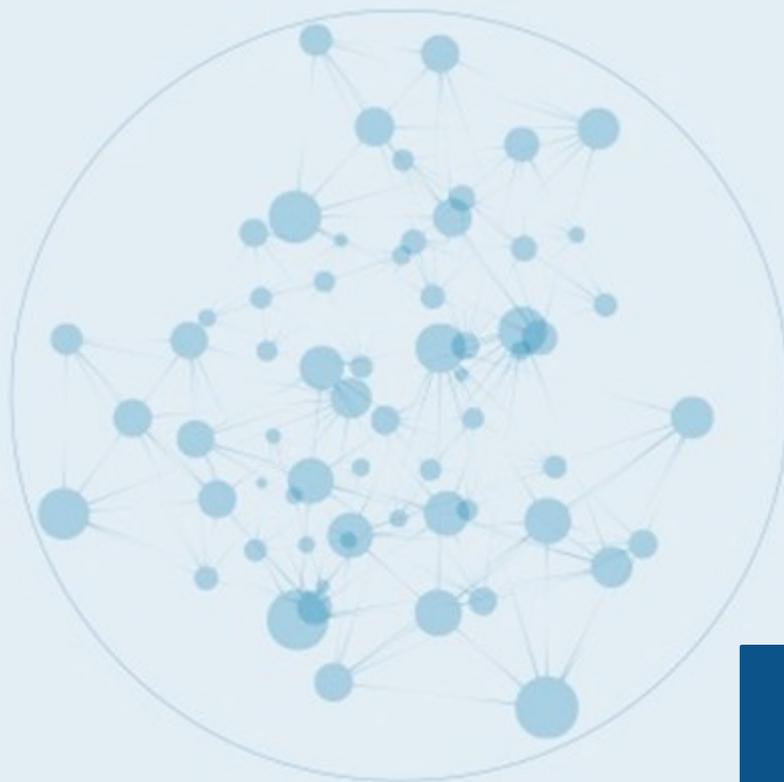




# STOCK EXCHANGES AND SUSTAINABILITY



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## The UNEP Inquiry

The Inquiry into the Design of a Sustainable Financial System has been initiated by the United Nations Environment Programme to advance policy options to improve the financial system's effectiveness in mobilizing capital towards a green and inclusive economy—in other words, sustainable development. Established in January 2014, it published its final report, *The Financial System We Need*, in October 2015.

More information on the Inquiry is at: [www.unep.org/inquiry](http://www.unep.org/inquiry) and [www.unepinquiry.org](http://www.unepinquiry.org) or from: Ms. Mahenau Agha, Director of Outreach [mahenau.gha@unep.org](mailto:mahenau.gha@unep.org)

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### About this report

This report forms part of the broader Inquiry and looks at not just effective mobilization of capital but the development of a financial system that is supportive of more sustainable outcomes. It does this by examining one part of the financial system, namely equity markets. The report and its conclusions are based on extensive desktop research and interviews, though the conclusions reached are those of the author. Finally, the scope of this paper is such that by its very nature it generalizes to a certain extent and may not treat all topics with the depth that they require. Thus, where the paper utilizes certain qualifications, these should be understood as recognizing that the statement does not hold in all instances.

Errors and omissions are the responsibility of the author.

Comments are welcome and should be sent to [simon.zadek@unep.org](mailto:simon.zadek@unep.org)

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## Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>4</b>
<b>1 INTRODUCTION.....</b>	<b>5</b>
<b>2 STOCK MARKETS AND (SUSTAINABLE) ECONOMIC DEVELOPMENT: EQUITY MARKETS IN THEORY .....</b>	<b>6</b>
<b>3 STOCK MARKETS IN PERSPECTIVE .....</b>	<b>8</b>
3.1 From coffee shops to trading floors	8
3.2 A more competitive landscape	8
3.3 Changing ownership structure	9
3.4 Continued competition and evolution	9
3.5 Exchanges and sustainability	10
3.6 Markets of the future	10
<b>4 MARKETS, SHORT-TERMISM AND THE SOURCE OF THE SUSTAINABILITY CHALLENGE .....</b>	<b>11</b>
4.1 Market short-termism: the evidence in support?	11
4.2 Linking long-termism and sustainability	11
4.3 The roots of the problem and the role of stock exchanges	12
4.4 Addressing the sustainability business case and information shortfall	12
4.5 Increase in traders relative to investors	19
<b>5 REFORMING STOCK MARKETS.....</b>	<b>24</b>
5.1 Encouraging a shift to sustainability	24
5.2 Reducing market freneticism	25
<b>6 CONCLUSION .....</b>	<b>28</b>
<b>GLOSSARY .....</b>	<b>29</b>

