Jon Cunliffe: Market liquidity and market-based financing

Speech by Sir Jon Cunliffe, Deputy Governor for Financial Stability of the Bank of England, at the British Bankers Association International Banking Conference, London, 22 October 2015.

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According to Oscar Wilde, there is only one thing in life worse than being talked about and that is not being talked about.

Wilde of course was not a banker. And although he retained his notoriety until well after his tragic and unjust end, even he probably never experienced the sustained and hostile public attention which bankers and the banking system worldwide have experienced over the past eight years.

So it will probably come as a relief to those of you here at the BBA International Banking Conference that I do not today intend to talk – in the main – about banks and bankers. Rather, I want to talk about market not bank-based finance and about market liquidity. I hope you will not find that worse than being talked about.

I will, however, make some important points at the outset about the reform of the regulation of the banking system. That is not just for any of you that would otherwise have withdrawal symptoms. It is to illustrate how far we are into the implementation phase of that reform programme, what remains to be done and, from the vantage point of a macroprudential regulator, how I view the future now that we are eight years on from the financial crisis and memories are beginning to fade.

On the first point, the implementation phase, it is illuminating in itself that from a macroprudential point of view I have also chosen to talk about something else today. That is not to say that there is nothing that remains to be done. There is a vast amount of complex and difficult implementation that still needs to happen. My colleague, Andrew Bailey, will set out in a speech tonight the progress we've made so far on prudential regulation and three big areas of implementation left to complete: the Senior Managers Regimes, structural reform and competition. But as I have said before, the contours of the reformed regulatory framework for banks are clear – the Basel 3 capital and liquidity regime for banks, the reforms that address too big to fail, especially the regime for loss absorbing capacity in resolution that needs to be held by global systemic banks – which goes by the unlovely acronyms of TLAC and MREL and which is on course to be agreed by the G20 in Antalya this November. And the changes to derivatives and securities financing designed to increase transparency and reduce risk.

There are, it is true, some material components of the reforms still under construction. We have an internationally agreed definition of the leverage ratio and we are implementing a leverage related capital requirement in the UK. But an international standard on such a requirement has not yet been agreed ahead of planned implementation in 2018.

And there is still major construction work underway on the denominator of the risk based capital adequacy requirement – the Basel Committee work to update the standardised approach for those firms that do not use internal models and to review the role of internal models in the framework. This work is important; in order to have confidence in the risk based capital regime, one has to have confidence in the denominator of the ratio as well as in the numerator.

My expectation, however, is that this will not lead to a major change in the aggregate level of global bank capital requirements, as some have claimed. If we are to trust the use of internal models in the approach we need to be sure that models are only used where there is adequate data to support them. And although we will I hope have an internationally-agreed leverage, non-risk based, requirement alongside the risk-based one, we will need more constraints on modelling assumptions and inputs in order to reduce variability of capital outputs between banks to an acceptable degree. I imagine this work will lead to a redistribution of capital within

the system and to changes in requirements for some institutions. But it should be seen as the working through of Basel 3 not as a new regime – a Basel 4.

Before I test whether Wilde was right and turn my focus to market-based finance, I should observe that this is not because I think either that systemic risks from banking have disappeared or that the new regulatory framework is perfect in every respect. The UK banking system is much more resilient now. For example, major UK banks now have an average CET1 capital ratio of 12%, almost twice their average capital ratio in 2008. Their liquid asset buffers have trebled in size since 2008 and their short-term wholesale funding ratio has halved since 2006 (from 24% to 13%). Last year's stress test showed that major UK banks could withstand a very sharp increase in unemployment, an unprecedented fall in house prices and with the Bank of England raising interest rates in the teeth of a recession. This year's test, I should observe, will see if it can withstand the opposite – a prolonged period of deflation triggered by an economic collapse overseas.

