In addition to their traditional role in contributing to economic development, exchanges are increasingly asked to address these broader issues. Given the size of the challenge it is critically important to have well-functioning exchanges fit for purpose. This paper sets the baseline for future work around policies and processes for maximising the development contribution of stock exchanges. UNCTAD will continue to support stock exchanges, including through the UN Sustainable Stock Exchanges initiative,[2] to assist exchanges in their endeavours to promote good corporate governance and investment in sustainable development.

James Zhan

Director, Investment and Enterprise Division

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Executive Summary

This exploratory report by the World Federation of Exchanges (WFE) and the United Nations Conference on Trade and Development (UNCTAD) examines the role of stock exchanges[3] in promoting economic growth and sustainable development. It explains why they matter and what can be done to ensure that exchanges make a positive development contribution.

This report is set out as follows. Chapter 1 begins with a description of a modern-day stock exchange and the framework within which it operates. It then summarises debates within economic theory about stock exchanges and economic development. It notes both the positive role of stock markets in promoting economic development, as well as some of the shortcomings and common criticisms of markets. Next the report describes functionally what an exchange does and how this translates into economic impact. The report then provides an overview of exchange activity around the world.

Because the growth of small and medium enterprises (SMEs) is an important element in the overall development of an economy and the creation of jobs, Chapter 2 of the report looks at exchange initiatives to enhance SME access to capital market finance.

Chapter 3 of the report looks at efforts by exchanges to promote sustainable development. Recent years have seen many exchanges around the world adopting various initiatives and tools to promote improved environmental, social and governance disclosure and performance among issuers. This includes involvement in the development of new ESG-themed financial products and information services such as green bonds and ESG indices.

The report identifies two main mechanisms through which stock exchanges can contribute to development:

1) Mobilising resources for sustainable economic growth and development:

   a) Well-functioning exchanges facilitate the mobilisation of domestic resources and foreign portfolio flows.

   b) Exchanges around the world are increasingly focused on improving SME access to finance, as evidenced by the dramatic growth in the number of dedicated SME markets.

   c) A number of exchanges offer sustainability-themed products and services, from ESG-themed indices and funds to green bonds. These assist in promoting companies that better manage ESG issues and mobilising funds towards addressing sustainability challenges.

2) Promoting good governance in business practices:

   a) Many exchanges are promoting greater ESG disclosure among listed companies via voluntary guidance, listing rules, and training activities.

   b) SME development is about more than access to finance. Some stock exchanges have introduced programmes to help SMEs to develop their management capacity, strengthen their governance structures and innovate and grow.

These findings highlight just some of the roles that exchanges play in contributing to broad and sustainable economic development. The ability of exchanges to perform these roles is dependent on the existence of a combination of relevant enabling policies, processes and institutional structures. The exact nature of these would vary across jurisdictions. The report sets out initial thoughts on key elements of a framework to maximise the role of stock exchanges in promoting development in the final chapter.

1. Stock exchanges and economic development

1.1 Overview of the modern-day stock exchange

A stock exchange is an organised marketplace, licensed by a relevant regulatory body, where ownership stakes (shares) in companies are listed and traded. Listing happens in the so-called 'primary market', where a portion of a company's shares are made available to the public. The company often uses the listing to raise funds through issuing new equity shares (an initial public offering or IPO). Investors can then buy and sell these listed shares in the so-called 'secondary market'. While listing in the primary market may result in a flow of funds from investors to the firm, the trading between investors in the secondary market does not.

The activity in both the primary and secondary market occurs within a framework of laws, rules and regulations, aimed at ensuring the existence of fair, transparent and orderly markets. To achieve these objectives, these rules and regulations will typically provide for the protection of investor assets, the process for transferring ownership of shares, the requirements with which companies that are listed on markets must comply, and processes for ensuring settlement of disputes. Exchanges also ensure that trading occurs according to predefined, public rules and that information about the prices at which investors are willing to buy and sell, and the prices at which instruments have sold (pre- and post-trade transparency) are publicly available.

Exchanges are supervised by a securities market regulator. Different jurisdictions have different models of who is responsible for what element of market regulation. All markets with an exchange will stipulate:

- The listings requirements (the requirements that companies wishing to list on the exchange must meet initially and on an ongoing basis, and the information they are required to disclose to the public);
- The membership requirements (the financial, educational, conduct and other requirements that the entities who trade on the exchange on behalf of investors must meet);
- The trading rules (the rules according to which, for example, buy-and-sell orders are matched, the price determination process, what happens in the event of errors, the moment at which a binding transaction is concluded); and
- The process for clearing and settlement of transactions (e.g. how the transfer of ownership of shares and cash is effected, over what time period, and how defaults are managed).

Regardless of the specific regulatory structure, all exchanges will have some responsibility for ensuring compliance with these aspects of market regulation and engaging in some level of market surveillance.

1.2 A review of the academic literature

Questions about the impact and role of financial markets in promoting long-run economic growth and development have occupied development economists, academics and policy-makers for decades. While the research focused initially on the banking sector it later expanded to include stock exchanges. Key questions examined include:[4]

- What is the nature of the relationship between financial development and economic development (does financial development happen in response to economic development or does financial development drive economic development)?

- What are the mechanisms through which financial development might support economic development?

- Whether there is a specific role for stock exchanges (rather than just banks) in economic development?

- What potential negative effects financial development might have on economic development, and how to mitigate these?

Some economists have either dismissed the role of finance[5] or ignored it entirely. However, there is a preponderance of research that suggests that financial development is integral to economic development, and that differences in levels of economic development can at least partly be explained by differences in levels of financial development. We summarise some of this below:

- There are several studies[6] that look at economic history to argue that many of the great economic advances that have been made over the last few centuries (such as the Industrial Revolution in Great Britain) are a direct result of the existence of a modern financial system.

- A more empirical set of studies by Haber[7] still looks at economic history, examining the textile industry in Brazil and Mexico in the late nineteenth and early twentieth centuries, and concluded that the more rapid expansion and productivity growth of the Brazilian textile industry over this time was a direct result of the reforms in Brazil that led to the creation of a more inclusive and accessible financial system.

