François Groepe: Game changers in financial markets – regulation, innovation and cybersecurity

Keynote address by Mr François Groepe, Deputy Governor of the South African Reserve Bank, at the STRATE, PASA and GIBS Conference, Johannesburg, 29 September 2015.

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Introduction

Good day, ladies and gentlemen.

I would like to thank the organisers of the STRATE, PASA and GIBS Conference for inviting me to give this keynote address.

I look forward to sharing my views on the developments that can be considered game changers that may affect financial markets and shall focus primarily on regulation, innovation and cybersecurity in this context.

A game changer can be defined as "a newly introduced element or factor that changes an existing situation or activity in a significant way".[1]

Another way of thinking about game changers may be in terms of what the well-known Austrian-born economist, Joseph Schumpeter, called "creative destruction". Schumpeter, writing on economic and social evolution in his work *Capitalism, socialism and democracy* in 1942, wrote:

> The opening up of new markets, foreign or domestic, and the organisational development from the craft shop to such concerns as US Steel illustrate the same process of industrial mutation – if I may use that biological term – that incessantly revolutionises the economic structure from within, incessantly destroying the old one, incessantly creating a new one. This process of creative destruction is the essential fact about capitalism.

Inventive economists have since adopted this term to describe the disorderly manner in which the free market delivers progress.

The disruptive nature of innovation is essential for both progress and prosperity, and the theory of "creative destruction" gives us some insights into understanding this phenomenon and the evolutionary changes that follow in its aftermath.

Disruptive innovation brings opportunity in the form of productivity gains, for example, but it also brings challenges such as increased cyber-threats and vulnerabilities stemming from the greater degree of interconnectedness and, in the latter case, increased risks of contagion.

Regulation, by necessity, has to keep pace and respond to the changing environment. Unfortunately, regulators often play catch-up due to the speed of technological change and innovation as well as their lagging ability to fully understand the technology and the risks that it may give rise to. Despite this, regulators should promote an environment that is conducive to technological change and at the very least not become a hindrance or frustrate innovation as it supports economic development and growth. In this regard, the OECD opines:

> One of the important lessons of the past two decades has been the pivotal role of innovation in economic development. The build-up of innovation capacities has played a central role in the growth dynamics of successful developing countries. These countries have recognised that innovation is not just about high-technology products and that innovation capacity has to be built early in the development

[1] Merriam-Webster dictionary.

> process in order to possess the learning capacities that will allow "catch-up" to happen … Ultimately a successful development strategy has to build extensive innovation capacities to foster growth.[2]

1. Regulatory developments affecting financial markets

The most recent global financial crisis has impacted negatively on the global economy and financial markets, and has revealed significant deficiencies in the policy frameworks of many countries. In an attempt to address these deficiencies, the G-20 has called for financial markets and regulation to be reformed, with the objective of making financial systems more resilient. This initiative has accelerated the rate of reform, with governments putting increasing pressure on regulatory authorities to adhere to and implement international best practice and standards. Activities offered by financial service providers in the financial system are highly interconnected, and these services are inseparably integrated into both the domestic and the international economy, which means that regulatory authorities had to take note of the way in which these markets are developing and the role they play within the broader global context.

The magnitude of the financial system and regulatory reform has been unprecedented. The reforms have focused mainly on the banking, insurance and financial markets and providers of financial services, as well as on the infrastructure supporting these sectors.

As regulatory frameworks develop and reforms are implemented, new aspects to financial regulation come to the fore. Previously, regulators were mainly concerned with the supervision of banks and the oversight of payment systems. Now they have to contend with a much broader universe (which includes non-bank participants in the financial markets) and consider shadow-banking, how it affects the financial system and financial stability, and how to regulate these activities. The focus, however, is no longer narrowly on prudential regulation. In this age where we are confronted with a society that is well informed and digitally connected, that proactively engages in consumer activism and that places great emphasis on values such as fairness, the spotlight shines brightly on issues such as market conduct, transparency and calls to "level the playing fields".

It is indeed so that regulation and liberalisation happen in cycles, and periods of deregulation are often followed by periods of re-regulation. Given the devastating effects of the most recent global financial crisis, the astronomical social costs resulting from it, and the perceptions around the role that financial engineering and technology alongside deficient supervision and regulation played in the run-up to the crisis, we have inevitably been catapulted into an epoch of re-regulation.

