OMFIF
OFFICIAL MONETARY
AND FINANCIAL
INSTITUTIONS FORUM

Mastering flows
Strengthening markets

How sovereign institutions can enhance global liquidity

In association with

BNY MELLON

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About OMFIF

The Official Monetary and Financial Institutions Forum is an independent platform for dialogue and research. It serves as a non-lobbying network for worldwide public-private sector interaction in finance and economics. Members are private and public sector institutions globally. The aim is to promote exchanges of information and best practice in an atmosphere of mutual trust. OMFIF focuses on global policy and investment themes – particularly in asset management, capital markets and financial supervision/regulation – relating to central banks, sovereign funds, pension funds, regulators and treasuries. Visit www.omfif.org, or follow us on Twitter @OMFIF.

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EXECUTIVE SUMMARY

Action for sovereigns

Global liquidity – a vital ingredient in the factors driving financial markets and growth worldwide – has been under severe strain in the eight years since the financial crisis, underlined by periodic market disruptions and additional uncertainty. Government and central bank responses to the crisis have contributed to a mismatch between supply and demand of safe and liquid assets.

The composition of market participants has changed, including the growth of ‘shadow banking’, adding to complexity over counterparty risks and trade strategies. All this provides challenges, but also great opportunities, for Global Public Investors, these are sovereign institutions including central banks, sovereign funds and pension funds, capable of acting together to help mitigate conditions inimical to sustained economic expansion.

Post-crisis regulations have raised the cost of balance sheet-intensive activities for banks and dealers, leading to greater risk aversion and disintermediation. Highly accomodative monetary policy, low interest rates, and asset purchase programmes by central banks have contributed to changes in bond issuance practices, trade strategies and market participants, reducing resilience to future liquidity strains. Low yields on high-quality assets have pushed investors into more risky markets, with a risk of illiquidity when monetary conditions or market sentiment change.

Sovereign institutions are aware of the impact they have on market liquidity, from the collateral eligibility criteria they employ and the size and growth of their balance sheets, to their asset allocation strategies. As underlined by the survey carried out for this report, sovereigns show a growing willingness to play a role in mitigating these challenges, especially via increased capital markets activities such as securities lending and direct funding of less-liquid asset classes such as private debt and equity, as well as infrastructure.

Among other palliatives, sovereign investors suggest widening collateral eligibility for repo transactions, increasing sovereign institutions’ participation in wholesale funding markets, ‘renting’ their balance sheets and directly funding some assets and projects to offset some of the issues of bank disintermediation.

Obstacles that need to be overcome include regulations on banks, dealers and hedge funds, a lack of coordination between regulators and sovereigns, and a lack of coordination among sovereigns themselves. Some sovereigns need to overcome internal rules that prevent them from pursuing a more active role in securities lending or repo markets.

Sovereigns aiming to increase their capital markets roles need to step up their engagement with custody banks, central clearing counterparties, tri-party repo providers and other key market participants. This includes action to overcome challenges facing sovereigns in the fields of counterparty risk, credit risk, collateral risk and cash collateral reinvestment.

The potential benefits are significant: not just an increase in market liquidity and resilience to destabilising shocks, but also the rewards of higher yields to offset the disbenefits of low or negative interest rates in high-quality liquid assets.

OMFIF survey highlights

An OMFIF survey in April-July 2016 of two dozen sovereign institutions with assets under management of $4.74tn produced the following results:

■ 95% ranked liquidity as 'important' to 'very important' for their fund, while nearly 65% believed that liquidity conditions will tighten in the next 12-24 months.

■ One of the primary reasons given for liquidity concerns was the impact of regulations, followed by central bank policies.

■ 75% believe that sovereign institutions have a role to play in increasing liquidity.

■ 75% of respondents are interested in increasing their securities lending. Most institutions were willing to use between 10-15% of their balance sheet for these activities, and some were considering as much as 60%.

■ 70% of respondents expected to achieve higher yields from this expanded capital markets role, with an additional 5 to 8 basis point premium.

■ The greatest obstacles to this were based on counterparty risk and internal fund governance rules, followed by legal obstacles, regulatory barriers and 'other' considerations, including a limited secondary market in some assets and low trader risk appetite or inventory.

■ During periods of market stress investors typically pursue a 'flight to quality', with upsets in bond or equity markets leading to a shift away from those assets, exacerbating liquidity shortages.

■ Sovereign investors highlighted both institutional level and systemic changes as key to solving liquidity issues. These relate to fund management practices and asset-liability matching on the one hand, and market developments and regulations on the other.

■ Some suggested that the regulations concerning bank balance sheets and capital costs which have driven much of the reduction in bank intermediation should be repealed.

■ Others argued regulations were manageable so long as they were transparent and predictable. This would allow sovereign funds and other financial market participants to adjust their strategies and operations, including reforming their own internal restraints to take advantage of new opportunities.

■ While some sovereign institutions are addressing liquidity risks by investing in only the most liquid assets, 65% of respondents said that the pursuit of higher yields has become more important to their fund in the current low interest rate environment, making them keen to diversify. Equity, fixed income and infrastructure are the most popular choices.

Forewords

Challenges to global liquidity

John Plender, OMFIF

It is a paradox: the world is awash with excess savings, yet global markets are suffering from a shortage of liquidity. And a new OMFIF survey of sovereign investors undertaken for this report finds that a majority expect liquidity conditions to tighten further in the next 12 to 24 months.

This is a sobering judgement. Liquidity may not be fundamental to all the activities of sovereign funds – those that invest to balance inter-generational requirements, for example, seek to profit from illiquidity. Yet for the more conventional tasks of reserve managers, such as defending the currency against speculative attack, liquidity is vital. The same is clearly true of sovereign funds that are required to make good government budget shortfalls resulting from declining energy and commodity prices.

In a first report with BNY Mellon, 'Crossing the Collateral Rubicon', published in September 2015, OMFIF studied the effect of regulatory, institutional and policy changes after the 2008-09 financial crisis on the supply of and demand for high-quality collateral.

This second report in the OMFIF-BNY Mellon series examines the factors behind the growing pressure on global liquidity – as seen, for example, in the fall in trade volumes and sizes in sovereign bond markets and increased volatility in even the most liquid market of US Treasuries. Encouragingly, the report also details sovereign investors' heightened sensitivity to the general drawbacks of liquidity shortages and a growing willingness to help address them.

As the OMFIF survey underlines, much of the decline in liquidity is due to the unintended consequences of central bank policies and of re-regulation since the crisis. One of the goals of quantitative easing was to pump liquidity into markets. Yet in practice the outcome of unconventional central bank measures in the US, Europe and Japan has been to increase the monetary base without prompting a significant expansion of broad money. At the same time central banks' bond buying programmes have contributed to a global shortage of safe assets just when the demand for such assets has become voracious.

The increase in post-crisis financial regulations, especially the Basel III rules on capital adequacy, has caused banks to shrink both their market making activity and proprietary trading. The structure of demand for financial assets has also changed due to the growth of non-bank financial institutions. The number of funds operating in global markets has become smaller and more concentrated among institutions that are increasingly price-sensitive, such as high frequency traders and collective investment vehicles that promise instant liquidity to their investors. This implies that markets will react in a more extreme fashion than would be the case in a more balanced market place.

Against that background a majority of respondents to the OMFIF survey are expecting to achieve higher yields by diversifying portfolios into riskier assets. They also see a role for sovereign investors in providing solutions to the liquidity drought. Some 75% wish to increase their securities lending. They also believe custodian banks could take a more active role in facilitating securities lending and managing repo and other financial market operations.

For the moment the liquidity drought is a manageable problem. It may cease to be so when central banks retreat from their unconventional measures. The extreme sensitivity of markets this year to any hint of tightening by the US Federal Reserve is one indication of the potential for stress. When confronted with changes of direction in monetary policy markets have always had a tendency to overshoot. A lack of liquidity can only exacerbate that phenomenon.

John Plender is Chairman of OMFIF.

Sovereigns can make a difference

Aerdt Houben, De Nederlandsche Bank

Strengthening the ability of the financial system to cope with shocks has been a prime policy objective in the aftermath of the global financial crisis. These efforts resulted in qualitative and quantitative capital increases as well as the introduction of the first global liquidity standards.

Indeed, the experience of 2007-08 underscored that capital and liquidity are complements, not substitutes. When liquidity evaporates, even well-capitalised banks can be forced into fire sales, with negative consequences for a bank's solvency and the value of other banks' assets.

The need for and benefits of these reforms are unquestionable. However, as with any other substantive reform, there are side effects. In particular, there are concerns that the tighter prudential requirements weaken bank profitability and reduce incentives to engage in market-making activities, adversely impacting market liquidity. At the same time, other financial institutions are seeking to gain market shares in traditional banking activities. In short, the financial system is undergoing fundamental changes. While the cause of reduced market liquidity is multifaceted, the potential consequences can be severe.

The current monetary policy environment creates additional challenges. The impact is two-sided. On the one hand, the central banks' quantitative easing has resulted in a financial sector flush with liquidity. On the other hand, central bank purchases of high quality bonds reduce the supply of the most liquid financial instruments.

In these circumstances, abundant central bank liquidity may be masking reduced market liquidity. In due course, when central banks exit their expansionary liquidity policies, financial institutions may find liquidity requirements more demanding to fulfill.