- There is also a wealth of statistical evidence showing the link between financial and economic development. King and Levine (1994), in a cross-country study[8] found a positive relationship between higher levels of financial development and real per capita GDP growth rates. Another multi-country study by Levine and Zevros (1998), using data from 47 countries over nearly 20 years, concluded that stock market liquidity and banking development are *"positively and robustly correlated with current and future rates of economic growth"*.[9]

Researchers have also attempted to isolate the role of stock exchanges specifically. Again, the theoretical and academic literature predominantly finds positive links between well-functioning exchanges and economic development. In a study looking at the performance of firms, Demigüç-Kunt and Vojislav (1996) found that firms in countries with 'active' stock markets experience higher-than predicted growth rates.[10] Another study by Beck and Levine (2002), looking at data from 40 countries over four, five-year periods, found not only that financial market development is important for economic growth but that both banks and stock markets independently and concurrently have a role to play.[11] Caporale et al (2004) looked explicitly at the question of causality[12] and concluded that well-developed stock markets can foster economic growth.[13]

An area where there is less consensus is whether market-based financing or bank-based financing has a greater impact on development. A recent report focusing on Europe concluded that if Germany had had more market-based finance (at a similar level to the United States) over the past 20 years, its GDP would now be approximately 2% higher[14] while another study concluded that whether a country was bank-based or market based offered little explanation for differences in economic performance.[15] Other researchers have suggested that it does matter and the answer depends on the specificities of the jurisdictions in question, referring to the quality of bureaucratic institutions,[16] the strength and enforceability of the relevant legal frameworks, and the impact on shareholder protections,[17] and even the underlying level of economic and financial development.[18] There is also evidence that banks and markets interact, providing sometimes substitutable and sometimes complementary services at different stages of economic and financial development.[19]

The theoretical explanation for the link between the financial economy and the real economy is that financial market development promotes economic development by facilitating the mobilisation of capital, and enabling risk sharing and risk transfer. Researchers are, however, still seeking to empirically isolate how stock exchanges (and other financial intermediaries) impact economic development. Some strands of research have suggested that markets enhance capital accumulation (see Bencivenga and Smith, 1991) while others focus on the impact on productivity (Levine and Zevros, 1998), more efficient resource allocation (Rajan and Zingales, 1998), and greater competition and innovation (Hsu, Tian and Zu, 2014)[20].

Researchers have also asked whether aspects of financial markets and financial development may have a negative impact on economic development and society. This question gained particular salience after the financial crisis. Concerns raised about stock markets specifically are:

- That markets may contribute to excessive 'short-termism', thereby undermining long-term value-creation by firms[21] and the ability to effectively address long-horizon sustainability challenges;[22] and
- That speculative trading activity and/or 'herding' behaviour may create a disconnect between the real and the financial economies, resulting in a misallocation of capital and potentially destabilising economic consequences.[23]

Other research[24] focuses on the finance sector more broadly and suggests that above a certain threshold, further expansion of the financial sector, relative to the real economy, may have a negative impact on economic development (including on income inequality).[25] This research finds that this effect is particularly pronounced for the banking sector[26] and resulted in 2017 policy proposals from the Organisation of Economic Cooperation and Development (OECD) and the G20, which encourage more balanced market development (with reduced reliance on bank credit and greater use of equity).[27]

Finally, the positive link between markets and economic growth is predicated on the creation of a 'well-functioning' financial market. While there is some evidence that market size (as measured by market capitalisation) may matter less than liquidity and spread of liquidity,[28] this is an important area for future research.

1.3 Elements of well-functioning markets

This section builds on the theoretical overview set out in the previous section, by explaining practically how modern-day stock exchanges may contribute to economic development. Essentially, exchanges enhance the ability of entrepreneurs, as well as more established corporations with expansion plans, to access the capital they need to grow their businesses. The source of funds is the savings of domestic (and potentially, international) investors who are looking for investment growth. Stock markets are able to perform this 'savings mobilisation' function for a number of reasons:

- **Investment horizons:** Stock markets provide investors with a comparatively easy means of exiting their investment, in that the shares listed on a stock exchange can be sold in the secondary market. Investors do not have to identify a specific buyer for their securities nor do they have to negotiate the terms of the sale as these are determined by the rules of the market. This reduces the risk for investors (savers) in putting money into an investment with different time horizons than their own investment horizons.

- **Transparency:** Through the initial listings and ongoing disclosure requirements, exchanges reduce the costs that investors would otherwise incur in finding out the information they would need for investment decisions. This also helps to address the 'information asymmetry' problem where company insiders necessarily have more information about the company than outsiders.

- **Investor protection:** The rules of the exchange, combined with relevant securities market regulation and associated settlement infrastructures address or at least mitigate contract enforceability risks where investors might not otherwise be sure that they would receive the benefits of the investment they have bought.

- **Pooling funds:** By bringing together a large and diverse set of investors, markets reduce the size of an individual investment (e.g. an investor can gain economic exposure to a firm by buying a single share). This allows investors to manage the extent of the risk they take on and thereby the risk to which an individual investor is exposed.

These 'risk mitigation', 'risk spreading and 'risk transformation' features of stock exchanges serve both to reduce the cost of the capital for firms, and to obtain financing for larger and/or riskier ventures than they might be able to finance otherwise. This can be seen for example in the financing of mining and exploration companies (that, for example, make up a large number of the companies listed on the Australian Securities Exchange) or technology companies (such as Amazon).

