Financial reform and the role of regulators: Evolving markets, evolving risks, evolving regulation

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Introduction

I gladly accepted the invitation because addressing this forum is always informative and challenging. Your job, risk management, deserves more reflection, in its sheer complexity, in its analytical difficulty and, not least, in its fundamental uncertainty. "And that is why the work of an organisation like GARP matters so much. GARP creates a forum to share ideas on new ways to approach risk or to share suggestions on ways to improve current practices. …."

I used those words last time I addressed you here in New York. It was in 2004, which was 11 years ago, and even more importantly: one *major* crisis ago! On that occasion, I spoke in my capacity as the chairman of the Basel Committee on Banking Supervision. I am tempted to ask: how many of you were there? Rich Apostolik, you were there!

At that time, I highlighted the progress and the importance of risk management, trying to convince you that we regulators were on the same side as you risk managers. At that time, regulation was evolving to become more risk-sensitive and to encourage better risk management. Eleven years on, we have all learned a lot more about risks: counterparty risks, liquidity risks – and most importantly, we have learned how difficult it is to identify, to measure and to internalise systemic risks.

I shall not go through all the lessons that we have learned – or perhaps that we shouldn't have forgotten. Today, I will instead focus on the question I was asked: What is the role of regulators? But before trying to answer that question, let me make two preliminary points.

First: We need to recognise increasing complexity and to adopt a wide perspective in managing risks. We have learned that the economy is growing more complex, more global, and that the interconnections within the financial sector and with the real economy are increasing in ways that are difficult to fully appreciate. We have also learned that risk management itself has a tendency to encourage procyclicality, especially by assessing risks as minimal precisely when they were at their greatest. Moreover, each institution has tended to assess risks without taking into account its own contribution to systemic risks. This narrow view needs to be widened.

In response, regulators have sought to better internalise systemic risk into the regulation and to repair the evident cracks in the framework. A comprehensive regulatory agenda has emerged and, in particular, a macroprudential or systemic approach has become part of the regulator's toolkit to safeguard the stability of the financial system as a whole. Moreover, the notion that other policies – monetary, fiscal and structural – need also to do their part to reach the elusive objective of financial stability has gained traction.

Second: We need to take on board the evolving nature of markets and risks. Financial intermediation and markets evolve, risks evolve and regulators must adapt as well. The need to adopt a wider perspective, a systemic perspective, and to understand this evolving nature of risk are among the major challenges for regulators and financial institutions alike.

Keeping these two points in mind, let me turn to the main topic: What is the role of regulators? I think regulators have three main roles:

First: *Complete* the regulatory agenda.

Second: *Implement* regulations consistently and *analyse* the effects of implementation.

Third: *Monitor* and *adapt to* the transformation of risks.

Let me elaborate on each of these roles.

Complete the regulatory agenda

Regulators are in the process of completing the reforms that seek to repair the cracks exposed by the financial crisis. The breakthrough in thinking is that regulation should go beyond a firm-by-firm view to take a systemic perspective.[1] The reform agenda is a comprehensive one, with national elements alongside internationally agreed ones. On the international side, let me highlight four main areas:

- *Building buffers* for both capital and liquidity in internationally active banks. You all know the drill, so let me just highlight: the step up in the quantity and quality of capital held against risk-weighted assets; the leverage ratio as a backstop to the risk-weighted measure; and, for the first time, an internationally agreed liquidity standard based on the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR). These reforms intend to recognise the broader social costs that insolvency and illiquidity can impose. In other words, to internalise systemic risk.

  A breakthrough in international cooperation in Basel III is the countercyclical capital buffer, which addresses the natural reluctance of national authorities to adopt capital rules that are more stringent than the internationally agreed ones. Now, faced with rapid private credit growth amid buoyant asset prices, national authorities can impose higher capital requirements that will bind domestic and foreign institutions alike. Rules embedded in regulation are useful, but they will not be enough; discretionary decisions will be necessary at times.

  On insurance, the International Association of Insurance Supervisors (IAIS) has a full agenda of work to establish global capital standards for the insurance sector: from the Basic Capital Requirements for global systemically important insurers (G-SIIs) completed in 2014, to the Higher Loss Absorbency for G-SIIs in 2015, and finally the more ambitious, group-wide, risk-based Insurance Capital Standard slated for adoption in 2018.