While the adjustments to higher requirements are necessary, sovereign investors can play a role in reducing possible side-effects. The support provided by central banks through their securities lending facilities may serve as an example. Specifically, to support bond and repo market liquidity, Eurosystem central banks (including De Nederlandsche Bank) make their holdings of purchased securities available for securities lending operations.

With recognition of the different constraints sovereign investors are subjected to, increasing our understanding of other channels through which they can provide relief is important. This report provides a timely contribution to the debate.

Aerdt Houben is Director of the Financial Markets Division at De Nederlandsche Bank and professor of Financial Policies, Institutions and Markets at the University of Amsterdam.

SWFs: Stewards of global market health

Hani Kablawi, BNY Mellon

Having entered a period of almost unparalleled change for the global financial community with political and economic uncertainty challenging investor confidence, it is perhaps counter-intuitive to suggest that opportunities abound for members of the sovereign community. It would be more radical still to suggest that the benefits to the broader financial system that would accrue are central to the continued well-being of that system.

Historically, sovereigns have invested in high quality liquid assets (HQLA) such as government bonds and main index equities as core holdings in their conservatively-managed portfolios. In the aftermath of the financial crises of the 1980s and 1990s, central banks in emerging markets began to accumulate substantial amounts of such assets, becoming one of the largest owners of HQLA, particularly G7 government bonds. As interest rates in economies of these issuers entered a steady downward trajectory, these assets proved to be good investments, and critical to the defense of their currencies and economies, helping to avoid capital flight when the next crisis arrived in 2007.

Quantitative easing across major economies has, however, seen the likes of the Federal Reserve, European Central Bank, Bank of Japan and Swiss National Bank collectively leap-frog their emerging market peers as the largest holders of their own and other developed markets' HQLA, including sovereign debt, equity indexes and blue chip corporate obligations. This hoarding of HQLA by central banks, eager to pump liquidity themselves, has had a significant 'crowding-out' effect, further straining primary and secondary market activity in these asset classes.

As demand has pushed down interest rates to ultra-low or even negative territory, sovereign investors have joined others in the hunt for yield, making higher allocations to riskier asset classes, carrying with them a heightened risk of illiquidity when monetary conditions or market sentiment inevitably change.

Broker dealers used to maintain large inventories of HQLA as the dominant intermediaries in fixed income and equities markets. However, recent major regulatory changes brought about principally by Basel III and Dodd-Frank have led these firms to cut back substantially on their trading books, transforming the market landscape, reducing liquidity and accessibility to HQLA. The impact of change on banks, and broker dealers in particular, such as tri-party repo reform has brought stability but at the expense of liquidity, and with increased costs for this traditional source of funding.

As the requirement to reduce the size of sell-side balance sheets has continued, opportunities have opened up to help bridge the mismatch between supply and demand of HQLA, as part of an integrated collateral management programme generating both liquidity in the marketplace, and incremental returns for asset owners.

The concerns raised by sovereigns surveyed for this report – counterparty risk, legal obstacles, regulatory barriers and limited secondary markets – will need to be addressed if they are to play an active role in easing these liquidity pressures. Their own internal governance rules may also need to evolve in order to realise the benefits of this new role at the centre of global financial markets.

Hani Kablawi is CEO of EMEA Investment Services at BNY Mellon.

The future of liquid funding markets

Brian Ruane, BNY Mellon

'Liquidity is the price you pay for stability' – the impact of regulations on capital and liquidity have dominated the financial landscape since the financial crisis, creating an ongoing shift towards a more collateralised world.

Efforts to increase transparency and collateral mobility, as well as the safety and soundness of the global financial markets, have materially increased the demand for high quality liquid assets (HQLA)—outpacing the demand for all other asset types. Collective action taken since the crisis, including the regulatory imperative to clear and collateralise over-the-counter swaps, the requirement to hold such assets to meet liquidity standards, and the increased amount of cash in the system due to economic stimulus, are creating ongoing concerns around the continued availability of liquid collateral. In short, HQLA is now viewed as the financial system's most important commodity.

Regulations stemming from Basel III, most notably the supplementary leverage ratio, the liquidity coverage ratio and the net stable funding ratio, are leading banks and broker dealers to continue to reduce their balance sheets, streamline operations, optimise posted collateral and allocate capital more selectively to individual business lines.

The requirement that banks hold higher and more liquid capital and rely less on short-term debt has raised funding costs. Regulation has also increased the cost of funding inventories through repo markets, thus market making has become less attractive to banks.

US tri-party repo infrastructure reform has global implications due to the global importance of the US Treasury market and Treasury holdings as risk-free assets. BNY Mellon explored this in greater depth in our recent paper 'The Future of Wholesale Funding Markets'[1].

At this juncture, the narrative around wholesale funding and collateral management will likely move from the pure macro impact of regulatory reform to more specific implementation strategies and the emergence of market and regulatory reform.

A complex array of priorities facing the industry highlights the importance of having a comprehensive roadmap to help guide a firm's collateral strategy and the new opportunity for sovereign institutions as natural long term holders of HQLA. An increased focus on a global view of collateral management and the introduction of cleared repo products in the US are expected to remain at the forefront of change, helping markets and clients alleviate pressures from risk, regulation, and operational burdens. The ability to mobilise collateral across legal entities and countries is becoming increasingly important to the global financial system. Collateral mobility will improve the liquidity in the funding markets by making larger quantities of high quality assets more readily available to be moved across global liquidity pools.

BNY Mellon believes that our position as the US's largest tri-party repo agent and holder of collateral gives us a unique insight into the evolving market and provision of robust global collateral management solutions. We are delighted to partner with OMFIF on this important research paper on liquidity and look forward to engaging with you on the issues it raises in the period ahead.

Brian Ruane is CEO of Broker-Dealer Services at BNY Mellon.

1 https://www.bnymellon.com/us/en/our-thinking/the-future-of-wholesale-funding-markets.jsp

Research approach

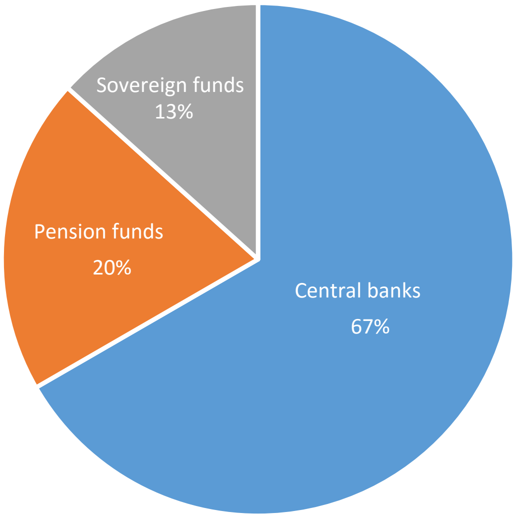
OMFIF research approach

Between April and July 2016 OMFIF conducted research on the role of global public investment institutions in financial markets. This consisted of a three-pronged approach involving:

- A survey sent to central banks, sovereign funds and public pension funds, with representation from every continent, on how developments in market liquidity have affected their activities, and what role sovereign funds can play in offsetting liquidity shortages and boosting financial market resilience.
- A series of wide-ranging conversations and meetings with official institutions on global market conditions.
- A series of in-depth interviews with selected sovereign institutions on detailed aspects of market liquidity and how they are approaching the decline in bank intermediation and dealer market-making.

Respondents to the liquidity survey

Distribution of respondents by institution type



Source: OMFIF liquidity survey, April-July 2016

The nature of liquidity

Liquidity, broadly defined, governs the ability of buyers and sellers of assets to transact on financial markets at the required time, in the required amount, with minimal price movement. This is a vital factor for the health and resilience of the global financial system. Important components are market liquidity (the presence of an efficient market for different assets, with ready buyers and sellers, low search costs and narrow bid-ask spreads), and funding liquidity (the ability to fund these market activities, either through the capital of one or several institutions involved in the transaction, or by raising money on financial markets).

Liquidity under strain

Global liquidity under strain

Over the last eight years trading volumes and trade sizes on fixed income markets have fallen, turnover is lower, and volatility has increased. Evidence of disruption in bond markets, in particular the 'taper tantrum' bond market sell-off in 2013, the US Treasury flash rally in October 2014, stresses in German bund markets in May 2015, and bid-ask spreads for some assets which remain above pre-crisis levels, highlight how liquidity is under pressure internationally.

Meanwhile, limits on redemptions imposed by a few fund managers towards the end of 2015 and again in June-July 2016 signal growing fears about the ability to liquidate assets without causing sharp movements in their price.

Developments since the financial crisis have reduced the resilience of global liquidity to future shocks. Regulatory developments have added costs and restricted the market making and liquidity-enhancing activities of banks. Government and central bank responses to the crisis have contributed to a mismatch between supply and demand of safe and liquid assets. The composition of market participants has also changed, presenting new challenges over counterparty risks and trade strategies.

There has been an increase in price volatility, spikes in credit default swap spreads, less frequent trades and lower turnover, a decline in secondary market size and a potential reduction in new bond issuance. If liquidity in financial markets and the ability of corporate and sovereign bond issuers to raise funds at affordable prices is reduced, second round effects could emerge which set off a series of bankruptcies and insolvencies. Resolving the issue of liquidity is therefore vital to improving the health of the financial system.