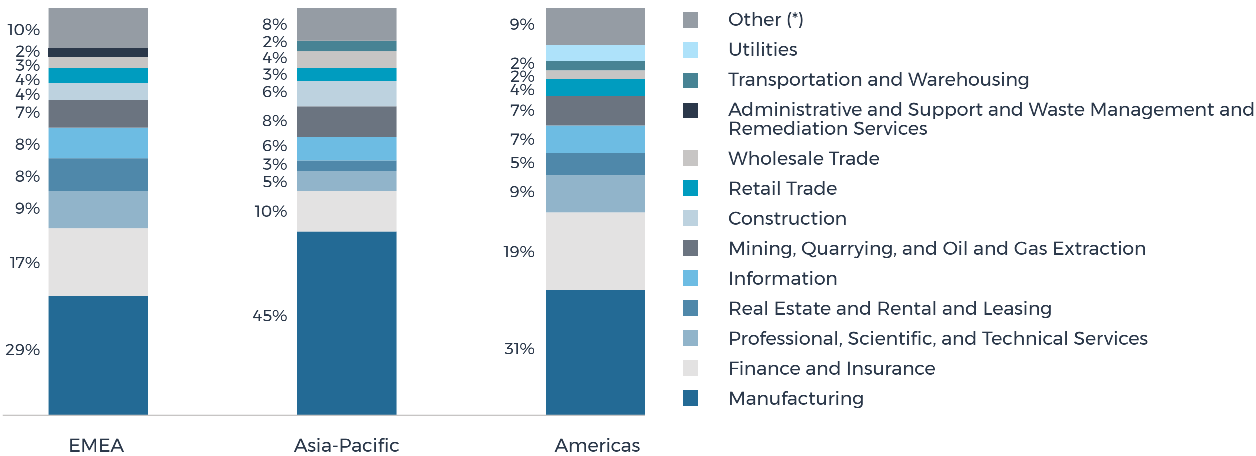
In providing investors with access to a range of investment opportunities, stock markets enable investors (through diversification) to reduce their risk of income volatility by diversifying their investment portfolios. This, together with positive investment returns enhances consumption and future investment opportunities for investors – thereby generating further funds to finance growth and expansion.

1.4 Stock exchanges and the real economy

As at end 2016, there were nearly 50,000 companies listed on 81 exchange groups[29] around the world. The combined market capitalisation of these companies was approximately $70 trillion.[30] While many people think of stock markets as representing large companies, the companies listed on these markets (which in many instances include dedicated markets for small and medium-sized companies) range in size from a market capitalisation of less than $10 million to well over $100 billion. The companies listed on stock exchanges come from all economic sectors: services, manufacturing, mining and information technology. They generate revenues that pay salaries, buy goods and services from other companies, pay taxes and return dividends to shareholders. They are also significant employers: WFE estimates suggest that the 24,000 companies across just 26 of the 55 WFE's equity market exchanges employ over 127 million people.

Figure 1.1: Sectoral distribution of companies listed on WFE Exchanges across regions

Top ten sectors, by number of listed companies



(*) The sectors included in "Other" vary from one region to another.

Source: WFE

Figure 1.2: Overview of companies listed on WFE exchanges[31]

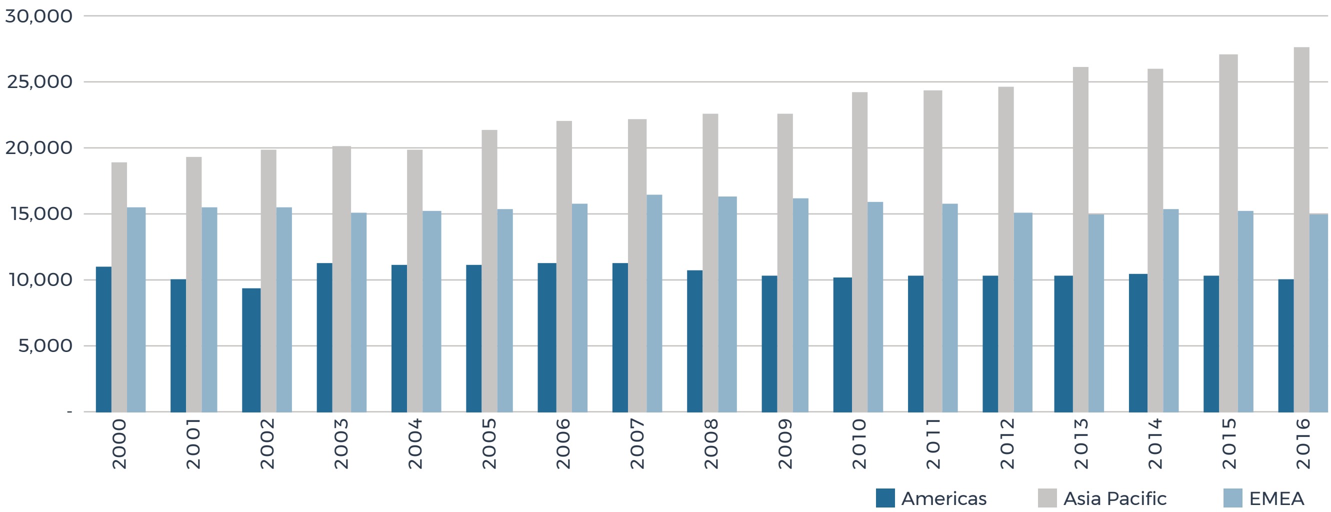
Number of exchange groups	26
Number of listed companies	23,767
Number of employees (total)	127 million
Number of employees (median)	1,162
Revenue earned	$29.9 trillion
Dividends paid	$1.2 trillion

Source: Reuters and WFE analysis

In line with the role of markets in financing future growth, there were over 1,000 IPOs in 2016, raising $130 billion. By mid-2017, there had already been over 800 IPOs with $83 billion raised.

This summary of stock exchange activity suggests that the capital mobilised by stock exchanges can contribute to economic growth around the world. One specific component of this activity concerns small and medium-size companies, a key driver of global economic growth. This is discussed in more detail in chapter two.

