IOSCO-FSI Seminar on Trading Book Issues and Market Infrastructure, Madrid, Spain, 16-18 November 2016

Intro

It is a great pleasure to be here today. I would like to focus my remarks on liquidity management in the funds sector and why we care about it, both from an investor protection and also systemic perspective.

Lessons of the 2007-2010 Financial Crisis

In order to frame my arguments, it remains useful to look back to the financial crisis of 2007-10, in all its complexity to draw out lessons for us in our work as securities regulators.

The overall character of the regulatory lessons of the crisis remain, and I would summarise them as follows:

- A relatively small financial sector shock has the capacity in our highly inter-connected market to create very substantial cross-market and real economy impacts;
- The mechanisms of contagion are not driven solely by the realistic threat of counterparty default but by: a) lack of transparency; b) impact of changing valuations; and c) simple fear;
- The arbitrage of banking regulation can push banks into acting as agents in market-based financing activities in ways which increase the systemic

risk in markets. The Fundamental Review of the Trading Book, discussed in depth this morning, can be seen as part of the response to this.

These high level lessons, all about what interconnectedness means, have been evident since the crisis itself. Liquidity management and the potential for liquidity mismatch are key aspects of interconnectedness which need to be explored in further detail. There have been some very interesting academic papers which have tried to use the analogies of complex biological systems and disease contagion analysis to deepen the understanding of these lessons. There has also been substantial statistical analysis of why particular markets behaved the way they did.

Questions Raised by the 2007-2010 Financial Crisis

While this is very useful work, it leaves the issue of how to design regulatory mitigants outstanding. Here, it seems to me, there are a number of high level questions which have recurred in the discussion, namely:

- To what extent is there an alignment between macro-prudential concerns and micro-prudential concerns such that we can deal with the macro-prudential risk by re-calibrating the micro-prudential constraints? By contrast, to what extent do macro-prudential considerations require unique macro-prudential tools?

- Closely related to this, to what extent does systemic risk raise both investor protection and market orderliness concerns?
- To what extent can we transpose elements of the regulatory framework which appear the best options in one sector, often banking, into other sectors, often asset management, and to what extent do we have to tailor regulatory measures to the specificity of each sector?
- Closely related to this, to what extent can we set a regulatory framework for an activity in an agent-neutral way which will make that activity sufficiently safe and, focusing on the asset management industry, to what extent must we place the regulatory burden on asset managers, in particular, to be prudent in their conduct of that activity?
- To what extent, given how new and limited the institutional framework for macro-prudential regulation is, both nationally and on a cross-border basis, should we rely on providing for intervention powers to control the accumulation of risks as these build up at the peak of the financial cycle? The problem is who is to exercise the intervention powers. Conversely, to what extent do we need to hard-wire constraints into a particular activity at all times to ensure that the constraint applies when it is needed?

- Overall, what is our risk appetite for systemic risk and to what extent are we willing to incur the costs involved in either restructuring the industry or controlling the financial cycle in order to manage systemic risk?

These are all hugely difficult questions. I don't think we can say that any one of them has been answered comprehensively thus far, but perhaps it would have been overly-optimistic to expect that.

Securities Regulation Post 2007-2010 Crisis

When it comes to securities regulation, the process of determining what should be done has been difficult. From an early stage, the core initiative was to manage counterparty risk in relation to derivatives by imposing either clearing or minimum margining. The discussion yesterday on resilience and recovery of CCPs deals with a key issue arising. This initiative has also involved a push to collect substantial data on derivatives trading and short-term lending, with the hope that by monitoring this data, supervisors could identify a build-up of risk and somehow tackle it. However, that idea of intervention continues to face a shortfall of credibility, despite some useful academic literature on interconnectedness.

A more constructive method has been to ask whether we could replicate the banking regulatory approach for asset management. This has led to questions about transposing a number of the key elements of the banking reform package such as:

- Strengthening of significant institutions
- Recovery and resolution planning
- Liquidity regulation
- Leverage regulation

It has become evident that there is a very broad range of reasons why a mechanical transposition from banking to securities regulation will not work. However, the case for transposing some elements of the banking package of measures is stronger than others – namely the focus on liquidity and leverage regulation.