Asset valuations have remained volatile and subject to rapid price corrections, while credit ratings for sovereigns and corporates have also been under pressure, with many losing their AAA rating – the latest being the UK. Many securities have periodically become illiquid as risk appetite among investors wanes and financial firms face higher funding costs or lose access to market funding altogether. As seen after the financial crisis, when trust in financial markets evaporates, along with confidence in the quality of assets and the ready availability of funds on which liquidity depends, the reverberations can be deep and long lasting.

Flight to safety

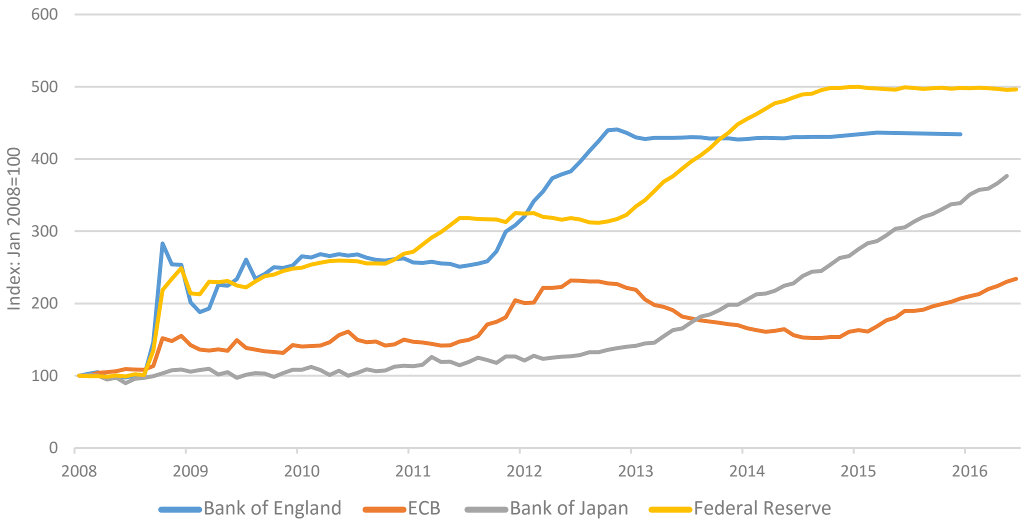
During the crisis bank financing dried up as interbank lending – particularly longer-term lending – declined, borrowing rates spiked and banks stopped extending credit lines to borrowers, rendering many unable to finance their assets. This led to sell-offs that significantly lowered the prices of assets as well as the value of loans able to be collateralised against them. Wholesale funding markets also shrank as the providers of funds – especially money market mutual funds, which had increased their presence in these markets in the run-up to the crisis – cut back on lending, accepted a much narrower class of collateral assets, or ran from collateral and increased their preference for cash instead.

This has made markets more vulnerable to liquidity shocks. As one example, interbank lending volumes in the US declined rapidly between 2008 and 2009 (from $500bn to around $150bn), and have continued a steady decline since then to just over $60bn in the first half of 2016.

Financial instability required government and central bank intervention to prevent a systemic collapse. Government and central bank responses to the financial crisis have left legacy problems that are inhibiting market liquidity. Different countries pursued different responses, but they generally involved some combination of a) providing financial institutions with extra liquidity, b) directly capitalising financial institutions which had suffered a write-down of their assets, c) purchasing the illiquid assets of financial institutions in order to overcome weaknesses in their balance sheets, d) directly intervening in financial markets that ceased to function, and e) using public funds to prevent the collapse of 'too big to fail' institutions. In the US all five responses were implemented. These measures contributed to the rapid expansion of central bank balance sheets following the crisis (see Chart 1).

Chart 1: Rapid expansion of central bank balance sheets

Assets of key central banks, 2008-16



Source: National central banks

Role and response of sovereign institutions

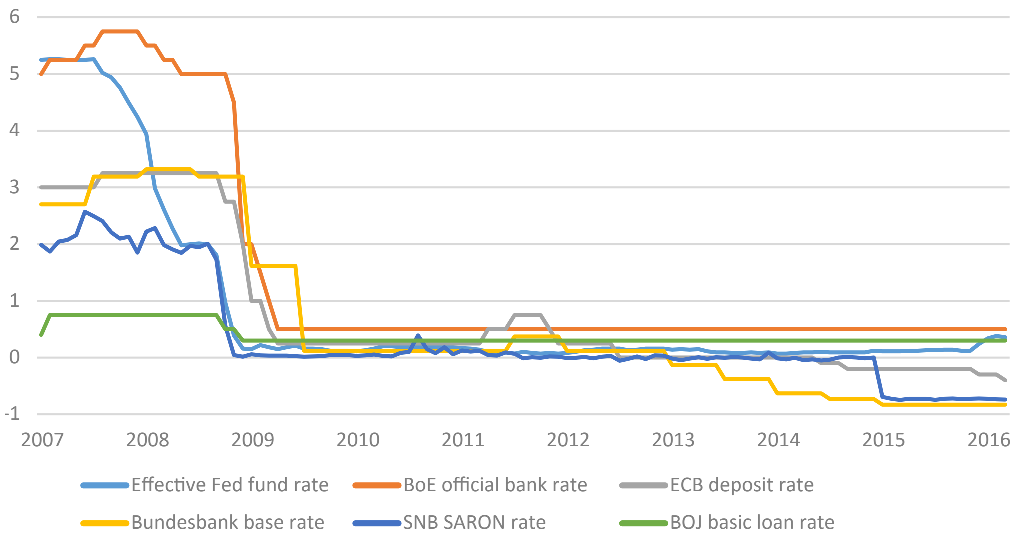
Collateral damage of sovereign intervention

While these interventions helped limit the spread of the damage after the crisis, they have had consequences for liquidity. By lowering interest rates (see Chart 2) central banks helped reduce borrowing costs, contributing to large growth in the size of fixed-income bond issuance, some of it by low-rated corporates.

There was an expansion of high-yield and 'junk' bond issuance over the last few years in both emerging and developed economies. Low interest rates and large purchases of government securities by sovereigns have reduced the yield on safe and liquid assets (see Chart 3), pushing investors towards riskier, higher-yielding and less-liquid assets, contributing to the size of primary market demand, despite the lack of secondary market depth.

Chart 2: Interest rates fall to historic lows

Key central banks, %, 2007-16

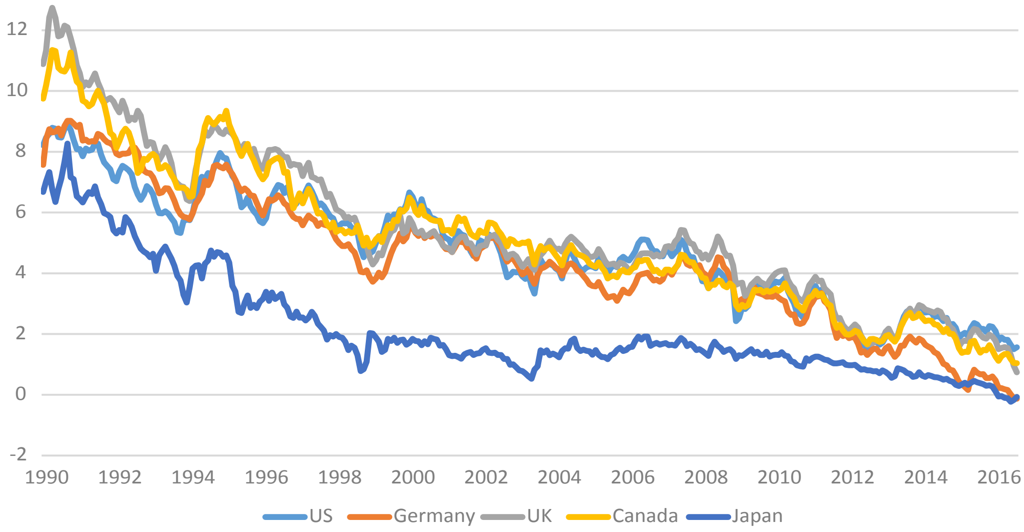


Source: National central banks

This response by sovereign institutions to the post-crisis increase in risk and contraction of liquidity has contributed to apparent stability in the amount of market liquidity, with low borrowing costs and low growth contributing to a bull market in equities and large issuance and strong demand for higher-yielding bonds. These policies have, however, lowered liquidity resilience (the ability to rapidly execute sizable securities transactions at low cost and with a limited price impact), as the fast growth in bond markets has resulted in bond issues of varying sizes, complexity and maturity. Appetite for these bonds and equities, meanwhile, has become increasingly dependent on loose monetary policy and market sentiment.

Chart 3: Steady fall in safe asset yields

10-year government bond yields, %, 1990-2016



Source: Thomson Reuters Datastream

Primary market growth

The large growth in the primary market has led to concerns about whether the secondary market could cope with a large sell-off, due to the effects of post-crisis regulations on reducing banks' liquidity provision. As negative interest rates in Japan and some European countries have harmed bank capital and reduced their lending activities, they have become increasingly unable and unwilling to stabilise markets via market-making.