Figure 1.3: Growth in number of listed companies over time[32]



Source: WFE

2. Stock exchanges and SME development

2.1 Importance of SMEs and the financing gap

Small and medium-size enterprises (SMEs) form a large proportion of companies and employers worldwide. According to the World Bank, SMEs provide at least 45% of the jobs and 33% of the GDP in emerging economies alone. Although SMEs are important contributors to jobs and the growth of economies, they face significant constraints, including lack of access to finance.[33] The World Bank suggests that 70% of SMEs in emerging markets lack access to credit.[34] The OECD similarly notes that "despite…improvements in SME lending…many SMEs continue to face credit constraints."[35]

Given the importance of SMEs to economies, a number of multilateral institutions, governments, policymakers and private sector actors across developed and developing markets are focused on addressing the SME financing gap. This has included a greater emphasis on the potential role of capital markets and stock exchanges in particular.[36]

2.2 Adapting stock exchanges to serve SMEs

The initial and ongoing compliance requirements and costs of traditional equity markets may represent a barrier to SME listing. This has prompted policymakers, regulators and exchanges to develop regulatory regimes and platforms that are appropriate to SMEs. Some earlier literature was critical of the success of these 'junior exchanges' due to low take-up and low amounts of capital raised. [37] However, the number and scale of SME platforms has grown significantly over the last 12 years in response to demands to improve SME access to finance. As at end 2016, there were over 7,000 companies listed on various SME platforms across WFE member exchanges in over 40 countries.

SME markets promote and support SME listings, not just by facilitating access to capital, but also by providing an environment that enables SMEs to thrive. SME exchanges cater to the needs of SMEs in a variety of ways, including:[38]

- Eliminated or reduced listings fees, and discounts on annual fees;
- Relaxed entry requirements such as shareholder spread or profit history;
- Business development assistance (often including a designated advisor);
- Access to additional capital; and/or
- Less frequent reporting requirements.

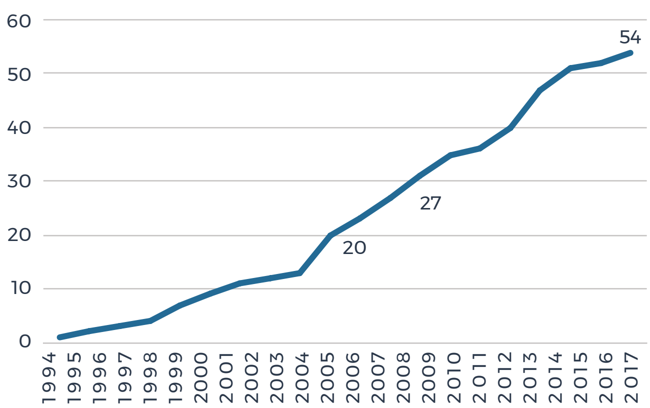
Most SME platforms are either an independent market within the exchange group or a separate board or segment within an existing exchange structure. This tends to be more cost effective than creating a stand-alone SME exchange and, where relevant, provides a mechanism for SMEs to graduate from the SME board to the main board.[39] While graduation may enhance a firm's access to capital and reputation,[40] firms will not always choose to graduate and most exchanges do not require it.[41] The Johannesburg Stock Exchange notes that the reduced requirements and additional support provided to SMEs on its SME market has encouraged some companies to move their listing from the main board to the AltX (SME) platform.

2.3 The SME platform universe

The number of SME platforms has more than doubled since 2005 (Figure 2.1).[42] This includes a sharp increase in 2013 with the addition of several African Growth and Enterprise Segments (GEMS) in Kenya, Rwanda, Tanzania and Uganda. These new segments followed the East African Securities Regulatory Authority's launch of the Capital Markets Advisory Centre (CMAC) to encourage SMEs to use capital markets to promote economic growth.[43] Several other stock exchanges are also currently revising listing requirements or launching new initiatives designed to attract SMEs.[44]

Figure 2.1: Number of SME platforms doubles in past decade

Number of SME platforms in operation



Source: UNCTAD

Consequently, SME platforms are now found across the world.[45] The size and scale of these platforms vary dramatically. For example, the market capitalisation of these markets ranges from $5 million to over $750 million and the number of listed companies from less than ten in some markets to over 1,000 in others.

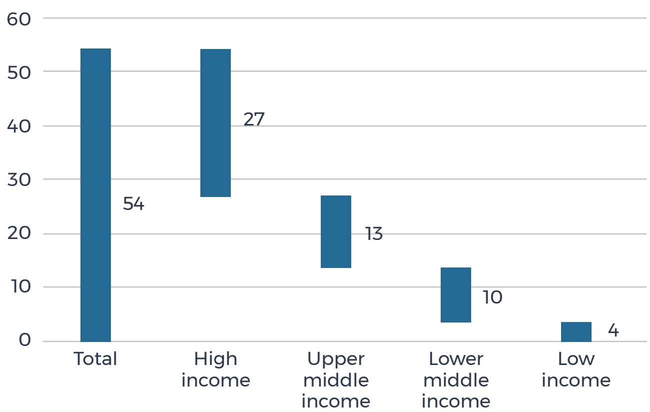
There is as yet no proven, single model for ensuring successful use by SMEs of exchange-based offerings. However, the growth in the number of dedicated SME platforms and associated services suggests a global attempt to support the potential of this portion of the economy.

2.4 SME listing challenges in developing markets

Despite the significant growth in stock exchanges and SME platforms worldwide, low income countries have significantly fewer SME platforms than high income countries (Figure 2.2). Stock exchanges in smaller developing countries have a more difficult time supporting companies, and in particular supporting SME growth. A lack of foreign investors, lack of investment in domestic industries, lack of domestic savings, and low availability of liquid capital all make it more difficult to establish thriving stock exchanges.[46] Additionally, businesses in these markets often choose to list on larger, more developed exchanges rather than list on their own country's exchange.[47] These factors, together with the relatively smaller size of companies in these markets, make it even more challenging for exchanges in these markets to offer viable exchange-based offerings for SMEs.