- *Correcting perverse incentives*. This has been done in various areas such as securitisation, but the biggest challenge has been to address the distortions resulting from the perception that some firms are too big to fail. You know well how much weight the rating agencies have

[1] Andrew Crockett, "Marrying the micro- and macro-prudential dimensions of financial stability", speech to the Eleventh International Conference of Banking Supervisors, Basel, 20–21 September 2000.

traditionally placed on the prospect for external support when rating big banks.[2] While some have called for the break-up of large firms as the solution, the internationally agreed approach is to treat the systemically important financial institutions more stringently in terms of required capital and in terms of more intensive supervision. Again, the logic underlying this area of reform is that of internalising better the social costs that distress at the biggest, the most connected and the most irreplaceable firms can impose. Furthermore, as a backstop to stronger capital requirements, regulators and legislators have worked to make resolution regimes a credible, ex ante alternative to official support for big firms.

- *Reinforcing infrastructures.* Another key area of reform is to make derivatives markets safer by moving the trading of standardised over-the-counter derivative contracts to exchanges or electronic trading platforms, and their clearing through central counterparties. Progress towards this goal has been slower than hoped and varies across jurisdictions, but much progress can be anticipated this year. Here in the United States, activity in interest rate swaps has migrated to a substantial extent. Contracts that are not centrally cleared have been made subject to higher capital requirements. Thorny questions on the cross-border interaction of different national rules are being worked through.

- *Dealing with risks in the shadow banking system.* Globally, the value of financial assets outside banks, insurers, pension funds and central banks rose by about 7% in 2013 over the previous year, to a total of $75 trillion. This is almost back to the pre-crisis level as a share of GDP. Not all of this should be considered "shadow banking" as such and, whatever name we use, not all of it is necessarily a risk to the system. But it does point to a growing volume of financial activity outside the bank regulatory perimeter that could give rise to maturity and liquidity mismatches, and cannot be easily monitored or managed by traditional regulatory tools. Some measures have been taken to reduce the risk of runs on money market mutual funds, especially here in the United States, but also in Europe[3] – time will tell whether they are enough. The Financial Stability Board (FSB) has set out a regulatory framework for haircuts on certain non-centrally cleared securities financing transactions. It has also put out for comment a proposal for minimum haircuts (numerical haircut floors) for transactions between non-banks backed by collateral other than government securities. Such minimum haircuts would tend to make the financial system less procyclical.

I shall not go into details about the state of play in each of these four areas. Let me just mention a few matters that remain to be decided:

- *TLAC in resolution.* As you know, the FSB and the Basel Committee have proposed total loss-absorbing capacity in resolution. Why TLAC? In the event of resolution, global systemically important banks need to have sufficient loss-absorbing debt to allow an orderly resolution that avoids falling dominoes, maintains critical functions and minimises taxpayers' risk. Both bondholders and shareholders should have a stake in banks' managing risk properly. An impact study is scheduled to be published by August; calibration is to be done by September; endorsement by the G20 Leaders is expected in November; and implementation may be as early as January 2019.

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[2] The gap between stand-alone and overall ratings has narrowed since 2010. See Nikola Tarashev and Goetz von Peter, "Low rates spur credit markets as banks lose ground", *BIS Quarterly Review*, December 2013, Graph 7, page 9.

[3] Money Market Fund Reform; Amendments to Form PF, Investment Company Act Release No. 31166 (July 23, 2014) [79 FR 47735, (August 14, 2014)].

- *Calibration of the leverage ratio.* Since risk models and risk weights – no matter how sophisticated – do not fully capture all relevant risks, the leverage ratio in Basel III serves as the suspenders to the risk-weighted belt. It guards against model risk and "unknown unknowns", putting a limit on the growth of banks' leverage. It is often said that the minimum leverage ratio is set at 3%, but let us be clear that its level remains to be decided. The commitment is to finalise calibration by 2017, and this work could well be completed before then.
- *Other items.* There is other work in progress on the regulatory agenda. This includes revisions of the standardised approaches and their adaptation to set floors for firms' own model results; a fundamental review of the trading book; disclosure of the Net Stable Funding Ratio; and work on the simplicity, comparability and risk sensitivity of the regulatory framework.

Implement consistently and analyse effects

The global financial crisis taught us that agreeing to rules is not enough. The Basel Committee and other standard setters have taken on the job of monitoring and promoting their consistent implementation across jurisdictions, including peer reviews – the second role of regulators that I mentioned.

Regulators face two major hurdles in implementing international standards consistently: difficult cross-border issues and the so-called Goodhart's law.