Table 1: Brexit downgrades UK rating

Credit ratings of selected countries, S&P, Moody's, Fitch, 30 August 2016

	S&P		Moody's		Fitch	
	2006	**2016**	**2006**	**2016**	**2006**	**2016**
Euro Area						
Belgium	AA+	AA	Aa1	Aa3	AA+	AA
Austria	AAA	AA+	Aaa	Aa1	AAA	AA+
France	AAA	AA	Aaa	Aa2	AAA	AA
Germany	AAA	AAA	Aaa	Aaa	AAA	AAA
Luxembourg	AAA	AAA	Aaa	Aaa	AAA	AAA
Netherlands	AAA	AAA	Aaa	Aaa	AAA	AAA
Finland	AAA	AA+	Aaa	Aa1	AAA	AA+
Other EU						
Denmark	AAA	AAA	Aaa	Aaa	AAA	AAA
Sweden	AAA	AAA	Aaa	Aaa	AAA	AAA
United Kingdom	AAA	AA	Aaa	Aa1	AAA	AA
Other Europe						
Norway	AAA	AAA	Aaa	Aaa	AAA	AAA
Switzerland	AAA	AAA	Aaa	Aaa	AAA	AAA
Non-Europe						
Australia	AAA	AAA	Aaa	Aaa	AA+	AAA
Canada	AAA	AAA	Aaa	Aaa	AAA	AAA
Hong Kong	AAA	AAA	Aa3	Aa1	AA -	AA+
Japan	AA-	A+	Aaa	A1	AA	A
Kuwait	AA	AA	Aa3	Aa2	AA -	AA
New Zealand	AA	AA	Aaa	Aaa	AA+	AA
Singapore	AAA	AAA	Aaa	Aaa	AAA	AAA
United Arab Emirates	AA	AA	Aa3	Aa2	AA	AA
United States	AAA	AA+	Aaa	Aaa	AAA	AAA

Source: S&P, Moody's, Fitch

Regulatory development

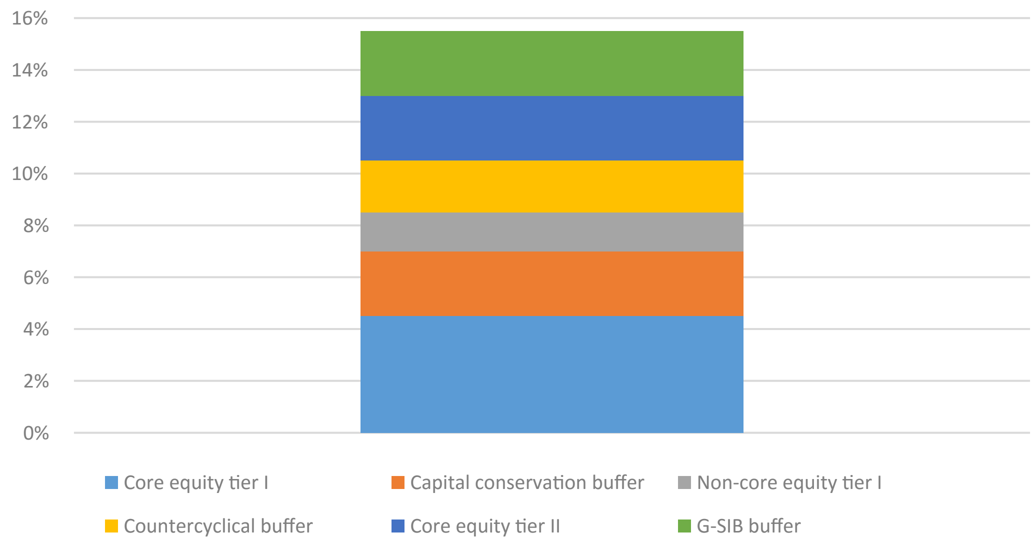
Since the financial crisis, new rules have been implemented which aim to increase the ability of financial institutions to deal with future market strains. Among these are the Dodd-Frank Act on leverage, liquidity, and proprietary trading, the Basel III and Solvency II rules on capital requirements, and the European Market Infrastructure Regulation's rules on increased trade reporting and enhanced risk management practices.

Under the new rules, banks are required to hold large amounts of liquid assets in order to minimise liquidity crunches in times of stress. The assets considered sufficiently liquid for regulatory purposes are narrow, and include only cash, central bank reserves, US and other top-graded government securities, and a certain amount of top-graded corporate debt. Basel III requires that the amounts held be sufficient to cover total net cash outflows over a 30-day stressed period. Banks are also required to have enough net stable funding to cover at least 100% of their liabilities for a one year period.

Basel III capital requirements have raised banks' capital requirement to up to 15.5% of their risk-bearing assets, including a common equity tier 1 ratio of 4.5% plus a capital conservation buffer of 2.5%, a countercyclical buffer of 2% and an additional 2.5% buffer for global systemically important banks, by 2019 (see Chart 4).

While making banks more resilient to future crises, these regulations have raised funding costs, reduced risk appetite, increased the cost of balance sheet-intensive activities, and have lowered broker-dealers' market-making activities. In some areas, notably Europe, these ratios are being met by reducing the size of bank balance sheets rather than increasing capital, again affecting activity.

Chart 4: Rising regulatory requirements
Basel III capital rules, % of risk-based assets



Source: Bank for International Settlements

The role of ‘shadow banking’

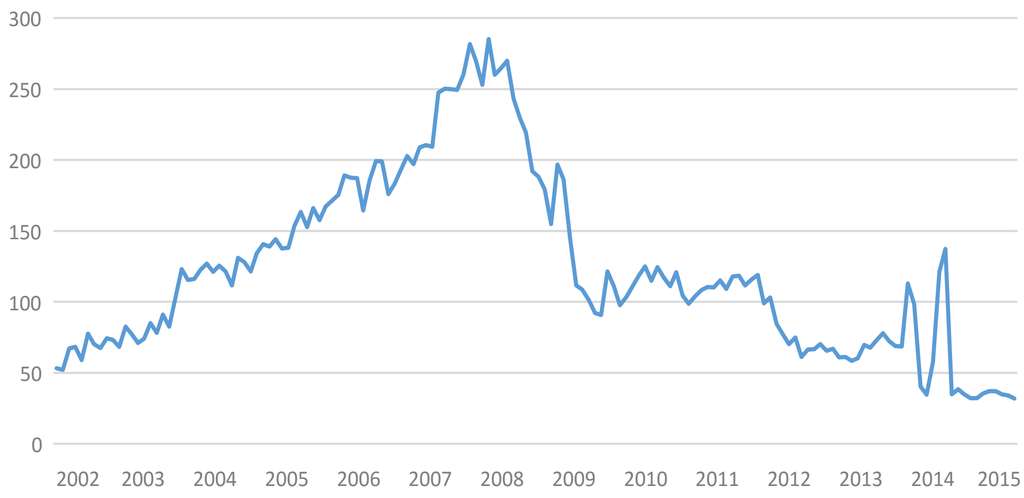
As banks have stepped back from intermediation, non-bank agents on the buy-side, ranging from individual investors to large asset managers, exchange traded funds, investment banks and hedge funds, have become more active. These non-bank financial institutions are not covered by the stringent rules on capital and leverage ratios that apply to traditional dealers and banks, and many have lower capital reserves and smaller inventories, lacking the capacity to absorb trades of the same size as traditional dealers and lowering overall resilience to market shocks.

Previously, banks and securities firms engaged in ‘principal trading’ by using their balance sheet to become the counterparty to trades when an immediate buyer or seller could not be found. This helped smooth the market by absorbing the shocks of infrequent or large trades, thus reducing price volatility. Between 2007 and 2015, however, sell-side dealers lowered their inventories of fixed-income assets by over 80% (see Chart 5), reducing their ability to play this role.

Instead, the non-bank financial institutions now present in the market generally trade in smaller amounts, do not seek to match buyers and sellers, and therefore hold assets for a minimal time. Many of these non-bank institutions use short-term, high-frequency trading strategies, which are changing the way markets – particularly the more standardised equity, treasury and foreign exchange markets – function.

Chart 5: Market-makers’ falling activity

Fixed income dealer inventory, $bn, 2002-15



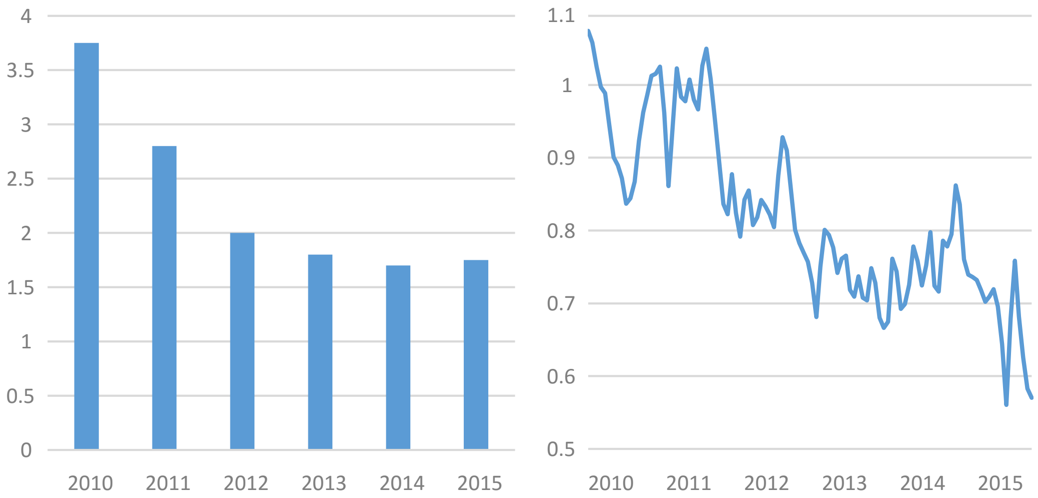
Source: Citi, ICI, NY Fed, Bloomberg, Haver Analytics, US Treasury

Markets less able to absorb large trades

The reduction in bank intermediation and broker-dealer market-making has resulted in markets being less able to absorb large trades, with participants finding it harder to interact in the required time, in the required quantity, with minimal price movement. This is evident in the decline in trade size and market turnover, with trades having to be broken down, and taking longer to execute, thereby reducing the liquidity of the underlying assets (see Chart 6). This has not yet resulted in an obvious liquidity crisis, but in times of stress this could rapidly materialise.