Figure 2.2: Lower-middle and low income countries contribute a quarter of SME platforms

Total SME platforms, by country income



Source: UNCTAD

2.5 A review of African SME markets

As part of the research for this report, a review (including a series of interviews) was conducted of SME platform operators in low- and lower-income African markets.[48] This complements existing WFE and other research into SME platforms and provides additional insights. While many of the challenges these platforms have identified are common for SMEs around the world, some are perhaps more pressing in low-income markets. The key barriers to SME use of markets and examples of responses to address these, are as follows:

Compliance capacity of SMEs. As noted, SMEs are by definition often less able to meet standard exchange listing requirements. This is exacerbated in developing markets, where SMEs are often significantly smaller than in higher-income countries. For example, the average market capitalisation of a company listed on Euronext's Alternext market is $70 million, while the average SME on Egypt's Nile Exchange (the second largest SME exchange in Africa by number of listed companies) is only $2.5 million. Exchanges have sought to address the cost and compliance burden associated with listing in a variety of ways. These include reduced fees, lower or no profitability requirements, and less frequent reporting (e.g. bi-annually instead of quarterly). Several exchanges also allow companies to list as 'introductions,' which enables companies to introduce some shares on the market without releasing a public offer. A few platforms also offer differentiated reporting requirements where companies can for example report according to local GAAP instead of IFRS (which may be a requirement for main board companies).[49]

Loss of control. Many SMEs in these markets are family-owned and are hesitant to relinquish control of the company. In line with exchanges in other markets, stock exchanges have sought to mitigate this challenge by reducing the proportion of shares that must be owned by public investors. Public float requirements are, on average, lower for SME platforms (14% for SME platforms versus 24% for main platforms).[50] A similar control is reducing the number of required shareholders that an SME must have to be eligible to list. SME platforms require an average of 71 shareholders versus an average of 451 required by the main board.[51]

Lack of information. In their study of Kenyan SMEs, Mwarari and Ngugi (2013) found that many SMEs do not know about stock exchanges or understand the benefits of listing.[52] To address this, the Enterprise Growth Market Segment of the Dar es Salaam Stock Exchange (DSE) worked with the non profit Financial Sector Deepening Trust (FSDT) to implement an awareness, training and capacity building campaign aimed at encouraging SMEs to list. While DSE's Enterprise Growth Market Segment currently has just five listings, the DSE has more than doubled its investor base since the launch of this SME platform, largely through the success of this awareness campaign.

Perception of elitism. Some interview respondents noted that stock exchanges are viewed as "too elite" to deal with by many SMEs. The Botswana Stock Exchange's upcoming Tshipidi SME Board will therefore be explicitly branded as pro-small business in an attempt to overcome the perception that stock exchanges "don't care

about the little guys." In Tanzania, the teacher's bank MCB was one of the first companies to list on the DSE's SME segment. Established by the Tanzania Teachers Union, the bank serves teachers and other civil servants and has provided quick buy-in for the SME platform.

Fear of tax liabilities. African exchanges that were interviewed suggested that SMEs were often concerned that listing would reveal a lack of historic tax compliance, resulting in large penalties. To address this, the Nairobi Stock Exchange's Growth and Enterprise Market Segment, for example, has asked regulators to accompany them to orientations on listing on the segment, so SMEs can hear directly from tax authorities on the tax implications of listing. In some cases, the tax authority has asked SMEs to pay the outstanding balance owed, but has given amnesty on the penalties for historic non-payment.

More limited management capacity. SMEs by their nature are likely to have less management capacity to deal with the rigours of listing. Again, this is more likely to be the case for SMEs in less-developed markets. Exchanges in the interview group (and more broadly) are therefore increasingly focused not just on making it easier for SMEs to list but supporting SMEs in the pre- and post-listing period. Many platforms offer or require the use of advisors to guide SMEs through the listing process and ensure ongoing compliance. These advisors often provide more support than a sponsor or an advisor on a main board. For example, the FSDT not only publicised the DSE's Enterprise Growth Market Segment, but also supported the Tanzanian Capital Markets and Securities Authority in certifying and training 40 Nominated Advisors to support SMEs.

SME platforms also increasingly offer creative mentorship structures for SMEs. For example, the Nigerian Stock Exchange's (NSE) Alternative Securities Market operates a 'tripod' training structure consisting of the following three elements:

1) The *'Guardian Angel'* (chosen from registered stockbroking firms based on status as SME subject matter experts) provides financial advice pre- and post-listing, and guides SMEs through complying with all requirements. The NSE is working on developing incentives for these brokers to become more involved with SMEs.

2) '*Institutional Services'* are offered by business consultants who diagnose SMEs' needs and offer solutions for SMEs interested in listing. These consultants provide a free initial diagnosis for interested SMEs (subsequent sessions must be paid for by the SME).

3) '*Growth Ambassadors'* are identified individuals who have excelled in their various areas of expertise to serve as mentors and provide guidance to companies prior to and while listed on the SME platform. They also support in driving advocacy for the platform.

The Casablanca Stock Exchange's ELITE program (in conjunction with the London Stock Exchange), similarly provides a two-year training programme to prepare SMEs for listing.

While many of the solutions employed by this sample of African SME platforms are in line with those used in other parts of the world, they also provide some interesting suggestions as to how stock exchanges particularly, but not exclusively, in lower-income countries can attract and nurture SMEs, thereby supporting SME growth and development. Exchanges may wish to explore:

- Working with regulators to address tax concerns that may prevent SMEs from listing on exchanges.

- Partnering with civil society organisations to support the growth of SME segments.

- Encouraging advisors to engage with SMEs.

- Providing a forum for sharing experiences between SME platforms.