Leverage

I don't intend to focus on leverage as Shane will speak to that in detail; however, I do quickly want to mention why, as regulators, we need to assess liquidity management and leverage in the same context – if I am leveraged and I face liquidity problems, my capacity to bear losses, even notional losses, is less than if I am not leveraged. The reason why in the available evidence[1] suggests that, for a large part of the hedge funds industry, leverage is

[1] Hedge funds Survey, June 2015, Financial Conduct Authority.

primarily acquired using derivatives or secured financing transactions and any unsecured financial leverage in aggregate appears minimal. It tends to be either on an overnight basis or is withdrawable on demand (or subject to margin re-setting).[2]

This reliance on overnight or short-term leverage created by SFTs or derivatives, where it occurs, is a key mechanism in understanding how leveraged investment funds can find themselves subject to stress. The clearing of derivatives and the initiatives which have been taken by the FSB to regulate margination and haircut practices in relation to secured short term borrowing have helped but, arguably, will not eliminate the problem. Furthermore, there is a relationship worth pointing to between how safe secured financing transactions are being made by rules on margination and haircuts and how much attention needs to be paid to the build-up of leverage across the cycle in the funds industry. That is why leverage remains a significant issue in the funds sector and Shane will speak on that in a moment.

Liquidity

As with leverage, there have been initiatives to regulate the activity of liquidity provision. These measures have focused on banks as liquidity

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[2] Adrian and Shin (2010) document high and growing leverage ratios of financial institutions, reaching debt-to-equity ratios of 30 or more for dealer banks. Much of this debt is short-term collateralized loans.

providers who now face enhanced capital requirements for operating as market makers and are themselves subject to regulation of their own liquidity profiles. Undoubtedly, these measures will make the provision of liquidity in markets less pro-cyclical. But once again, as with the regulation of the activity of providing leverage, we cannot say that the regulation of the activity of providing liquidity has resolved the issue. Consequently, we are forced to focus in on the growing funds sector.

It is a striking feature of the funds industry that it engages, like banks do, in liquidity transformation, by which I mean that funds offer to provide you with the value of your funds at a faster pace than would be required to sell the assets of the fund. Fund managers have always understood this and investment fund regulation has always focused on this fact. Of course the precise nature of the liquidity transformation in the funds industry is different from the liquidity transformation in banking. Where banks promise you that if you deposit one dollar with them you will get one dollar (+ interest) back, irrespective of how the assets of the bank are performing, funds do not promise that. They promise to give you back what your dollar, having been invested, is now worth. But most funds promise to try to give it back to you in a matter of days and it is in this respect that they are most like banks. Should they fail to do so, they are not legally in default, but you, the investor, expected them to do so and if they fail, you are shocked and – to the extent that you depended on them – disadvantaged.

Managing to meet that expectation is hard, particularly hard in the world of bond markets which are fragmented, dealer-intermediated and often lack transparency. Asset managers try hard to meet that expectation and consider not doing so as failure. But there are a number of practices they can fall into which justify regulation. Firstly, they can create an expectation of daily liquidity and then invest in assets which make that very difficult to deliver. Secondly, they can refuse to plan for extreme events on the basis that they only happen occasionally and cost too much to plan for.

These behaviours are bad for the investor, bad for the orderliness of markets and bad for the system.

So can we regulate to reduce these practices? The first problem is the definition of liquidity. Surely if we want to regulate liquidity effectively we have to be able to define and measure it?

<u>Liquidity Definition and Measurement</u>

a) Market Liquidity

In principle it is straight forward to define market liquidity – a security is liquid if it can be sold without significant loss of value in, let's say, three days. [3] In practice there are numerous problems with this: What is considered a significant loss of value? Secondly, one might estimate excess market capacity for one day, but will that continue into day 2 and day 3? How consistent is excess capacity as market conditions vary? How does one move from trader opinion on excess capacity to a more objective measure of it?

In practice, also, liquidity has a number of dimensions which make it hard to measure. Market depth is how large a trading volume that can be transacted without moving the price. Resilience refers to how quickly the market recovers from the impact of large orders. Immediacy refers to how long it takes to get a trade done. Then, there is the price of liquidity, usually thought of as the bid-ask spread. Often in debates we talk about "liquidity" but mean the price, but the other dimensions are also important. In equity markets the analysis of these is complicated by the existence of spread traders and market makers and by the complexity of market order types. In bond markets, the matter is even more complicated by the dominant role of the

[3] This market participants view is similar to that in Borio, Claudio. "Market Liquidity and Stress: Selected Issues and Policy Implications." BIS Quarterly Review November (2000). However, see also Brunnermeier, Markus K, and Lasse Heje Pedersen. "Market Liquidity and Funding Liquidity." Review of Financial studies 22, where liquidity is seen as the difference between the transaction price and the fundamental value of securities.

so-called sell-side, intermediaries who make money by providing liquidity, and by fragmentation and lack of transparency of the bond markets.