Cross-border issues arise in manifold contexts. The cross-cutting point is that national regulation is not enough by itself. Regulation must be as cross-national as the markets and firms trading in them. This requires cooperation among authorities. We now have a better framework for cooperation, which ranges from peer reviews to the support and commitment of Leaders of the G20, but we must recognise that market conditions have been very challenging and that in times of stress there is always an inclination to protect your own jurisdiction. We need to continue to be alert and try to contain any financial fragmentation tendencies.

Implementation in practice requires us to cope with Goodhart's law: "As soon as the government attempts to regulate any particular set of financial assets, these become unreliable as indicators of economic trends." In the context of regulation, it could be rephrased: As soon as a rule turns into a binding financial regulation, it will cause changes in financial institutions' risk management that will make it less binding and less effective. Financial markets are constantly innovating, and firms are constantly adapting to the new rules. Simple rules may seem appealing, but we should not be naive: a good part of the complexity comes from this continuous adaptation to rules once they are implemented.

One striking example of the challenges to consistent implementation is the wide range in the manner in which banks have calculated – or, one might say, optimised – their risk-weighted assets (RWA). Let me make four points about the need for more consistency:

- First, risk sensitivity is the cornerstone of the prudential framework. The regulatory reform has reinforced the basic notion that: where there is risk, there should be capital; and where there is more risk, there should be more capital.
- Second, evidence suggests that differences in supervisory and bank practices play a significant role in very inconsistent RWA outcomes. We have to make sure that this goes away by promoting consistency in supervisory approaches to these calculations, by tightening the constraints on parameter assumptions, and by setting floors based on a revised and transparent standardised approach.
- Third, transparency. The system's best defence is that the assessments be grounded in solid fundamentals (representative and comprehensive data, robust methodologies, solid

governance and culture) and that outcomes be as transparent as possible. Supervisors need to be proactive in their assessment.

- Finally, the ultimate test of our efforts to promote greater transparency and comparability of outcomes is stronger confidence in the framework on the part of market participants: bank stock analysts and investors in bank bonds.

This example shows that monitoring and coping with change, innovation and complexity requires not just a good regulatory framework but also active supervision. A more proactive supervision can help to contain model dispersion, ensure consistent implementation and monitor changes and risks. At its narrowest, supervisors need to monitor the effects of the regulation on firms, on markets and on the financing of the economy. At its widest, supervisors need to monitor the emergence of new risks, and to understand the interlinkages between financial markets and the real economy. Thus, I turn to the need to monitor and adapt to the evolution of markets and risk – the third role of regulators.

Monitor and adapt to the transformation of risks

Before the global financial crisis, banks drew on easy leverage and a perception of low risk to expand their balance sheets, whether to finance risky mortgages in the United States or unsustainable construction booms in the periphery of Europe. Since the crisis, the banks that were worst hit by the crisis have been deleveraging and improving their capital base. Only in the last several quarters has global cross-border bank credit begun to respond to the environment of low funding rates and generally low volatility.

A change in intermediation patterns is evident: the action has shifted away from banks and towards bond markets, with a significant increase in corporate debt issuance. Search for yield transmits easy financial conditions through markets and across borders. Likewise, compressed bond term premia transmit themselves powerfully, increasing bond market correlations across currencies, even if there is increasing divergence in the expected path of policy rates.

Even if leverage has been reduced in some areas, the overall leverage of the global economy has increased since the beginning of the crisis. The aggregate global indebtedness of households, non-financial firms and sovereigns remains 25 percentage points of GDP higher than before the crisis. Excess debt is a headwind for growth and creates a number of vulnerabilities and contagion channels. For example, in the context of increasing currency volatility, as large economies diverge in their cyclical position and policy paths, it is worth mentioning that there is around $9 trillion of US dollar credit to non-banks outside the United States. Today half takes the form of bonds, whereas less than a third took the form of bonds before the crisis. The recent strength of the dollar heightens financial risks – increases credit and liquidity risks – and may weaken growth as credit conditions are tightened.

Against this background, let me highlight three risks that have taken on greater salience in this environment of financial intermediation through bond markets. These are: market liquidity; leverage-like behaviour; and dependence on central banks. Let me say a few words on each.

First, market liquidity has become more problematic. Liquidity has always been difficult in stressful times, but there are signs that this difficulty may be more acute now. Last October, the Basel-based Committee on the Global Financial System published a report entitled *Market-making and proprietary trading: industry trends, drivers and policy implications*. It highlights the following:

- *Liquidity has bifurcated* and become fragile, as market activity has concentrated in the most liquid instruments and deteriorated in the less liquid ones.