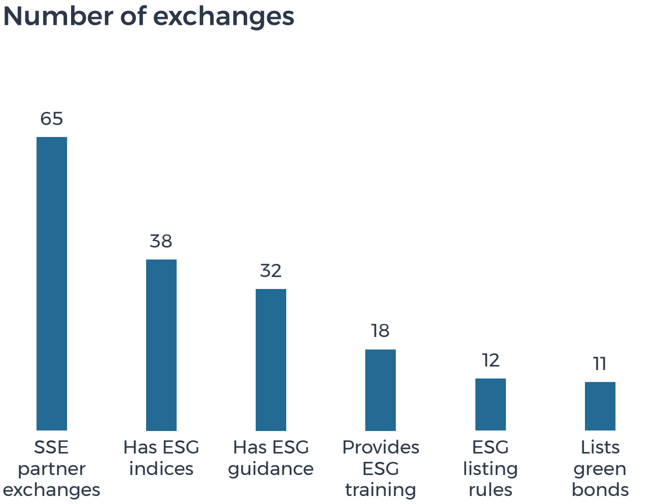
3. Stock exchanges and sustainability

3.1 Overview of sustainability mechanisms used by exchanges

While financing is at the heart of what exchanges do, stock exchanges have also historically played a strong role in the development of capital market institutions, standards and corporate practices.[53] More recently, this traditional role of promoting good governance has expanded to include the introduction of capital market policies and instruments designed to promote more sustainable investment practices, address the challenges posed by climate change, and support the achievement of the Sustainable Development Goals (SDGs). These ESG practices are being promoted through various stock exchange-related instruments (figure 3.1).

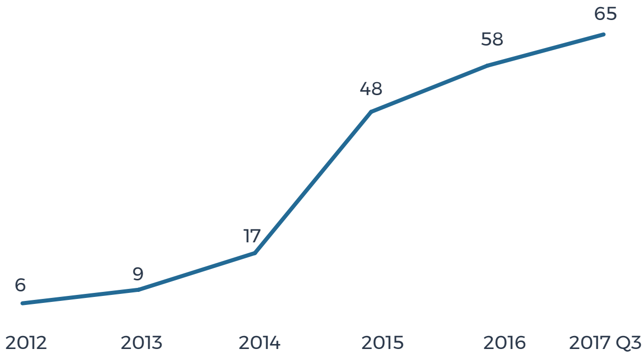
The growth in membership of the United Nations Sustainable Stock Exchanges (SSE) initiative, which has more than tripled in the last two years (figure 3.2), and the establishment of the WFE's Sustainability Working Group (SWG), can both be seen as proxies for the increasing attention exchanges are giving sustainability. Partner exchanges of the SSE range from global giants like NYSE and Nasdaq (United States) to large emerging market exchanges like B3 (Brazil) and JSE (South Africa) to small developing country exchanges like the Rwanda Stock Exchange or the Namibian Stock Exchange. Through the SSE and the SWG, exchanges have access to consensus and capacity building activities, guidance, research and other support to assist in their efforts to contribute to sustainable development. Given the large overlapping membership and aligned interests of the SSE and the SWG, the organisations co-operate where possible.

Figure 3.1: Overview of sustainability mechanisms used by stock exchanges



Source: UNCTAD

Figure 3.2: Sustainable Stock Exchanges members - Total number of SSE Partner Exchanges by year



Source: UNCTAD

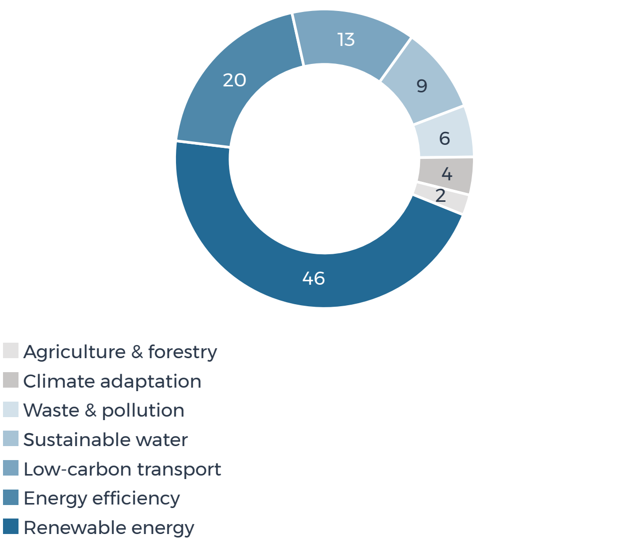
3.2 Green bonds, ESG indices and ESG disclosure

Specific efforts by exchanges to promote sustainability can be clustered into three categories, namely green bonds, the promotion of ESG disclosure and the creation of ESG indices.

Green bonds

Green bonds are debt instruments used to finance or re-finance activities related to environmentally beneficial projects, including climate change mitigation and adaptation efforts. Exchange-based green bond offerings have grown considerably in recent years, with 11 exchanges now listing green bonds. Since the first green bond issuance in 2007, the labelled green bond market has grown to over $180 billion outstanding as at end 2016.[54] Green bonds finance an array of sectors from clean and efficient energy to low-carbon transport and water (Figure 3.3).

Figure 3.3: What green bonds finance



Source: Climate Bonds Initiative

By listing green bonds, stock exchanges can play a leading role in the growth of this market by promoting standards for assurance and guidance for issuing green bonds, while opening new channels of finance for climate mitigation and adaptation projects. The Luxembourg Stock Exchange, for example, is one of the pioneers in this field, listing its 100th green bond in 2016. Exchanges in developing countries are also active; for example, the Nairobi Securities Exchange announced in 2016 the establishment of its Kenya Green Bonds programme.

The market for green finance related products is expected to continue to see rapid growth in the coming years. This growth takes place within a context of increased efforts by governments to address climate and related environmental challenges, coupled with increased investor understanding of the risks associated with carbon-intensive business practices and the potential for stranded assets.[55] Therefore the number of exchanges offering green finance related instruments is likely to continue to increase.

ESG indices

ESG indices remain the most popular sustainability instrument among exchanges, with 38 of 82 exchanges providing them. These types of indices are used to promote sustainable investment, while also encouraging greater ESG transparency from issuers. There are more than a hundred ESG-themed indices around the world, created by exchanges as well as specialist companies such as FTSE-Russell, MSCI, Standard & Poor's, Thomson Reuters and others.