A review of the academic literature and of the various measures used to measure liquidity leads to a similar conclusion: there are various measures of liquidity and none is authoritative. For example, the FCA[4] and the AMF[5] have published studies on the indicators of market liquidity in fixed income markets, which appear to show there has not been a significant decline in the available liquidity, at least when calculated by bid-offer spread measures and by measures which rely to a large degree on bid-offer spreads. However, PWC [6] find a measurable reduction in financial market liquidity when analysing banks' trading capacity, corporate bond trading volumes and turnover ratios of corporate bonds. These contrasting findings on current bond market liquidity highlight the complexities in measuring liquidity. It is a topic that C2 of IOSCO has wrestled with.

It is inevitable that these difficulties would be reflected in regulation of liquidity. Let me give you some examples from Europe outlining how difficult it can be to define liquidity for regulatory purposes.

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[4] Aquilina, M & Suntheim, F. Liquidity in the UK Corporate Bond Market: Evidence from Trade Data. FCA Occasional Paper, 14 Apr, 2016

[5] Autorité des marchés financiers. Study of Liquidity in French Bond Markets, 16 Nov, 2015

[6] Pricewaterhouse Coopers. Global Financial Markets Liquidity Study, Aug 2015

- In developing the European ‘PRIIPs’ regulation, which aims to provide information to investors to aid decision-making, it was ultimately decided it was not possible to come up with an objective measure of liquidity risk for the purpose of a composite risk indicator. Instead, there is provision for a narrative warning.
- In CSD-R, there are requirements for CSDs to invest in highly liquid instruments for which the CSD must have a defined and objective methodology for determining what is considered a highly liquid instrument. However, there are no further details provided by CSD-R on this, for good reason.
- Similarly, in SFT-R, liquidity is not defined.
- In the Money Market Fund Regulation proposals currently being worked on, there is a critical requirement to hold highly liquid investments. However, once again liquidity is not defined. Instead, the rule is formulated in terms of cash, government securities and weekly maturing assets – the point being that even if illiquid, the early maturity date allows the investor to get their money back.
- If we look at the UCITS directives, which are, at their core, about requiring UCITS to invest in liquid assets, we find that judging what

investments are considered liquid and illiquid is ultimately left to the asset manager, with limited guidance provided.

- In MiFID II, bonds are subject to transparency rules, requiring pre-trade publication of bid and offer prices, and post-trade publication of transactions. However, waivers and deferrals are available for bonds in which there is no liquid market. The appropriate methodology for deciding whether or not a bond was liquid proved to be a very difficult point in the finalisation of MiFID II. The attempt to define the terms of this exemption led to a very interesting debate on whether to analyse individual securities or categories of securities. What came out strongly in the debate is how uncertain and changing liquidity is.

The problem is that liquidity is multi-dimensional, constantly changes and is not determined exclusively by easily observable characteristics. Looking at the quality of the issuer or the frequency of trading, as is sometimes done in regulation, is looking only at proxies for liquidity. A bond that is liquid at one point in time may be illiquid very soon after and may become liquid again soon after that. Furthermore, a method which works for identifying liquid government bonds quite well may be less successful in relation to corporate bonds.

b) Funding Liquidity

Further complicating the matter, not only can we not easily define what 'liquid' is in a market, nor can we easily define what liquidity transformation is. People sometimes confuse maturity transformation and liquidity transformation. Maturity transformation is, arguably, a particular type of liquidity transformation in which I issue a security that becomes payable on maturity over a shorter time frame than the investments into which I put the money raised. But maturity transformation is only the critical variable when the only way to turn an investment into cash is for it to mature. The generality of assets in which funds invest are traded on markets and can, therefore, be turned into cash without waiting for them to mature. It is true that a closed-ended fund which invests in, let's say, an untraded bond is engaged in maturity transformation if the maturity of the two sides of the balance sheet are not aligned. But notice that I cannot say that a daily dealing open-ended investment fund which invests in tradeable bonds with, let's say, a ten-year maturity, is engaged in maturity transformation from one day to ten years. On the contrary, because that ten-year bond can be traded on the market almost as quickly as the demand for redemption of units can be submitted, the transformation involved can be minimal. However, because the amount of time it takes to trade the bond can vary what we have to do is say that the extent of liquidity transformation that a fund engages in is a variable. We do not know how much liquidity transformation there is unless we know current trading conditions.

On top of that, of course, open-ended funds do not promise to give you your money back when you demand it or at any set time. Rather they promise to TRY to give you your money back. So if they fail to do so, they have not defaulted. That means our regulatory goal is not clear in that we are not just needed to defend the investor's right to his or her money back. Rather, our mandate is more nuanced.