Chart 6: Key markets show signs of tighter liquidity

a) Average trade size, US Treasuries, $m b) Average trade size, European corporate bonds, $m



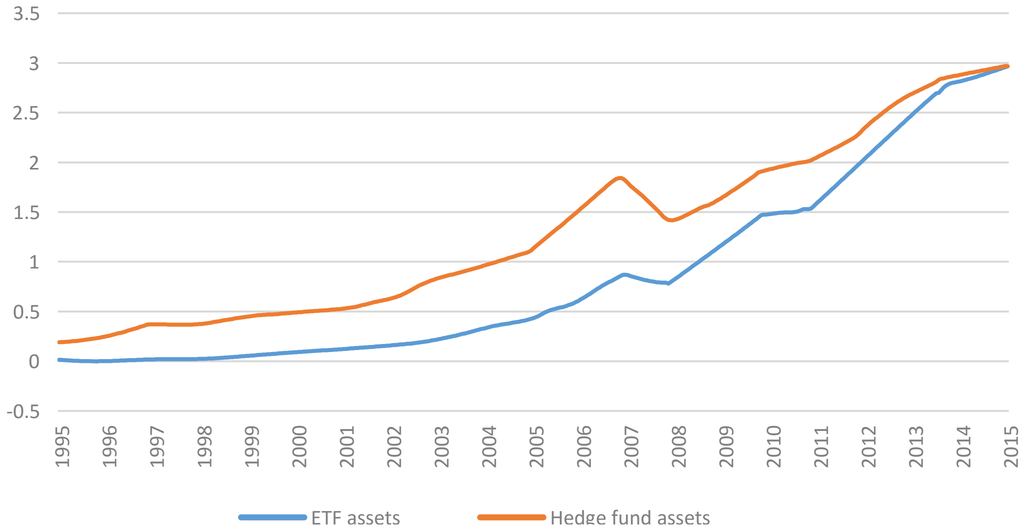
Source: TRAX, SIFMA

Market structures

The presence of these non-bank financial institutions has increased rapidly. The 20 biggest asset managers hold almost $10tn of corporate bonds, an increase of 67% on 2008 levels, while the assets of one large asset manager alone rose from $1tn in 2009 to $4.65tn in 2015. Assets of hedge funds and exchange traded funds have grown by around $1.5tn and $2tn, respectively, since 2008 (see Chart 7).

These institutions are less-capitalised, more information-sensitive, and shorter-term than the sell-side institutions that they have replaced in financial markets. This creates greater risks of ‘herding’ behaviour which can amplify shocks and destabilise prices, leading to asset cliff effects which could rapidly decrease the liquidity of the underlying assets. Their thinner capitalisation, lower capital reserves and smaller inventories also increase the concerns over counterparty risk. The rise of mutual funds which offer daily redemptions to their customers presents a particular risk of ‘fire sales’ if investor confidence turns, potentially causing a sharp contraction in liquidity.

Chart 7: Rapid growth of non-bank financial institutions
Assets of exchange traded funds and hedge funds, $tn, 1995-2015



Source: ETFGI and Hedge Fund Research

The role of interest rates

The prospect of divergent monetary policy between different central banks brings these risks to the fore, with potential future US rate hikes raising the prospect of asset price deflation, a decline in new issuance and an increase in short positions. As bond market liquidity is dependent on new issuance (given the rapid decline in volume and value of off-the-run bonds), a decline in new issuance would harm liquidity.

While the Fed is the only large central bank to have raised interest rates in recent years, US interest rate decisions have feedback effects for the rest of the financial system. They affect the value of the dollar and of dollar-denominated assets and debts, and raise the cost of dollar financing. In contrast to the US, central banks in Europe and Japan are experimenting with negative interest rates, while the UK has cut its interest rate to an historic 25 basis points following the decision to leave the EU. This divergence is likely to increase the demand for US assets and add to imbalances in equity and bond prices.

The impact on new bond issuance and valuations in turn raises the risk of second-round effects from a bout of illiquidity in any one market. In particular, volatility and illiquidity in one asset class could cause their holders to liquidate other financial assets, spreading the risk to a broad range of asset classes.

Similarly, geographical contagion is possible as shocks in the financial system, or liquidation of bonds issued by governments and companies of one country, could spread rapidly to others. The high leverage of many emerging economies, the open-ended nature of some hedge funds and mutual funds and the large amount of post-crisis debt issuance suggest significant liquidity risks from future monetary policy changes.

The policy framework

How sovereigns have responded

Avoiding financial shocks emanating from shadow funding institutions, maintaining access to market funding, preventing investor runs from money market funds, and averting a sudden drying up of new bond issuance are therefore important to maintaining liquidity. Compensating for the lack of liquidity-enhancing but balance sheet-intensive activities of banks is vital. Maintaining capital market access for companies and banks and preserving access to wholesale market funding is also important, as is keeping CDS spreads at a low rate.

The variety of liquidity risks highlighted in the preceding sections suggests that any solution to the liquidity issue will itself need to come from a variety of sources, and will involve both public and private sector institutions. Central banks and sovereign funds in particular have a large role to play in increasing liquidity, as do custodians and fund managers. The global 'financial plumbing' can be reformed to shore up liquidity in times of stress, while changes to market structures and bond issuance practices can help.

Strengthening wholesale funding

As higher regulatory capital requirements, a narrow definition of 'liquid' assets and higher balance sheet costs have caused banks to reduce their dealer and market-making activities, increasing liquidity and resilience in wholesale funding markets has become crucial. Prior to the financial crisis, wholesale markets contributed to systemic risks as banks became more reliant on short-term funding from non-bank institutions, which quickly evaporated once the crisis hit. Maturity mismatches between assets and liabilities in wholesale funding markets, as well as inaccurate and cyclically high valuations of collateral and low information on counterparty risks, contributed to the vulnerabilities in wholesale funding which helped to transmit the crisis through the financial system.

To this extent, better collateral valuation rules and margining policies, increased counterparty transparency and improved market infrastructure could enhance the resilience of liquidity in these markets.

Repurchase agreements are the largest component of wholesale funding markets and are an area where sovereign institutions, backed by sovereign guarantees, can play an important role in helping to reduce risk and improve stability. Provision of central bank assets or cash to banks or dealers in exchange for collateral can help to overcome some of the problems of bank funding, and can prevent bank liquidity problems from developing into solvency issues. This was covered in the 2015 OMFIF report with BNY Mellon 'Crossing the Collateral Rubicon: a new territory of challenge and opportunity for sovereign institutions'.

Central clearing counterparties

The infrastructure on which the smooth functioning of these wholesale markets depends has improved recently, as the growing use of central (clearing) counterparties in Europe (encouraged by the European Market Infrastructure Regulation) and the strengthening of tri-party repo agreements in the US, have increased market liquidity and resilience.

CCPs have lowered operational risk in European repo transactions by standardising and enforcing collateral and margin agreements for all their members. CCPs net exposures across multiple repo transactions, reducing liquidity risk by lowering the potential losses of repo cash lenders and improving collateral management.

They have minimised counterparty risk by guaranteeing contractual agreements even if counterparties default, due to collateral being deposited with them on agreement of the trade. By netting multiple repo transactions, sometimes in non-standardised trades or with a wide range of collateral types and cash investors, the risks to members of a defaulting borrower are minimised and the willingness of buyers and sellers to interact is improved.

Sufficiently capitalised CCPs, which can pool risk and mutualise losses among investors – and which have a participant-funded default fund – can act as a liquidity buffer under stressed market conditions and allow for an orderly sale of depressed collateral, instead of a fire sale. These reforms are as yet incomplete, and the issue of whether all collateral – including corporate bonds and mortgage- and other asset-backed securities – or only government securities would be cleared, remains. It is also uncertain whether clearing houses would be able to process the failure of a large bank or investor, and what the mechanism for doing so would be.

Further reforms and the increase in total loss-absorbing capital requirements for CCPs are tackling these issues, and by increasing the safety of funding markets, derivatives trades and collateralised loans, should help overcome some of the systemic liquidity concerns.

Tri-party repo

In the US, the strengthening of tri-party repo agreements, which place a clearing bank between counterparties in repo operations, is an important factor increasing the resilience of the short-term funding market.