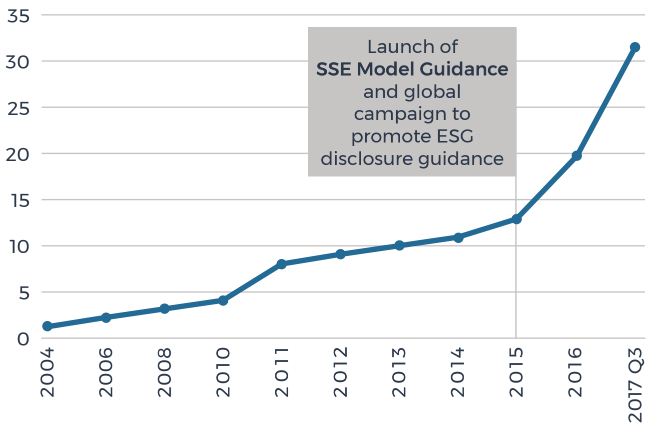
Investors are increasingly using these types of indices to incorporate ESG criteria into their investment decision-making. In July 2017, Japan's Government Pension Investment Fund, announced that it will shift 3% of its passive domestic equity investments (roughly $8.8 billion) into ESG indices while Swiss Re, a (re)insurer, said that in addition to incorporating ESG into their investment decision-making, they were also switching to the use of benchmarks that integrate ESG criteria. Globally there is an emerging consensus that considering ESG information may be an integral element of an investor's fiduciary duty.[56]

ESG disclosure

Finally, as an extension of their role in promoting good corporate governance and ensuring the availability of relevant information for investors, many exchanges are playing an important role in promoting greater, and better quality, ESG disclosure. By mid-2017 there were 32 stock exchanges providing formal guidance to issuers on reporting ESG information, including 17 exchanges that introduced guidance for the first time in 2016 and early 2017. Still more exchanges are expected to introduce such guidance as the global trend among stock exchanges shifts towards explicitly recommending issuers report on sustainability issues (figure 3.4).

Figure 3.4: Global trend in stock exchange ESG disclosure guidance

Number of stock exchanges with ESG disclosure guidance



Source: UNCTAD, SSE initiative database

Moving beyond voluntary disclosure, ESG information is incorporated into the listing rules on 12 exchanges as of mid-2017. Mandatory ESG disclosure rules are emanating from stock exchanges (e.g. Hong Kong Stock Exchange, Singapore Stock Exchange) as well as securities regulators (e.g. Securities and Exchange Board of India). These rules can have different scopes of application, sometimes applying only to a subset of the largest listed companies, thus relieving smaller companies of any undue additional disclosure burden.

While governments remain the most prevalent initiator of policy instruments aimed at sustainability disclosure, the cases of B3 (formerly BM&F-BOVESPA), Bursa Malaysia, Johannesburg Stock Exchange and Stock Exchange of Thailand represent instances where stock exchanges, through their ability to influence the reporting behaviour of their listed entities, are successfully generating a rapid uptake in sustainability disclosure.[57]

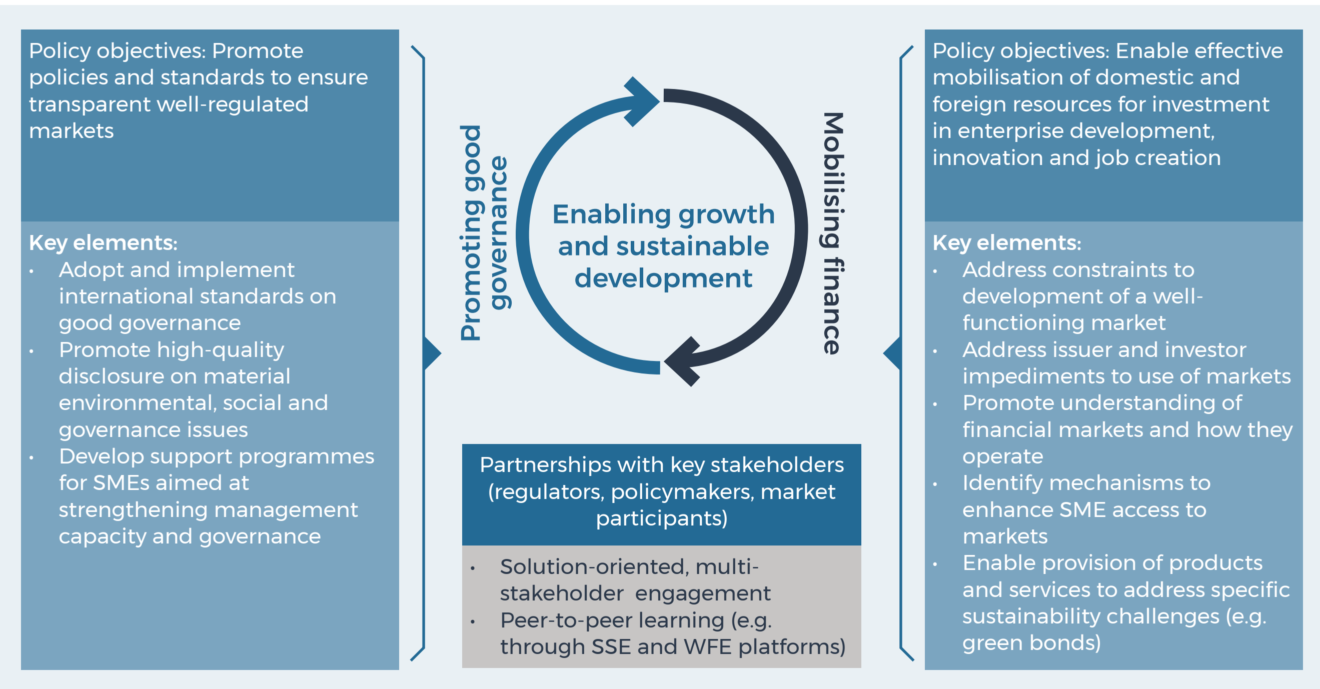
4. Towards a framework for stock exchanges to foster economic growth and sustainable development

This report provides an overview of some of the ways in which stock exchanges can, and do, contribute to economic growth and sustainable development. It has focused on two main roles of exchanges: mobilising resources to facilitate sustainable economic growth and development and promoting good governance. The mobilisation of finance is central to what exchanges do and the existence of well-functioning exchanges can therefore contribute to economic growth and development. There are also opportunities (which many exchanges have already identified) to build on this financing function to enhance SME access to finance, and to enable the mobilisation of capital to address significant long-term sustainability challenges. As part of their role in promoting corporate governance amongst listed issuers, many exchanges have already begun to encourage the disclosure of material ESG information. Finally, in seeking to improve SME access to finance, some exchanges have implemented dedicated programmes to improve SME governance and management.