Regulators and economic agents alike face a number of challenges at this point in time. These include:

1. International standards have been developed – for markets, regulators and participants – to assist with the management of risks and even behaviour. Whether they are encapsulated in the new Basel III requirements for capital or liquidity, or in the *Principles for financial market infrastructures*, or in the codes of conduct, these standards are introducing requirements that require adherence. Non-compliance with these standards is likely to lead to hefty penalties. There is a strong demand for participants to be accountable and responsible, and to incur liability if they are not playing by the rules. This has resulted in numerous large financial-sector firms being slapped with fines running into billions of dollars.
2. Standards are inextricably linked to the next point, which is governance arrangements and remuneration. Governance arrangements have been a focal point for some time

[2] OECD Directorate for Science Technology and Industry, 2012, *Innovation for development.*

now, and recent events in international markets have highlighted the importance of good governance and of ethical behaviour from all stakeholders. The global financial crisis has also refocused the attention of regulators on the remuneration structures of management and other individuals participating in financial markets and systems. This, in some ways, can be related to what economist describe as the "agency problem" and which under certain conditions may result in risk-shifting. This is a key area of focus of reform in attempts to promote the soundness of the financial sector in particular, hence governance arrangements and remuneration continue to be intensely discussed at various international regulatory forums.

3. "Shadow-banking" and "new (non-bank) participants" have come into sharp focus since the global financial crisis due to their role in the run-up to the global financial crisis and in financial regulatory arbitrage. Efforts to regulate these entities will intensify. This is likely to draw criticism from certain quarters but is entirely justifiable. The reason is that shadow-banking has the potential to transform the financial environment, to open up markets, to promote financial inclusion, to reduce frictional costs, and so forth. Hence, the further development of shadow-banking should be encouraged, simultaneously mitigating any risks that these entities may pose to the financial system and ensuring that the playing fields are level.

4. Financial market infrastructures (or FMIs), resolution and cross-border issues constitute a further challenge. Central banks have traditionally fulfilled the role of lender of last resort to commercial banks. The global financial crisis has shown that central banks may need to reconsider this function and consider the role of FMIs. Financial markets are interconnected and integrated internationally, creating a further challenge for central banks as they need to consider the position and cross-border transactions of global FMIs.

5. Conduct has already been raised in terms of standards, codes and governance. As much as financial market participants must come to terms with the fact that there are now a multitude of regulators to contend with, regulators need to consider the mandates of other regulators and agree on arrangements or memorandums of understanding to work with one another to create an enabling environment for a safer financial sector. It is also vitally important that regulators do not merely regulate because that is their mandate. It is vital that the impact of regulation is properly assessed ex ante and that careful consideration is lent to the possible unintended consequences and the economic costs of unnecessary regulation or so-called "red tape". Regulators should strive towards smart and effective regulation as opposed to simply issuing more regulations.

2. Innovation and financial markets

Regulators should not inhibit innovation. However, as custodians of financial stability, central banks in particular are tasked with the safety and efficiency of financial systems, and should act appropriately to address any risks that may emerge.

Electronic trading in South African bonds

During 2012, the Bond Market Development Committee, under the auspices of the Financial Markets Liaison Group, embarked on an initiative to enhance liquidity in the South African bond market.

The Bond Market Development Committee, chaired by National Treasury, and in consultation with the World Bank and bond market stakeholders, has made considerable progress and is currently at an advanced stage of the development of an electronic trading platform; it is envisaged that the platform will be introduced before the end of this year.

The initial phase will, however, include only government bonds; it will be expanded to corporate bonds at a later stage. Initially in the electronic trading platform, primary dealers will be the only "price makers" while the rest of the market will be "price takers" but with full access to trading and pricing information.

In addition to the general benefits of enhanced market transparency, credit risk management and trading, the electronic trading platform also aims to improve liquidity by expanding this platform to include other market participants complying with the requirements as market makers, in addition to the primary dealers. Competition among market makers is paramount to supporting liquidity at an instrument level and to minimising transaction cost.