But while we are advanced in the implementation in the UK of a much stronger regulatory framework, and while UK banks already have much greater resilience, we have not abolished the credit cycle. We have I hope, turned off or dampened some of the more damaging amplifying mechanisms in the financial system that drive up risks and create booms and drive the economy down in the resulting bust. We can test how the system is likely to behave under stress. But we have until recently been in a very muted phase of the credit cycle. We are now, I hope, entering a more normal phase of the cycle, and approaching the point at which, from a macroprudential stand point, the Financial Policy Committee (FPC) will have to spend less of its time on the design of the regulatory framework and a lot more of its time on whether and when it needs to address the build-up of cyclical risk in the financial system.

And, as we learn how the financial system behaves in first the more normal and then the more challenging parts of the credit cycle, we will also learn more about how the new regulatory framework functions as a whole. There will, as I and others have said, be areas where we find the reforms do not work as intended and that it is necessary to adjust them. It would be surprising if this were not the case. In response to the biggest global financial crisis since the 1930s the international regulatory community has agreed and is carrying through the biggest, most complex and most comprehensive programme ever of interlocking regulatory reform. There will be elements that need to be adjusted – indeed this process has already started with the reforms to securitisation now underway in the EU motivated in no small part by the joint work of the Bank of England and the European Central Bank.

I should however be clear about one extremely important caveat in this process of adjustment and about something that seems to be often misunderstood. The risk appetite of the Bank of England – both as macro and as micro prudential regulator of the UK banking system – has not changed. The financial crisis led to a reassessment of our tolerance to risks that could jeopardise financial stability. It brought home that systemic financial crises were not something that only happened in history books and in emerging economies. We learned they were both possible and indeed even more explosive and damaging in modern, advanced economies and in their interdependent financial systems. And we learned the costs to the real economy when financial stability is lost. GDP per person in the UK is barely above its pre-crisis level. This reassessment both of the probability and of the cost of damage to financial stability is the foundation of this unprecedented reform programme.

As we learn how the new regulatory framework operates through the credit cycle we may, nay will, adjust – in any direction – reforms that are not operating as intended. We will do this in consultation with the industry and other stakeholders – the Open Forum on financial markets which the Bank of England will hold on 11 November is an example of this process. But, as the memories of the crisis fade, as they inevitably will, we will not reset our underlying tolerance of risks to financial stability. There is no "back to future".

Finally, before I leave the banking system, I want to highlight one piece of good news in recent market developments. We have had a number of incidents of extreme market volatility over

the past year or so – the removal of the Swiss Franc peg; a 30 basis point fall within 90 minutes in UST yields on 15 October 2014; the so called 'Bund tantrum' earlier in the year; and the seizure of US equity markets this summer, against the backdrop of news about China. These have raised a number of issues about changes to market structure and market liquidity. But the one dog that has not barked, however, is the transmission of the shock from these market events to the core banking system that support markets. For example, the reaction in UK banks' CDS premia to these disruptions has been small and not out of line with broader market movements.

I would put this down in no small part to the reforms of bank capital and liquidity that have made banks more resilient. So while money was lost in these market episodes and some people had a very bad day at the office, they did not cause wider shocks in the banking system.

And that leads me in to the other subject I want to talk about today – the changes we are seeing in the liquidity of financial markets, which some indeed ascribe to reforms of the capital and liquidity standards in the banking system. I want also to touch upon some of the macroprudential challenges posed by the increase in market based finance. A forthcoming Bank staff paper will explore these issues in more detail.

Market liquidity

Before I talk about liquidity I need first to make some distinctions. Liquidity is a very broad term and people mean very different things by it. There are three concepts of liquidity. Monetary liquidity; funding liquidity; and market or asset liquidity. Monetary liquidity captures the looseness of monetary conditions – it is underpinned by the stance of the monetary policy authority. Funding liquidity is the ease with which banks and other non bank financial intermediaries can raise funding. And market liquidity refers to the ease with which one asset can be traded for another. All three concepts are tightly related. I am going to focus largely on market liquidity today.

Market liquidity is in itself a very good thing. It allows investors to transact at a reasonable size at or close to prices prevailing in the market prior to the trade. It contributes to markets that are "effective" – by which I mean both fair and resilient. Liquid markets play an important role in the financing of investment in the real economy. Bonds account for virtually all credit growth since the crisis in the US, UK and euro area. So if market liquidity is a very good thing, can you ever have too much of a good thing? Surely any reduction in market liquidity is unwelcome.