## Executive summary

Stock exchanges have historically played an important role in economic growth and development through enabling effective capital allocation. However, exchanges and markets more broadly have changed over time, in structure, interconnectedness and rate of activity. This has happened against a backdrop of growing recognition of the unsustainability of the current economic growth path in both social and environmental terms. Sustainability advocates and others have identified stock exchanges and evolving market structure as both contributors to the problem and a potential partner in the solution. Markets and by extension, the companies listed on exchanges and the investors in those companies, are increasingly short-term in outlook and appear not to value the environmental and social impact of corporate behaviour. This is due to a range of factors including (but not limited to) the lack of disclosure by listed companies of relevant environmental, social and governance information, as well as an evolving market structure and trading behaviour that favours trading above investing. Given that it is increasingly clear that environmental and social issues have an impact on corporate performance, exchanges (or the relevant securities regulators) must require disclosure in the same way that financial disclosure is required. Exchanges also have a role to play in developing sustainability indices, ratings and associated products that are useful to investors as they seek to shift to more sustainable investment. More fundamentally, it is necessary to address some of the challenges posed by new market structures. This requires improving the understanding of how the current and evolving market structure impacts on the core capital raising and allocation function of markets and redefining market quality to reflect this linkage. Markets will not, however, even if optimized for sustainability, solve the sustainability challenge, as they should reflect societal norms and expectations, rather than driving them.

## 1 Introduction

There is growing consensus that the current global economic growth trajectory is unsustainable: unsustainable in the sense that it is contributing to increasing inequality (social and economic exclusion) and that it is happening with disregard for planetary boundaries. It is therefore critical to not only reorient the economy towards a more environmentally and socially sustainable growth path but to mobilize substantial new investment towards this end. In order to achieve a sustainable economy it is necessary to have a sustainable financial system, that is to say one that is not only stable and resilient but one that also effectively mobilizes the allocation of capital towards a sustainable economy.

This paper forms part of the broader Inquiry into the Design of a Sustainable Financial System and examines the role of stock exchanges in the context of sustainable finance. The Inquiry seeks to identify policy and other options that would “deliver a step change in the financial system’s effectiveness in mobilizing capital towards a green and inclusive economy” and equity markets (with stock exchanges at their centre) have been identified both as part of the problem and potential part of the solution.

Stock exchanges – as the interface between listed companies and investors – are attractive targets as sustainability change agents. Not only are companies that are listed on exchanges required to comply with certain standards and to disclose information about the company’s performance on an ongoing basis, but equity markets themselves, if functioning well, should ensure allocation of capital to its most productive (ideally, sustainable) use. The Sustainable Stock Exchanges Initiative (SSE) 2014 Progress Report<sup>1</sup> points out that there are over 45,000 companies with a market capitalization of over US\$65 trillion listed on the 55 exchanges that are members of the World Federation of Exchanges and the SSE. The world’s 2,000 largest listed companies according to Forbes (2014) have revenues of US\$39 trillion and assets of US\$162 trillion.<sup>2</sup> Meanwhile, the OECD estimates that as at end 2013, assets under management of institutional investors in OECD countries came to US\$93 trillion and as at 2011, 38% of institutional assets were invested in public equities. Ensuring that these assets and this capital are directed towards more sustainable outcomes would be a significant step in the right direction. In order for this to happen however, regulators, policymakers and standard-setters need to address market shortcomings while also recognizing market limitations in enabling a significant shift.