The introduction of the electronic trading platform will enable National Treasury and the South African Reserve Bank to monitor market-making activities in the secondary bond market, which could result in the enhanced monitoring of liquidity conditions.

Enhancements to over-the-counter trading

In response to the recommendations of the G-20 and the subsequent *Principles for financial market infrastructures*, the South African Central Securities Depository, known as STRATE, is in the process of addressing the lack of transparency and risk management in over-the-counter (or OTC) instruments. To address these concerns, the Financial Markets Act was promulgated and regulation was passed to include the clearing through a central counter party and to record all the financial transactions of OTC derivatives contracts in a Trade Repository.

Collateral optimisation

In collateral markets, "collateral optimisation" has become a key objective. Not only do banks invest in systems that optimise the way in which their collateral can be utilised, but vendors and central securities depositories now also provide these services to their clients. These smart systems have built-in intelligence which optimises the way in which the collateral is applied and will substitute assets if required. An example is the Clearstream collateral management system, which is gaining momentum globally.

The speed of transactions

The need for faster services, trading, transactions and payments is stimulated by a generation demanding access and speed, accommodated by the proliferation of new technologies, growing familiarity with technology, and expectations of real-time satisfaction if not gratification – not only in financial market transactions and payments, but also in communication, services, social media and entertainment.

Participants in financial markets have created systems which enable the "trawling" of financial markets to detect opportunities within markets and then to transact on these opportunities within milliseconds – also termed "high-frequency trading". Not only do these transactions take place within seconds; the system development and innovation within financial markets makes it possible to transact from anywhere in the world 24 hours a day, seven days a week.

Blockchain technology

Blockchain technology, another example of the recently trending phraseology, enables the ordering (grouping) of various transactions in an inexpensive decentralised manner by making use of a number of servers. These transactions are not only limited to near-real-time payments but can also include financial market transactions and information relating to the settlement thereof. Blockchain has the ability to reduce transaction costs, as it takes away the requirement for intermediaries and is completely decentralised.

Blockchain is still in its infancy and while regulators and markets are still trying to get to grips with the concept of Bitcoin, newer or more innovative technologies are already on our doorstep.

3. Cybersecurity

The developments in cyberspace are a cause of concern for regulators, financial market participants, business and informed consumers. With the interconnectedness of systems and the ease of Internet access, regulators need to understand the cyber-threats that the financial system is exposed to.

Nearly every week one reads about the latest victim of a cyberattack, and the targets range from banking systems through consumer information held by retailers to social media facilitators and even governments.

The rapid developments in technology and the cyber-world have opened the doors to a new and uncharted frontier. Companies and countries alike are trying to get to grips with this latest threat and to find ways in which to mitigate the risk while protecting their information and reputation at the same time.

Governments, central banks, financial service providers and companies are expanding their cyber-protection capabilities. This means there is a growing demand for the limited technical skills available in this environment. The focus is, however, not only on prevention. In responding to security breaches, one has to respond with agility and speed while trying to limit the damage done and importantly to ensure continuity of service.

Conclusion

In conclusion, I would like to revisit the idea of a “game changer”. A game changer can be the discovery of something as small as a molecule or the invention of something that transforms the way in which we communicate, like mobile telephony.

The way in which one looks at game-changing innovations will alter the way in which one sees the world and will affect one’s strategies and business plans. Game changers can be perceived as opportunities or threats, and both the number and the frequency are likely to increase in the future.

No country can afford to have a myopic view and narrow national focus when it considers the game changers in financial market developments. Equally, regulators cannot afford to be left behind and only react to the changes in financial markets. Regulators must work alongside all stakeholders and not only the incumbents to try to understand the disruptive innovations and the policy implications thereof. It is important to emphasise the point of incumbents, as Rajan and Zingales eloquently set out the role that incumbent coalitions play in financial system developments but also underline how such coalitions may hold back financial sector development.[3]

Lastly, regulators need to be agile and forward thinkers and appreciate that their role extends beyond simply regulating. Their role is to help facilitate progress with the ultimate objective of improving the quality of peoples’ lives.

Thank you.

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[3] Rajan, R. and Zingales, I., 2003, ‘The great reversals: the politics of financial development in the twentieth century’, *Journal of Financial Economics* 69, p. 5–50.