The ability of exchanges to perform these roles is dependent on the existence of a combination of relevant enabling policies, processes and institutional structures. The exact nature of these would vary across jurisdictions. Based on the research presented in this report, and building on the identified roles, the suggested policy objectives, respectively, are, to: i) promote policies and standards to ensure transparent, well-regulated markets; and ii) enable effective mobilisation of domestic and foreign resources for investment in enterprise development, innovation and job creation. Key elements of a framework to maximise the growth and sustainable development benefits of exchanges are visualised in figure 4.1.

These elements speak not only to enabling growth and sustainable development, but also to ensuring the creation of healthy, sustainable, transparent, and inclusive markets, that maximise the benefits while minimising potential negative impacts. Achieving these goals requires the collective effort of exchanges, regulators, policymakers, and market intermediaries. Multilateral organisations such as the UN, the WFE, and IOSCO can provide platforms for such engagement.

Figure 4.1: A growth and sustainable development framework for stock exchanges



Source: UNCTAD, WFE

Notes

1 UNCTAD (2015) Investment Policy Framework for Sustainable Development.

2 The Sustainable Stock Exchanges (SSE) initiative is organized by UNCTAD, UN Global Compact, UNEP FI, and the PRI.

3 The report focuses on stock exchanges and does not cover the role of derivatives exchanges. The role and functioning of derivatives markets is an area for potential future work.

4 For a comprehensive review of the finance and growth literature, see Levine, Ross, 'Finance and Growth: Theory and Evidence,' Working Paper 10766, *National Bureau of Economic Research,* 2004.

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19 Claessens, Stijn and Eric Feijen, 'Financial Sector Development And the Millennium Development Goals,' *World Bank Working Paper,* no. 89, 2006; also Rioja, Felix and Neven Valev, 'Does one size fit all?: a re-examination of the finance and growth relationship,' *Journal of Development Economics,* Vol. 74, 2004.

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25 See for example Loewald, C. et al, 'Resilience and Inclusive Growth,' *G20 Insights*, 2017; and Cournede, B., O. Denk and P. Hoeller, 'Finance and Inclusive Growth,' *OECD Economic Policy Papers*, No. 14, 2015.

26 See, for example, Arcand, Jean-Louis, Enrico Berkes and Ugo Panizza, 'Too Much Finance?', IMF Working Paper No. 12/161, 2012 who look specifically at the impact of credit extension to the private sector.

27 See Loewald et al and Cournede et al.

28 Bae, Kee-Hong and Jisok Kang, 'Does the Stock Market Benefit the Economy?', March 2017, available at: http://www.efmaefm.org/0EFMSYMPOSIUM/2017/papers/Does-theStockMarketBenefittheEconomy-updated.pdf

29 This number represents exchange groups rather than individual exchanges. Some exchange groups (e.g. Nasdaq Nordic) operate more than one exchange sometimes in the same jurisdiction, sometimes across jurisdictions.

30 The number of listed companies and market capitalisation is based on WFE data of domestic listed companies. Summing the total number of listed companies across exchanges would result in a slightly higher number due to the fact that some companies are listed on more than one market.

31 This data is based on a subset of WFE member exchanges across all regions. Employee data is not widely available in all jurisdictions and was therefore extrapolated using available data. Median employee numbers are based on actual data. Revenue data is likely understated but presented as found.

32 Based on data submitted to the WFE. Includes WFE members, affiliates and non-members. Based on data from 83 exchanges (exchange groups) as at end 2016. Includes only exchanges where data is available (or nearly available for the full period) of the exchange was established during the period. Limited data gaps were filled by extrapolation.

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40 Harwood & Konidaris, 2015

41 The National Stock Exchange of India Emerge and the Bombay Stock Exchange SME platforms require that companies with equity capital of over $450 million and that meet certain other requirements must migrate to the main board.

42 These figures are derived from an UNCTAD database of over 50 SME platforms.

43 Esiara, Kabona, 'East African capital markets advisory centre to boost SMEs,' *The East African*, March 17, 2017, accessed May 1, 2017 at <http://www.theeastafrican.co.ke/business/Capital-markets-advisory-centre-to-boost-SMEs/2560-3853244-5pbelx/index.html>

44 Exchanges currently revisiting SME policies include: Kazakhstan Stock Exchange, Kuwait Stock Exchange, and NASDAQ Dubai. Exchanges with newly launched or announced SME offerings include the Johannesburg Stock Exchange, Deutsche Boerse and the Korea Exchange.

45 Asia-Pacific and Europe each have 15 SME platforms as identified by UNCTAD research. Africa has 13; the Americas region has 7; MENA has 4.

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48 We would like to thank the SME platforms of the Botswana Stock Exchange, the Bourse de Casablanca, the Dar es Salaam Stock Exchange, the Egyptian Exchange, the Johannesburg Stock Exchange, the Nairobi Securities Exchange, and the Nigerian Stock Exchange for their time and valuable insights into this research.

49 For more on the financial reporting challenges of SMEs, see UNCTAD (2009) *Accounting and Financial Reporting Guidelines for Small and Medium-sized Enterprises*

50 Based on a sample of 7 African SME platforms within the UNCTAD SME exchange database.

51 Based on a sample of 7 African SME platforms within the UNCTAD SME exchange database.

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