This paper explores these themes in more detail and to that end, deals with the following: it begins by examining the theory regarding the role of stock exchanges in economic growth and development; it then goes on to look at how stock exchanges have changed over time both in legal form and focus and to identify their likely trajectory; next it looks at issues of market short-termism and a lack of incorporation of sustainability into investment decision making and the role of stock exchanges in this regard; it then goes on to examine existing exchange and investment sustainability initiatives; and concludes with a set of recommendations to more closely align exchanges (or markets) with the sustainability agenda.

## 2 Stock markets and (sustainable) economic development: Equity markets in theory

In theory, if equity markets function as they are supposed to, they would “*operate and sustain high performing companies and (to) earn good returns for savers without undue risk*”.<sup>3</sup> This occurs through the interaction of the primary and secondary markets with capital raising happening in the primary market and trading of shares happening in the secondary market. While there is some dispute about the exact nature of the relationship between the primary and secondary markets and the link to the real economy, the model is relatively straightforward: companies with interesting growth prospects are able to raise capital in the primary market (for example, through listing on a stock exchange) from a large pool of public investors. The fact that there is a large number of investors lowers the investment risk for all investors (a single investor is not required to invest as much as they would, for example, in a private company) and the cost of capital for the company. Additionally, because there are different types of investors with different investment horizons, requirements, and perspectives on the prospects of the company and these investors are able to trade their shares in the secondary market (thereby realizing the value or loss of their investment) companies are able to raise capital for activities with time horizons that may exceed the time horizons of individual investors. Thus, the aggregating, risk-pooling and sharing function of the primary market, coupled with the exit opportunities provided by a liquid secondary market enable companies to raise capital cost-effectively for long investment-horizon initiatives.

Equity capital markets also have an informational component. First, as part of being “listed”, companies must publish information deemed to be important to shareholders, both initially and on a continuing basis; second, the share price, as reflective of investors’ views on management decisions and company prospects, provide valuable information to managers. This disclosure requirement coupled with the informational content of the share price greatly reduces the cost for investors of sourcing this information independently and enhances the ability of investors to exercise governance over the company through voice (company engagement) and/or exit (selling the shares).

While the model linking financial markets and the real economy is easy to articulate, economists have battled both to empirically demonstrate a link between financial markets and real economic growth and development and (even where such a link is found) to identify the transmission effects. In their 1996 paper on “Stock Market Development and Long Run Growth”,<sup>4</sup> Levine and Zervos summarize some of the competing theoretical findings, stating that “*some theories provide a conceptual basis for believing that larger, more liquid, more efficient stock markets boost economic growth. Other theoretical models, however, have a more pessimistic opinion about the importance of stock markets.*”<sup>5</sup> They nonetheless conclude their analysis with a finding of a strong correlation (but not causation) between “*stock market liquidity and “current and future rates of economic growth, capital accumulation, and productivity growth*”. In a subsequent study, Beck and Levine find that “on balance” stock market and bank development impacts positively on economic growth and development.<sup>6</sup> Bond, Edmans and Goldstein (2011) meanwhile conclude that company share prices as determined by trading activity in the secondary market contain information about firm value and that this information may have a feedback effect on the firm’s behaviour. Tadesse concurs with the informational importance of stock market prices, arguing that these perform an important governance function in “*providing outside investors a variety of mechanisms for monitoring inside decision makers*”.<sup>7</sup>

This enthusiasm for the informational content of share prices needs to be tempered however with an appreciation of three key shortcomings of equity markets. The first is that although stock prices may

reflect investors' perspectives on known information about a firm (a weak form of the efficient markets hypothesis), this does not necessarily equate into an “*unbiased estimate of the fundamental value*”<sup>8</sup> of the firm. Kay identifies three reasons for this: first, long-run company performance is difficult to predict; second, different investors and actors are incentivized and motivated in different ways, and third, investors do not behave as rationally as theory would predict (e.g. assorted stock bubbles). The second (a shortcoming in relation to sustainability) is that markets allocate capital on the basis of expected company performance and consequent expected returns for shareholders, not value judgements about social or environmental performance. The third is that markets value individual institutions, not systems. These last two points become critical in later discussions on concepts of materiality.