This question is very pertinent today as it is clear that market liquidity in the system is more fragile, not just in particular market sectors, but also across the system as a whole. Dealers are holding less inventory. For example, in US fixed income corporate securities, market maker inventories are half the size they were immediately before the crisis and back at levels seen in the early 2000s even though corporate bond markets have doubled in size since then. How much should we worry about that? If liquidity is always a good thing, how far can we and should we seek to restore liquidity to levels seen before the crisis? This is a question that is increasingly asked of prudential regulators.

I think the issue is more complex, however. Nothing in life is free and that is most certainly true in financial markets. Liquidity comes at a price. And that price is not at all the same for all financial assets. It should reflect the underlying liquidity characteristics of the asset itself and how it is traded.

Financial assets cannot escape entirely their underlying risk characteristics. Financial intermediation and financial engineering can reduce the costs of those risks by enabling them to be held by those who can best bear them – and I will return to that. But when pricing the liquidity risk of an asset its underlying characteristics matter. And, the more its liquidity depends on intermediaries being able and willing put their capital at risk, the higher the price should be.

Indeed, it is worth observing in passing, one of the puzzles in recent years has been the degree to which market participants have expressed their concerns about the fragile liquidity in

markets and the higher risk while at the same time charging less to hold those assets. Though they have increased somewhat of late, liquidity premia are still well below historic averages suggesting that liquidity risk is being under-priced and prices do not reflect the underlying characteristics of the assets.

Assets that attract a more diverse set of participants are likely to be traded more frequently. This, in turn, should raise the likelihood of finding an instant match at any point in time, meaning there is limited need for intermediaries to warehouse risk. If trading is sufficiently frequent, this should also minimise the need to transact in larger trade sizes.

In this respect, assets with standard terms and structures increase price transparency and the ease of price discovery, thereby attracting a larger pool of buyers and sellers. Government bonds, equities, foreign exchange and futures are good examples.

Similarly assets that are designated benchmark instruments and those included in indices tend to attract a larger pool of buyers and sellers. And assets that can be posted as collateral against securities financing and derivatives transactions experience greater demand.

On the other hand, while some characteristics make assets more liquid, some make them more illiquid. Assets that tend to be traded primarily by "buy-and-hold" investors may require greater warehousing of risk to facilitate the matching of trades at or close to prevailing market prices. By way of illustration, there is a sharp contrast between the frequency of trading in equities and corporate bonds. For example, McKinsey estimates that NYSE and NASDAQ-listed equities trade around 3800 times per day, compared to around 85 times per day and 65 times per day for the most liquid US investment-grade and high-yield corporate bonds respectively.

Assets exposed to tail risks tend to exhibit larger price falls and become less liquid in times of stress. Examples of such assets include high yield/EME bonds, financial debt and OTC derivatives.

Complex and/or opaque assets are less well understood and the risks can be more difficult to manage, so reducing the pool of potential buyers.

Finally, assets with relatively news-insensitive cash flows like investment-grade corporate bonds may be less attractive to more active investors seeking to profit from information, but more attractive to buy-and-hold investors seeking predictable long-dated cash flows.

And the related issue of how assets are traded matters. The costs of liquidity on order driven electronic platforms is much lower than in markets that depend on voice quotes from market makers.

Against that backdrop, I'd like to make two observations.

First, funding and monetary liquidity can exacerbate the illusion of market liquidity. The exceptionally accommodative monetary policy seen internationally, which has intentionally increased the amount of cash available for the purchase of risky assets, may have masked the underlying liquidity risk characteristics in a number of markets, including advanced economy high-yield and emerging market economy bonds. This is almost certainly one factor behind the apparent disconnect between market participants' concerns about the fragility of liquidity and the current low level of liquidity premia.