- *Banks are allocating less capital* to market-making activity and keeping inventories under control.
- *There is a disconnect* between the reduced commitment to secondary market liquidity, on the one hand, and a strong primary bond market and holders' demand for immediacy, on the other.
- *Increased concentration on the buy side* implies more concentrated decision-making and thus greater demand for immediacy.
- *Automation of bond trading can lead to price discontinuities* in stressed markets, as thresholds are crossed and programmes take automated trading offline, even if in normal circumstances such automation narrows trading spreads on smaller trades.

When markets threaten to become illiquid, we can see a rush for the exits by bondholders, or an attempt to hedge risks in one market by taking a short position in a related, more liquid market. The results can be bouts of fire sales and contagion. These dynamics are accentuated to the extent that products offer investors the illusion of liquidity, which disappears in stressful conditions.

Put differently, there can be runs on market instruments just as there are on banks. For example, many exchange-traded funds (ETFs) promise continuous, liquid exposure to markets and sectors that are themselves relatively illiquid. A sudden shift in buying or selling pressure for these funds could send the underlying markets into a tailspin, and potentially destabilise the dealers and asset managers that tend these funds. The point here is that one should factor in the scenario that there will be less market liquidity and take risks accordingly.

The second risk I want to highlight is that asset managers have become more important and may contribute to unexpected market dynamics. Industry practices and incentives facing these managers can result in leverage-like amplification and non-linear price movements. Examples of such mechanisms are:

- Aversion to coming last in short-term performance, which can exacerbate buying and selling pressures. This effect can be amplified by redemption risks.
- The need to meet market benchmarks, which can lead to the concentration of exposures, higher correlations and herd behaviour – it is safer to be wrong in a crowd than on your own.
- A search for yield that focuses too much on central scenarios, and does not take heed of a wider distribution of potential outcomes. When these unexpected outcomes occur, valuations can jump sharply.

All of these examples of how market dynamics can amplify stress in markets need to be better monitored and understood.

Events last year in the most liquid fixed income markets in the world highlight some of the risk. For one, 15 October 2014 featured a melt-*up* in the price of one of the most liquid instruments in the world of finance, the 10-year US Treasury bond. As with the 1987 crash in equities, or the more recent flash crash, a full forensic investigation will take some time. But, even if the market recovered rapidly, it is not too soon for risk managers to add a melt-*down* of similar speed to their store of stress scenarios. I do not need to remind this audience that one of the toughest historical stress tests remains the one based on the 1994 global bond market rout – which occurred despite the fact that while the Federal Reserve was tightening, the Bundesbank was loosening.

The third risk I would like to highlight is the risk that market participants have become overly dependent on central banks. After all, central banks provided not just lending of last resort to particular financial institutions in 2008–09, but also market-making of last resort in some markets – intervening heavily in some cases and becoming dominant players there. At the same time, uncertainty surrounds the prospective normalisation of policies. And exit uncertainties are augmented by the different cyclical conditions in the economies of the main currencies.

Looking to the central banks to calm markets might have made sense at the height of the crisis. But the risk now seems to be that many market participants' central scenarios still assume that central banks will continue to be there to provide market liquidity and to suppress volatility. Stress tests need to consider a wider range of potential scenarios, particularly as the necessary normalisation of policies is starting.

Conclusion

The financial system has become more complex, more globalised and more intertwined with the real economy, and risks and leverage continue to mutate. To try to capture this complexity and the evolving and elusive nature of risks, we – both officials and private risk managers – need to be humble and recognise that there are limitations to our knowledge and models, no matter how sophisticated they are.

As in any complex system, the behaviour of the whole financial system is dependent not only on the parts but also on the linkages. Dynamics can easily become non-linear – small causes can produce large effects. Of course, it is still very important to improve risk management systems, but even with state-of-the-art systems, some risks cannot be fully captured and internalised. Setting initial conditions right, being prepared ex ante – meaning robust buffers in terms of capital, liquidity and risk assessment – is more important than trying to manage stress dynamics.

Creating the right risk culture, appropriate governance and risk management systems requires a wide perspective, understanding our limitations and the need to operate with sufficient room for manoeuvre to be able to tackle a broad range of scenarios.

From the regulatory perspective: more than designing new rules, completing the agenda, ensuring consistent implementation and monitoring results will take up most of the resources. Hopefully, changing times can be adapted to – at least for a while – through a more proactive supervision, leaving space for the industry to incorporate not only the rules but also the spirit of the reforms.