But if liquidity is a variable and if our objective in regulating it is unclear, how do we regulate liquidity in investment funds? You can immediately see that hard-wired rules are a problem. If I make assumptions as to what instruments are liquid in the market, the only thing I can be sure of is that I will be wrong in time.

An alternative might be to define liquidity and require market participants to ensure that their assets are liquid. But I have no definition of liquidity that I can require market participants to apply, as I have just discussed. So how do I write or supervise compliance with such a rule?

Furthermore, the regulation cannot even assume that it is always correct to give investors their money back on demand. On the contrary, for the regulation of the funds sector to dampen the amplification of financial shocks, sometimes asset managers need to refuse to give investors back their money. This is bizarre when considered by reference to banking regulation. In that case we are always trying to ensure that the bank does not default towards its depositors….but apparently not in the case of funds?

So how then should we regulate liquidity?

<u>FSB Asset Management Structural Vulnerabilities Liquidity Policy Proposals</u>

With the support of IOSCO, the FSB has tried to identify how to improve the liquidity management of funds in ways which continue to protect investors but do so in ways which also shore up the system.

There are a number of recommendations with regards to liquidity the FSB outline in their structural vulnerabilities consultation document. There are 9 recommendations across 3 areas: i) lack of information and transparency; ii) gaps in liquidity management both at the design phase and on an ongoing basis; iii) adequacy of liquidity risk management tools to deal with exceptional circumstances. Recommendation 3 [7] is considered the key recommendation, which focuses on reducing the probability of

[7] "In order to reduce the likelihood of material liquidity mismatches arising from an open-ended fund's structure, authorities should have requirements or guidance stating that funds' assets and investment strategies should be consistent with the terms and conditions governing fund unit redemptions both at fund inception and on an ongoing basis (for new and existing funds), taking into account the expected liquidity of the assets and investor behaviour during normal and stressed market conditions. In this regard, IOSCO should review its existing guidance and, as appropriate, enhance it."

unmanageable liquidity mismatches arising from an open-ended fund's structure.

I will not take you through the detail. The main themes of the recommendations are on the slide. The heart of what the FSB is suggesting is that asset managers need to understand the liquidity needs of their investors and need to be ready, where it is in the interests of their investors as a whole, to control and limit redemptions. What the FSB has recognised is that, if the asset managers manage liquidity to a high standard, investors will be better off, but so will the system. Funds supposedly invested for the long-term but actually not being well prepared to provide liquidity without emergency actions in periods of market stress are not in the interests of investors. But neither are funds which trigger emergency sell-offs of assets to meet redemption demand in periods of stress. In simple terms, without defining market liquidity and without defining well-aligned funding structures, regulation can require asset managers to have designed their funds, to have planned their liquidity management and to have contingency plans to do what is in the interests of their investors through the financial cycle. If they do so, they will contribute significantly to limiting the amplification of financial shocks.

Following the public consultation, the FSB received approximately 50 responses, with the majority of responses coming from asset managers/investment funds in the Americas and Europe. Some of the key points from the consultative responses were:

- Respondents agreed with the focus on asset management activities rather than entities.
- Many respondents suggested the FSB and IOSCO take into account existing regulatory requirements and initiatives in completing the policy recommendations.
- While many respondents supported the proposed policy recommendations, some respondents expressed a preference for recommendations to be justified by historical analysis or empirical evidence rather than an economic analysis of potential risks that might manifest in the future.
- Some asked that recommendations not be overly prescriptive and expressed concerns about unintended consequences that could result from a "one-size-fits-all" approach.
- Some felt that recommendations should be proportionate to the size or risks of funds and/or asset managers.

The FSB are in the process of reviewing these comments, with a final document expected to be published by the end of the year. IOSCO will then be tasked with operationalising many of these proposals, in which I am chairing the sub-group tasked with operationalising the liquidity proposals.

Conclusion

So let me summarise. The crisis justifies close attention to two features of the asset management industry – liquidity and leverage. I have focused on liquidity during this speech. Liquidity is not easy to define in law or regulation. There is a legitimate concern that overly rigorous rules will create moral hazard and likely be counter-productive because liquidity is such a mercurial phenomenon. Nevertheless, by focusing on processes and by focusing on the goal of better aligning the interests of asset managers and their investors, the FSB policy proposals have done something which some economists consider contradictory – they have aligned the macro and the micro perspectives. This is to my mind a highly desirable outcome in an extremely challenging area of regulation.

Thank You.