Second, financial intermediaries and financial engineering can make a very important contribution to liquidity – but they cannot turn lead into gold. The underlying risk characteristics of an asset cannot be changed. They can be separated out, combined with other risks, repackaged. And that is important. Because although the liquidity risks generated by the underlying characteristics of an asset cannot be changed, they can be structured to enable the risk to be held by those most able to bear it. This doesn't change the underlying risks but it does change the impact if they crystallise.

However, if the effect of financial intermediation and financial engineering to increase liquidity is not to distribute liquidity risk to those most willing and able to bear it but rather to obscure it, then it contributes only to the illusion of liquidity that can evaporate very quickly and painfully.

Market making, securitisation and exchange traded funds (ETFs) illustrate the balance to be struck.

1. Securitisation technology allows securities to be much more easily tradable than the assets underlying them. But as we know, in the crisis, a sizeable proportion of these assets turned out to be complex, opaque and exposed to tail risk – so under stress, these markets broke down catastrophically and have yet to fully recover. This has prompted the regulatory authorities to develop new criteria around securitisation that, among other things, may bolster their liquidity in the future.

2. ETFs are another form of financial engineering that have grown rapidly over the past decade or so – from a small base in the early 2000s to more than US$2 trillion today. Equity funds still comprise the majority of ETFs. But the share of fixed income ETFs, in which the underlying assets are much less liquid, has grown substantially – in Europe, from around 5% in the early 2000s to around 25% today. ETFs are exchange traded, they offer investors liquidity. Prices of ETFs are usually kept in line with the assets they track by market participants being willing and able to transact in the shares they issue and the underlying securities. But in times of stress not only can their liquidity characteristics revert back to that of their underlying assets, they can also trade at a discount to the value of these assets. We saw some of this effect in the market turmoil last summer. We need to understand better why these effects happened and the circumstances in which they could reoccur.

3. And market making itself is another example. Market making means the temporary transfer of risk to intermediaries to smooth out imbalances of supply and demand. But market makers have to be able to bear the risks. Pre-crisis, market makers funded their inventory with short-term borrowing and very small amounts of loss absorbing capital. As a result, when exposed to a severe stress, market makers simply disappeared from the scene.

So liquidity is a good thing. It does play a key role in the functioning of effective markets. And financial market intermediation and engineering can help ensure the price is as low as possible, consistent ultimately with an asset's underlying characteristics. But taken too far, these can create the illusion of liquidity rather than liquidity itself and expose the system to risk when the illusion disappears. We should not in particular refer to metrics of the pre-crisis period to see what some "good" level of liquidity looks like. Some markets may indeed not function as smoothly or cheaply as they did in the run up to this crisis. But that may well be the counterpart of less poorly priced liquidity risk in the system.

Promoting true liquidity

That is not to say that nothing can be done in this area.

First, we should ensure that regulatory changes are coherent. Regulators have dealt with the under-pricing of liquidity risk in part by remedying inadequate capital requirements.

But, as I said earlier, it is quite conceivable that given the range and speed of regulatory reforms, there are parts of the framework that might not work in the way we intended. As I mentioned, the Open Forum on 11 November will be another opportunity to assess this issue. The aim is to bring stakeholders together from across financial markets to discuss how we build markets for the public good.

Second, changes in market structure and the ability of technology to connect buyers and sellers may increase liquidity. There are a number of suggestions that with the growth of assets under management asset managers and institutional investors may in future need to deal more

directly with each other and might be better placed to take on some of their risks. Technological change would certainly make this increasingly feasible. It remains for me, however, an open question whether such liquidity would be resilient in times of stress. Automated markets may have driven down costs, but are possibly less resilient. Dealer-intermediated markets, on the other hand, may have become more costly, but possibly more resilient.

In a forthcoming speech, my colleague Minouche Shafik will discuss the changes in market structure that we have seen since the financial crisis and what they mean for market functioning.

And, of course, the higher costs of assets with poor liquidity characteristics may have changed the economics for issuers of liabilities such as corporate treasurers which may encourage more standardisation of terms to improve liquidity and reduce costs.