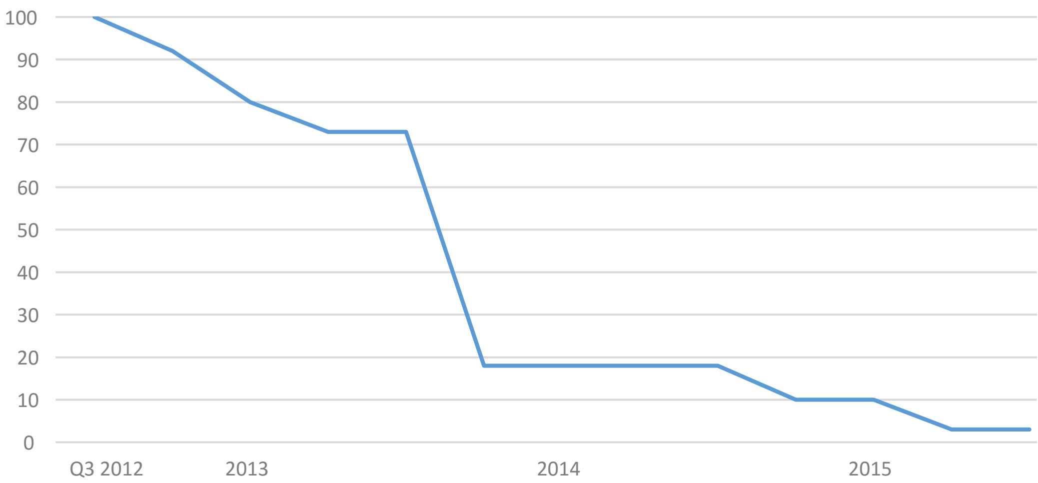
Clearing banks in tri-party repo agreements actively manage the collateral used in repo trades, including through frequent collateral valuations and assessments of volatility, spreads and liquidity in the collateral assets. They also impose strict margin requirements and provide clear publication of the 'haircut' imposed on different collateral assets, counterparties and maturity structures. Together these developments have helped strengthen wholesale funding markets.

These markets have further benefited from the Tri-Party Repo Infrastructure Reform Task Force, which has helped reinforce the clearing banks that stand at the centre of these transactions.

The amount of secured intraday credit extended by these institutions has fallen from 100% of all tri-party collateral in 2012 to an estimated 3% at the end of 2015 (see Chart 8), greatly reducing the risk of overdependence on secured credit, which was one of the main risks prior to the crisis.

Chart 8: Clearing banks becoming more resilient

Amount of secured intraday credit, %, 2012-15



Source: Federal Reserve Bank of New York

Collateral eligibility

Central banks' policies regarding which assets they include in the list of collateral eligible for repo transactions can have a positive impact on liquidity. Narrow definitions of assets available for collateral have resulted in higher funding costs for banks, limiting their access to financial markets, reducing bank financing for assets and increasing risks of insolvency. Wider definitions, by contrast, help to reduce the excess demand for safe and high-quality assets and boost demand for other assets, contributing to increased primary market issuance and secondary market depth.

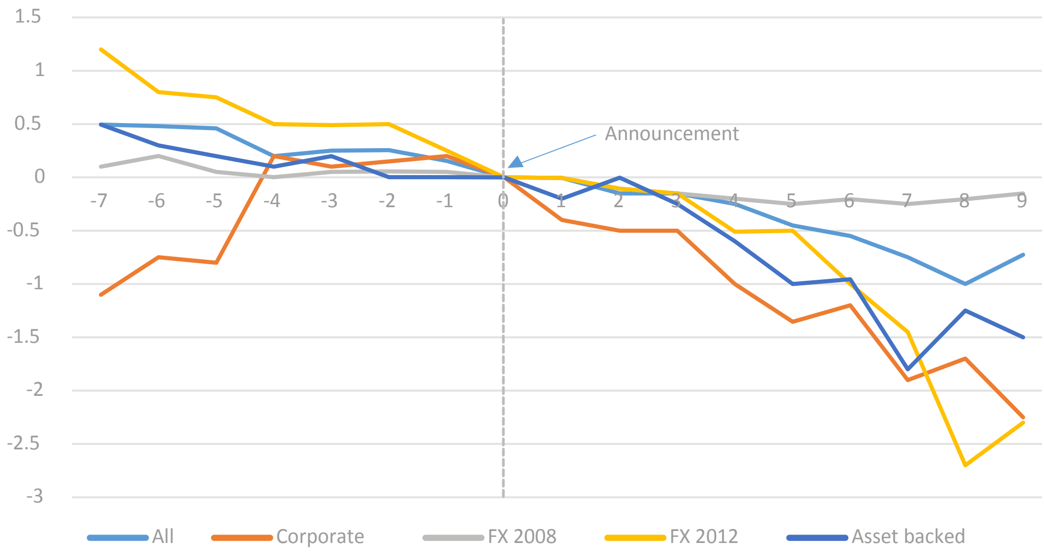
Widening the assets eligible for collateral purposes in repurchase operations also increases the effectiveness of monetary policy, as large haircuts on collateral assets raise lending rates and effectively tighten monetary conditions. This has knock-on effects for the wider banking system by reducing the central bank liquidity which is necessary for maturity transformation by commercial banks.

In Europe, the ECB expanded its collateral eligibility policies via the long-term refinancing operations regulations, while the Funding for Lending scheme of the Bank of England expanded its eligibility criteria to cover asset-backed securities, lower-grade corporate bonds, covered bonds and portfolios of loans, in order to boost liquidity. Bid-ask spreads fell following the ECB's widening of eligible collateral in 2008 and its subsequent lowering of the required credit rating for accepted collateral (see Chart 9).

In the US, the Fed contributed to liquidity in money markets by providing treasury securities against agency, mortgage-backed and other illiquid securities, helping to reduce repo rates against these assets. The expansion of targeted longer-term refinancing operations by the ECB in June 2014 and March 2016 are a further positive step, with the decision to provide funding for banks that increase their lending to businesses helping to boost market liquidity and depth.

Chart 9: Collateral eligibility and liquidity

Percentage change in median bid-ask spread



Source: Bloomberg, ECB, IMF estimates

Expansion of collateral eligibility

The ability to post less-liquid collateral with the ECB may have contributed to the relatively large amount of government securities in European repo transactions, improving liquidity in those markets relative to US markets, in which a smaller amount of government bonds were available for repo, and where cash investors did not have access to central bank financing of securities gained via repo agreements.

As European banks had access to ECB liquidity for a wide range of collateral they might be left with in the event of a borrower's default, they were also more willing to engage with a larger group of counterparties than cash lenders in US repo markets, which were dominated by money market funds. This further increased the liquidity of European repo markets.

In late August the Reserve Bank of India announced that it would accept top-rated corporate bonds as collateral in repo transactions with commercial banks. This should boost the liquidity of corporate bonds by boosting primary and secondary market demand and encourage banks to increase their market making activities.

The expansion of collateral eligibility does, however, introduce additional risks to central banks from potential collateral valuation changes. Managing these risks requires enhancing central banks' collateral management, monitoring, and usage practices, including via active collateral valuation, haircuts and margin calls.

Liquidity swap lines

The rise of sovereign debt, central bank asset purchases and implicit and explicit government guarantees since the crisis have increased the risk of sovereign default resulting from a market liquidity shock. This is not only a threat to insolvent countries with large debt-to-GDP ratios: capital flight and the liquidity risks in different asset markets explored above – highlighted by growing sovereign bond spreads – mean that in times of market stress even solvent countries can face liquidity crises.

The existence of liquidity swap lines can minimise the rise in credit default swaps which could otherwise lead to a sovereign liquidity crisis – for central banks in Mexico, Australia, Brazil, Canada, Sweden, Singapore and the ECB among others, liquidity swap lines with the Fed have helped to substantially decrease borrowing costs during times of market stress.

The Dodd-Frank reform in the US, which imposes restrictions on bilateral liquidity provision, may limit the ability of the Fed to engage in such activities in future. However, the IMF has spearheaded a drive to increase liquidity lines to countries through its precautionary liquidity lines and flexible credit lines, in order to prevent geographical and asset class contagion from illiquidity in any one market.

In addition, liquidity swap lines can reduce the amount of central bank foreign exchange reserves or sovereign stabilisation funds needed to stabilise national currencies and mitigate capital outflows during crisis periods.

Liquidity swaps can thus both preserve countries' financial buffers as well as reduce the overall size of buffers needed to maintain stability. This in turn could free up assets currently held by central banks and sovereign funds for other financial market uses, reducing excess demand for safe and liquid assets. With the prospect of tightening global monetary conditions, the use of liquidity lines could play an important role in preventing volatility in sovereign debt markets and limiting the risk of contagion.