Finally, the role and value of stock markets also need to be contextualized within the broader financial economy in which they operate. In a May 2015 International Monetary Fund (IMF) Staff Discussion Note<sup>9</sup> the authors support the economic and financial development link but build on the “too much finance” studies which suggest that financial deepening is only economically positive to a point. The authors construct a financial development index comprising a range of financial indicators for both financial institutions and financial markets. The conclusions of most relevance for this paper are as follows:

- financial development contributes to economic development up to a point, whereafter the positive impact weakens and eventually declines;
- while some financial sector functions remain intact at high levels of financial development, others (such as efficient capital allocation and effective corporate control) may weaken;
- above certain levels of financial development, both growth and macroeconomic stability are harmed.

Therefore, it is fair to conclude for the purposes of this paper that financial (stock market) development as represented by increased liquidity and market capitalization, within a framework of adequate disclosure and market regulation, will contribute positively to real economic development both through allocation and governance, up to a point. Furthermore, if one accepts Michael Spence's proposition that the purpose of economic growth is in fact “*inclusive, sustainable prosperity*” then by definition the most productive capital allocation should be the one that achieves this end. To the extent therefore that markets are undervaluing sustainability considerations, they are failing. That said however, one must also recognize the limits of markets in achieving inclusive, sustainable prosperity on their own given their imperfections. The questions that the rest of this paper seeks to address are to what extent can markets be utilized to bring about some of the necessary sustainability shift, what are the limits of markets in this and what is the role of stock exchanges both as part of the problem and part of the solution?

### 3 Stock markets in perspective

#### 3.1 From coffee shops to trading floors<sup>10</sup>

While stock exchanges date back several centuries (for example, the London Stock Exchange was formed in 1801, the New York Stock Exchange and Board in 1817, the Bombay Stock Exchange in 1875 and the Johannesburg Stock Exchange in 1887), the developments of the last few decades are most relevant for this report. Prior to the Wall Street Crash of 1929, stock exchanges were truly voluntary, self-governed, member-controlled organizations. Stock trading (broadly defined to include both debt and equity) proliferated throughout the US, Western Europe and the trading centres of East Asia. For markets to function, it was necessary for the participants to know the rules of the game and to believe that all participants would play by the same rules. This led to the concept of exchange membership and the sanction of expulsion if the rules were not adhered to. As exchanges matured, the rules governing how the markets worked evolved, thereby increasing their efficacy and their usage. The use of exchanges was however by and large not government-regulated, and those wishing to buy and sell stocks and bonds did not have to use exchanges – they were simply an increasingly convenient mechanism for trading and price discovery. Exchanges therefore performed a somewhat delicate balancing act between regulating market behaviour in order to ensure trust in the market, and not wanting to alienate their users.

This voluntary self-regulatory structure changed after the Great Depression (for which stock market activity received its fair share of the blame) and the Second World War. Governments introduced greater regulatory oversight of various aspects of stock markets (from issuance to trading activities) and formalized the front-line regulatory function performed by the exchanges. This led in some jurisdictions to the establishment of de facto government-sanctioned exchange monopolies (for example Europe, Japan and South Africa – though not always a single exchange) while in the US over-the-counter trading alternatives remained viable despite the growing role and importance of the New York Stock Exchange (NYSE). As stock exchanges became better regulated, the attractiveness of and interest in equity investments increased. Exchanges financed the regulatory function that they performed through fees that they levied on their members while members earned revenues through trading activity. Members controlled access to markets and were protected through fixed commission charges set by the exchanges. This served to limit price competition between members but was also an increasing source of aggravation for those entities that had to trade through members in order to access the markets. Eventually in 1975, as a consequence of pressure from increasingly powerful institutional investors and banks (at this point, banks accounted for 75% of the trading activity on the NYSE) the exchange abolished

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