It is, however, important to look not only at how to improve the resilience of markets to imbalances between sellers and buyers at times of stress. We need also to look at whether and how the features of financial markets can amplify these imbalances by creating selling pressure. Correlated trading is one example. Such trades arise when the demand for an asset ceases to fall materially as prices rise, and vice versa. They turn the law of supply and demand on its head. This may be caused by the prevalence of algorithmic momentum traders in a market or the use of industry standards and benchmarks that influence asset allocation and peer assessment.

Consensus trades are another example. They occur when investors take positions on the basis of prevailing market norms as opposed to conviction in their view of the future path of economic fundamentals. Consequently, these positions may be particularly susceptible and adversely affected by comparatively little bad news.

Investment funds and asset managers

Finally, I want to look briefly at the potential role of investment funds and asset managers in creating selling pressure in markets at times of stress.

To state the obvious, investment funds and asset managers are not banks. They do not offer the promise that you will get your money back. And they are typically much less leveraged. But increasingly they do offer a liquidity promise – that the investors can redeem the value of their investment at very short notice. In this way they can create liquidity mismatches when investors in funds are offered a greater degree of access to investment than is consistent with the ease with which the assets in which they are invested can be sold without a big impact on price.

A particular concern occupying both the FPC and authorities internationally is that simultaneous redemptions from open-ended funds offering short-term redemptions could test the resilience of market liquidity, with wider adverse effects through mark-to-market pricing and collateral calls.

This risk has increased due to the growing importance of open ended mutual funds. As described in the FPC's July 2015 Financial Stability Report, global assets under management have grown significantly over the past decade, to around US$70 trillion. Within that, the share of funds typically offering investors near-term redemptions such as open ended mutual funds has increased, from just below 40% a decade ago to approaching half. This could give rise to particular risks where a liquidity promise offered by a fund gets too out of line with the liquidity characteristics of the assets the fund holds.

Corporate bond funds could be relevant here. These funds have more than doubled in size over the last 10 years, from US$2.7 trillion to almost US$7 trillion AUM. This growth has been faster than growth in the global stock of bonds outstanding over a similar period, which grew from roughly US$66 trillion to $100 trillion over 2005 – 2012.

While funds typically have a number of tools available to them to manage liquidity risk, some investors may not fully appreciate that their ability to redeem, at or close to, current market

prices could be compromised by large simultaneous withdrawals by other investors. In a recent survey, the Bank and Financial Conduct Authority found that, in aggregate funds assumed that, over a one-day horizon, they could liquidate corporate bonds of a value equivalent to 2.9 times average daily US corporate bond trading volume.

A great deal of thought internationally and in the UK is now being given to these issues, and to understanding whether or how systemic risk could arise from these channels. To the extent that it can, there will need to be much more work on policy options. A more system wide approach to stress testing could be one promising avenue for development. This would be in line with the Financial Stability Board's advice last month encouraging the appropriate use of stress testing by funds to assess their ability individually and collectively to meet redemptions under difficult market liquidity conditions. A second avenue worth exploring is better data on funds, including the development of more comprehensive metrics that capture the degree of any mismatch of the liquidity of underlying assets and the liquidity offering.

Conclusion

We are well advanced in the programme of regulatory reforms to manage systemic risk in the banking system. We are only now beginning to think about macroprudential risks from market-based financing. This should not be surprising. With the exception of some types of market based financing activity, such as money market mutual funds, which have been addressed, asset managers and investment funds were not a source of instability in the financial crisis.

But the past is not always a guide to the future. It is important to try to understand risks from market based financing and how they could materialise in a world in which market liquidity might be lower than before the crisis.

And to return to where I started, it is important that we complete the implementation of the programme of reform of the banking system. Oscar Wilde also once said 'When bankers get together for dinner, they discuss Art. When artists get together for dinner, they discuss Money'. I suspect over the last few years the dinner topic for members of the banking industry has been much more about regulation and the future of your industry and much less about art. I think it will be a long time before art is the only topic of conversation over dinner. There is a great amount of implementation work to be done. Risks have not gone away and we will need to consider them carefully as the financial cycle moves through a more normal phase. But I hope that increasingly there will be other things as well as regulation to talk about.