Sovereign investors: The way ahead

OMFIF survey – broad results

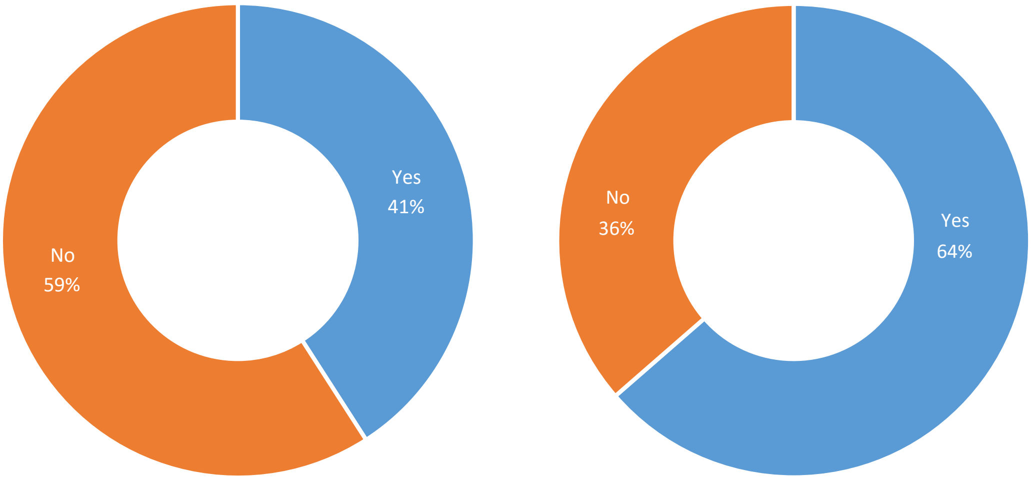
OMFIF surveyed two dozen sovereign institutions between April and July 2016 to gather their views on market liquidity, bank disintermediation and the role of sovereigns in financial markets. The institutions surveyed collectively hold more than $4.74tn in assets under management, equal to more than 16% of total assets under management of all sovereign institutions worldwide. Of respondents, 95% ranked liquidity as 'important' to 'very important' for their fund, while nearly 65% believed that liquidity conditions will tighten in the next 12-24 months. One of the primary reasons given for liquidity concerns was the impact of regulations, followed by central bank policies. Almost 75% believe that sovereign institutions have a role to play in increasing liquidity.

OMFIF also conducted a series of in-depth interviews with selected sovereign institutions on the specific measures their funds are taking in the current environment. These measures include a greater focus on securities lending, investing in new asset classes and playing an increasingly active capital markets role which may compensate, in some cases, for bank disintermediation.

Chart 10: Sovereign investors expect liquidity to tighten

a) Have you experienced a deterioration in liquidity over the previous 12-24 months?

b) Do you expect liquidity conditions to tighten in the next 12-24 months?



Source: OMFIF liquidity survey, April-July 2016

Increasing securitisation

The securitisation market in Europe has declined rapidly since its peak in 2008, for which regulations were cited as the main cause. The low liquidity of the underlying assets which are unable to be securitised means they instead remain on banks' balance sheets, reducing their ability to raise capital.

The lack of securitisation also reduces overall market liquidity and market functioning, with knock-on effects for money markets. These strains in the European banking system have had deleterious effects on European credit markets, resulting in more selective funding by banks which has reduced access to finance for some assets and long-term illiquid investments, and which has meant that riskier but higher yielding assets lack access to capital.

It also limits the ability to 'upgrade' assets via securities borrowing facilities in which lower-quality assets could be swapped for sovereign bonds and other high-quality liquid assets in order to participate in repo markets.

While regulations and higher capital costs have reduced bank risk appetite and contributed to disintermediation, sovereign institutions are yield-hungry and less risk averse, with around 75% of respondents expressing an interest in increasing their securities lending in order to achieve higher yields and improve market functioning.

Most institutions were willing to use between 10-15% of their balance sheet for these activities, several were considering 'up to 35%' and some were considering as much as 60%. This is seen as a positive step for financial markets, by enhancing the liquidity of a wide range of assets and compensating in some places for the reduction in bank/dealer market-making. Expanding the range of collateral accepted in securities lending trades, subject to sufficient haircuts, could also allow the assets on European balance sheets to be upgraded.

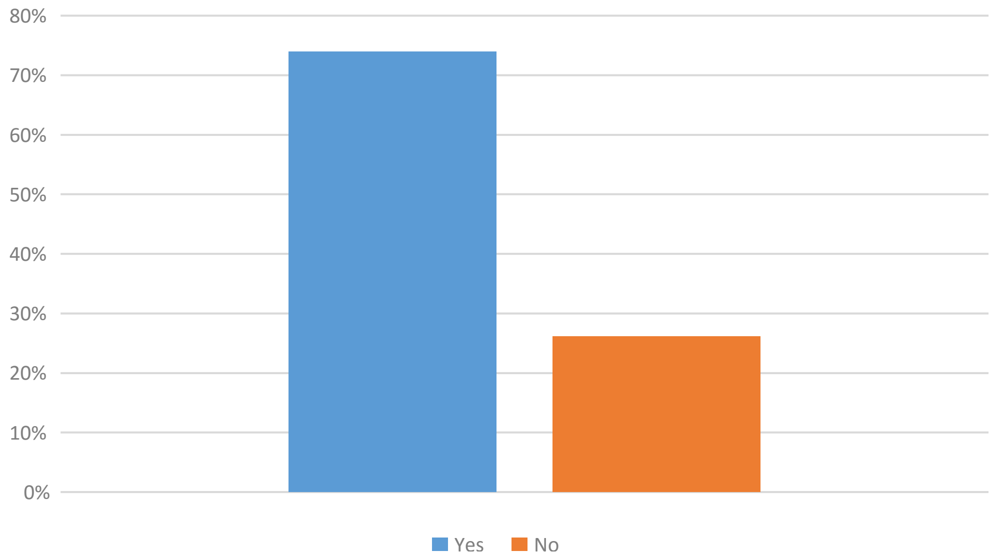
Securities lending is one way in which sovereign investors could 'rent' their balance sheet to financial intermediaries at low cost, enabling greater market making. According to a large European sovereign institution, 'securities lending would alleviate the scarcity of securities that are needed for adjusting portfolio exposures by institutional investors'. This should also add directly to market liquidity by supporting the repo market and other key funding markets. Securities lenders that accept cash collateral, particularly in the US and Asia, expressed an interest in reinvesting that cash in tri-party repo.

Respondents argued that increased activity by sovereigns in funding markets should improve market-makers' ability to finance long positions and cover short positions, thereby facilitating transactions. The large amount of safe assets held by sovereign institutions should also allow borrowers to exchange assets like corporate bonds and equities for high-quality liquid assets that can be used in repo markets and are acceptable to CCPs.

The liquidity of the underlying collateral assets was likely to improve, according to respondents, increasing their attractiveness to investors and deepening secondary markets. It was also seen as likely to boost smaller or lower-rated institutions' access to capital markets based on the credit quality of the collateral they originate rather than the rating of the institution itself.

Chart 11: Securities lending an option for sovereign investors

Can sovereigns increase their securities lending to enhance liquidity?



Source: OMFIF liquidity survey, April-July 2016

The search for yield

Some sovereign institutions – particularly those vulnerable to low commodity prices, for whom capital preservation and access to liquidity have become the most important concerns – are addressing liquidity risks by investing in only the most liquid assets, mainly government bonds.

However almost 65% of respondents said that the pursuit of higher yields has become more important to their fund in the current low interest rate and low-yield environment, making them keen to diversify into new instruments and asset classes, increasing their demand for assets shunned by other investors and risk-averse banks. This includes the more 'exotic' options of private equity and alternative debt funds. Equity, fixed income and infrastructure are the most popular choices for public investors' recent asset allocations, followed by cash and gold.

Sovereign funds showed a greater demand than other types of public investors for equity (including private equity) and emerging market debt, and had a greater interest in hedge funds. The increased regulation and higher cost of banks' market-making activities and balance sheet-intensive actions provides a potential opportunity for sovereign funds, which are less burdened by post-crisis regulations, to participate in these markets. One Latin American sovereign fund argued that 'as banks exit certain businesses, sovereigns could view this as an opportunity to enter some of these markets'. Although this would require 'taking additional risk', it would also 'potentially reap high rewards', with '[enhanced] liquidity [likely to] follow'.

Countercyclical investments

Almost 75% of respondents said that 'sovereign investment institutions can play a countercyclical role in capital markets by allocating investments to asset classes that are suffering from liquidity shortages'. Survey responses focused on two main scenarios where this would be beneficial. One was where assets may lack access to capital due to bank disintermediation, risk aversion, or increased capital costs. In these cases, respondents argued that direct support by sovereign investors for illiquid markets like private debt could help to 'combat the credit crunch impact of bank regulation'.

The other scenario results from recent changes in market structure, in which short-term, event-driven investors and high-frequency trade strategies, as well as mutual funds which offer daily redemptions, have proliferated, increasing the pro-cyclicality of asset prices and market liquidity. The almost-zero yield on 10-year German bunds was highlighted by one respondent from a European central bank as indicative of herding behaviour, as investors' lack of confidence in other assets leads them to search for quality and safety.

The low-cost, long-term funding of sovereign funds, however, with their low leverage ratios and few short-term liabilities, mean they have a comparative advantage in providing stability to stressed financial markets. The sovereign institutions engaging in or considering countercyclical investment allocations expected this to boost their returns, although the amount would depend on a case-by-case basis.

The risks and illiquidity that sovereign investors are willing and able to take depends on each fund's internal restrictions and 'the extent to which they can afford to hold illiquid assets', according to a European sovereign fund. The motivation for these activities also differs by institution type, with central banks and some pension funds responding that the 'illiquidity premium' these assets provide was the main reason for increasing allocation to them. These institutions also agreed that a by-product of this investment strategy would be 'market stabilisation' and increased liquidity. Sovereign funds, by contrast, responded that 'the main motivation' for investing in less-liquid assets 'is for market stabilisation' but suggested that an additional consequence of these investment choices could be to boost returns over the long-term.

Domestic liquidity provision

Respondents highlighted that sovereign funds have a large role to play in stabilising financial markets in their domestic economies, helping to prevent shocks that would cause investors to abandon local assets and cause a contraction in liquidity that could spread to other asset classes and regions.

Sovereign funds responding to our survey indicated that they are pursuing 'new investment opportunities, new instruments and new asset classes', and increasing their search for yield. This supports the view that they are able to counteract some of the problems stemming from the concentration of asset managers, low capital market activity (especially in Europe), the effects of bank disintermediation and increased regulations, and the reduced risk appetite among investors generally. Almost 45% of respondents argued that 'there is a role for sovereign institutions to increase their capital markets role and compensate for bank disintermediation'.

Investments in private equity, for which sovereigns show an increased appetite, can act as one form of bank disintermediation by providing direct funding for the underlying corporates and businesses. One large Asia-Pacific public pension fund suggested that direct capital market participation in a range of illiquid assets, including infrastructure and debt markets, could alleviate some of the issues of banks' risk aversion. A large European sovereign fund argued that 'sovereign institutions could directly lend to corporates and securitise those loans… which could then be traded on the market'. They could also 'underwrite infrastructure bonds and, above all, those issued by SMEs', which could then be traded on capital markets, thereby 'enhancing liquidity and compensating for bank disintermediation'.

Some of the institutions which argued that there is not currently a role for sovereigns to compensate for bank disintermediation would however consider doing so in future if regional capital markets were established or deepened. European and African funds in particular supported this option, with one respondent arguing that 'a deep and integrated European capital market could enhance the liquidity of the system', and one African sovereign institution arguing that the lack of capital market development in many emerging economies 'hinders liquidity'.

Adapting to regulations

In order for sovereign securities lending to be effective, 'there needs to be someone taking the market risk using the lent stock (i.e. the market-makers)', which as one European pension fund argued, 'requires market-makers to step back into the market'. A large Latin American fund echoed this sentiment, fearing that without regulatory certainty 'very few traders would borrow securities to correct price misalignments'. Regulatory transparency and predictability is necessary to encourage traditional market-makers to maintain and expand their market activities, as the market-making business 'requires large-scale investment to start-up and maintain', according to one large Asia-Pacific development bank.

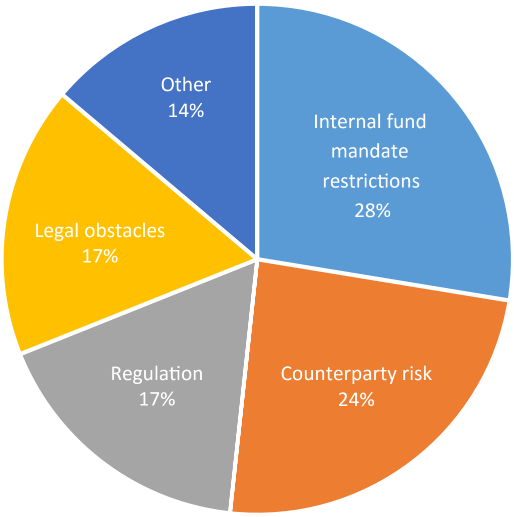
Another hindrance to increased securities lending, greater sovereign repo activity, and widened collateral eligibility rules is the counterparty risk these activities imply, with 24% of respondents seeing this as the greatest barrier to an increased capital markets role. Governance and internal fund mandate restrictions are an issue for another 28%, followed by legal obstacles (17%), regulations (17%) and other (14%). One fund raised the additional concern that in lending securities to the market, sovereigns are 'likely to be providing ammunition for shorting the sovereign bond market', echoing sentiments by some respondents that sovereign institutions need to be aware of 'negative secondary effects from their own increased market activities'. Respondents suggested that 'in normal times this may not be problematic, but in times of systemic stress things may look very different'.

Sovereigns investing in hedge funds may impact liquidity

There was disagreement about the potential impact on market liquidity of sovereign funds investing in hedge funds. Some argued that they played a positive role by aiding the price discovery process and that the shorting of certain markets can contribute to accurate price alignment which can limit the growth of market bubbles. Some respondents highlighted the risk, however, that hedge funds can act as a drain on liquidity during market stresses like the dotcom bubble and during the 2008-09 crisis, and tend to increase allocation to more-liquid over less-liquid stocks when funding constraints are tighter.

Chart 12: Internal restrictions pose greatest challenge for securities lending

Main barriers to increased securities lending for sovereign investors



Source: OMFIF liquidity survey, April-July 2016

Need for coordination

Several respondents highlighted the 'different sets of rules and governing bodies' that regulate different participants in securities lending programmes as a factor hindering effective market structure and functioning. Securities borrowers such as banks, investment dealers and hedge funds are subject to different rules, and survey respondents highlighted the need for improved collaboration and coordination among regulatory bodies in order to improve liquidity in these markets.

One Asia-Pacific sovereign highlighted the greater need for coordination between sovereign institutions and regulators, as well as among sovereign institutions themselves, given that they 'are among the largest issuers of debt instruments in many different markets'. Increased collaboration and coordination with regulators 'could help maintain smooth market functioning and transparency', which should boost liquidity. Respondents emphasised that, as the largest security issuers with the highest credit ratings, sovereigns 'should standardise their debt instruments so that they can more readily be utilised as collateral by market participants' and become more flexible and compatible with needs. The pace and level of sovereign debt issuance, purchases, and sales by official institutions should be better coordinated to avoid liquidity shocks. One European fund considered 'the segmentation across national lines of government debt issuance' in Europe to be one of 'the main obstacles to a truly integrated European capital market'.

Standardisation in other securities markets is required in order to increase the attractiveness of assets and improve liquidity in the secondary market. Further clarity is needed regarding which securities would be accepted as collateral by central banks and other sovereign institutions. Sovereigns highlighted that greater regulatory certainty would allow them to provide this clarity.

New skills and capabilities

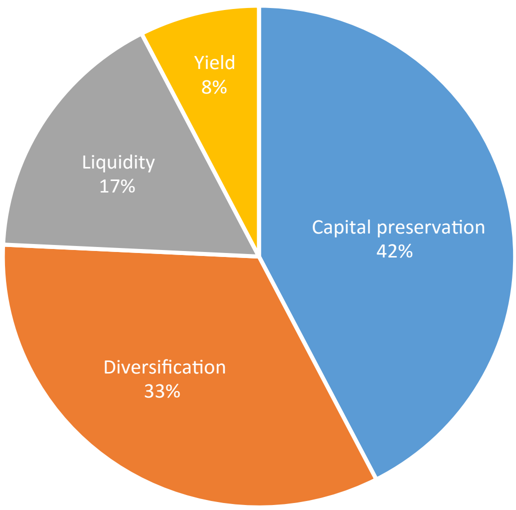
Investing in less-liquid assets like private equity requires familiarity with equity ownerships, and respondents agreed that private equity portfolios are generally more complex to diversify, demanding a 'more sophisticated level of investor monitoring than traditional listed equity investments'. Respondents highlighted an increased need for internal fund capabilities for assessing assets and projects, as well as for managing the legal and regulatory issues around different investments. As one Asia-Pacific fund emphasised, the new skills required by sovereign investors 'are not only the classic investment skills, but should also extend to transaction skills and governance and management skills'.

While adding some complexity to portfolios, these investments can help support market liquidity and diversify investment risk, something which survey respondents argued was increasingly important. Similarly, investment in private debt can both diversify portfolios and offer new investment options which also help to 'combat the credit crunch impact of bank regulation', according to a large European sovereign investor.

'Renting' sovereign balance sheets and increasing securities lending in order to enhance market making 'could generate a useful contribution to liquidity' according to a large European central bank. This is, however, dependent on sufficient 'know-how and personnel' that sovereigns may find it hard to meet. As this is likely to be profitable 'only if it is done on a sufficiently large scale', the need to engage with custodians, CCPs and other specialised market participants is key. Around 45% of respondents 'actively use custody banks' services on securities lending' while a further 6% were planning to increase their use of custody banks or other external agents in the near future. The main objectives they required external agents to pursue were capital preservation (42%), followed by diversification (33%), liquidity (17%), and yield (8%).

Chart 13: External agents popular for capital preservation

Main reasons for sovereign investors to require external agents



Source: OMFIF liquidity survey, April-July 2016

Sovereigns and markets

The desirable level of sovereign institutions' involvement in capital markets is contested, with some respondents arguing that, 'It's the role of markets to price risk, not official institutions.' To these respondents, public investors should 'act as asset managers with a long-term view', rather than attempt to be market-makers themselves. Nevertheless more than 40% of institutions believed there was an increased capital markets role for sovereigns as a result of bank disintermediation.

Many argued that 'in principle it would be profitable to take up this role from large banks', but emphasised that 'in practice this would require a profound transformation of sovereign institutions and a considerable investment in human capital'. Despite these challenges, the survey highlights that sovereigns are adapting their capabilities and focus in order to play a greater role. As one Latin American sovereign fund put it, 'someone has to fill the void' of bank disintermediation.

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