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Crossing the Collateral Rubicon

A new territory of challenge and opportunity for sovereign institutions

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The Official Monetary and Financial Institutions Forum (OMFIF) is an independent membership-driven research network. It focuses on global policy and investment themes for off the record public and private sector engagement and analysis.

The overriding aim is to enable the private and public sector to learn from each other in different ways, promoting better understanding of the world economy and higher across-the-board standards. OMFIF co-operates with central banks, sovereign funds, regulators, debt managers and other public and private sector institutions around the world.

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What the experts say

'In an investment environment of low to negative yields, active collateral management and repo trading can prove a steady and rewarding source of income even for the most conservative investors with high quality liquid assets.'
- Bahar Alsharif, Deputy Treasurer, International Finance Corporation

'Inquiries [on collateral trades] have picked up, both from traditional custodial lenders as well as third-party lenders.'
- Portfolio Manager, Asia Pacific central bank

'It is essential to encourage fluid, efficient and effective collateral markets in the EU. Public sector efforts which have been made to date are to be applauded. But more steps are urgently needed as pressures build.'
- David Hiscock, Senior Director of Market Practice and Regulatory Policy, International Capital Market Association

'In the current environment of low oil prices, the liquidity framework becomes more important so investment activity can continue. We must make sure the liquidity profile is appropriate, prioritising liquidity over returns. In future, maintaining the liquidity management framework is the key.'
- Chief Risk Officer, Middle East sovereign fund

'Temporary supply-demand imbalances could arise in specific countries or jurisdictions. The recent European Central Bank decision to buy government bonds in the context of quantitative easing may contribute to such a (temporary) supply-demand imbalance in Europe.'
- Aerdt Houben, Director of the Financial Markets Division, De Nederlandsche Bank

'There is nothing to prevent us exploring collateral trades. We manage our balance sheet proactively and we, like other institutions, ensure we are using it intelligently. We have many contingency plans. We are prepared for any outcome.'
- Chief Risk Officer, Middle East sovereign fund

'Global Public Investors seeking to increase their role as providers of high quality collateral to financial markets will discover a new, still-emerging cross-border ecosystem of specialised service offerings aimed at shifting available collateral to where it is needed.'
- Peter Norman, Author, *Plumbers and Visionaries: Securities Settlement and Europe's Financial Market*

'With strict conditions on the subsequent lending of the collateral, returns are expected at around 20 basis points.'
- Portfolio Manager, Asia Pacific central bank

'For overall financial lubrication the system requires sufficient quantities of high quality collateral, so shortages in this area pose a problem for the smooth running of the international economy.'
- Manmohan Singh, Senior Financial Economist, International Monetary Fund

Executive summary

- Sovereign investment institutions around the world or Global Public Investors (GPIs) – broadly defined as sovereign wealth funds, central banks, public pension agencies and official development institutions – have since the 2008-09 financial crisis been gradually adjusting to their positions as systemically important players in the world economy.

- These institutions have occupied the limelight for several years as significant providers of capital for international companies, governments and large-scale projects such as infrastructure.

- Now, as the result of important regulatory and macroeconomic developments in the aftermath of the crisis, GPIs are emerging on financial markets in a new role as potential large-scale providers of high-value collateral to inject liquidity and facilitate many kinds of transactions of pivotal value to the real economy.

- Providing collateral through sovereign institutions could play an important part in overcoming liqudity shortages which might otherwise drive up market volatility during periods of financial turbulence. Collateral trades thus could be one of the instruments helping prevent a recurrence of financial crises similar to developments in 2008-09.

- Crucially, sovereign institutions are not subjected to the same post-crisis regulations such as Basel III and EMIR, which are impinging, sometimes with great severity, on their counterparties.

- Without in any way undermining the letter or spirit of the new regulations, sovereign institutions can combine forces in the key field of collateral trades to make the financial system both more effective and less risky.

- A key strategic undertaking for sovereign organisations is understanding the factors behind the new positioning, and how they can best profit from it, without deserting their fundamental financial conservativism and risk aversion.

- Adapting to a new role as a central provider of liquidity to money and capital markets forms just one part of sovereign institutions' tasks as they grapple with freshly evolving models of 21st century business and finance. For many public bodies, this amounts to crossing the rubicon into a new territory of challenge and opportunity.

- OMFIF spoke with two dozen sovereign institutions in February and March 2015, totalling over $2tn in assets under management. Central banks, broadly speaking, show a smaller interest in securities lending than other GPIs such as sovereign wealth funds and public pension funds. However, some larger central banks are looking to undertake these trades in highly liquid developed markets to enhance income.

Crossing the Collateral Rubicon

A new territory of challenge and opportunity for sovereign institutions

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Sovereigns, collateral management and the new environment

Hani Kablawi, BNY Mellon

New regulations, heightened risk sensitivity and rapidly evolving market dynamics are all making collateral management more critical than ever, as buy-side and sell-side firms alike find themselves confronted with new challenges and new complexities.

Collateral has always been integral to the extension of credit, but it is fast becoming the sole determinant of institutions' ability to engage in financial transactions in the cash or derivative markets. As our clients' business models continue to evolve, they are increasingly looking for unified capabilities across collateral management and segregation in order to more effectively address regulatory changes, manage risks and improve performance. In particular, those regulatory changes – Liquidity Coverage Ratio friendly deposits, Money Market Reform, Dodd-Frank, EMIR and Basel III, among others – require an extension of optimisation capabilities to the buy-side alongside the delivery of enhanced operational efficiencies. The ability to identify, mobilise and – if necessary – transform idle assets to be used actively as part of an overall investment strategy remains key. How quickly can you access your collateral? How liquid is it? Do you have the right type of collateral, and – if not – are you able to transform the securities you currently hold into acceptable collateral?

The impact of many of the new regulations – Solvency II, Basel III, EMIR, central clearing – is just beginning to be felt in the market but what is clear is that balance sheet management, liquidity and more effective financing are key challenges for an increasingly broad range of participants, who must balance these drivers with a range of other priorities: risk mitigation, cost, and operational efficiencies. Going forward, financial institutions and intermediaries will need to access new and efficient ways to collateralise and to fund liquidity, and identify partners who can help them repurpose common platforms to allow them to address future collateral eligibility needs. With the segregation and optimisation of collateral still key areas of focus, the future of collateral management is also about efficiency, with clients increasingly seeking out the most direct and effective approach to collateralising their assets.

While the predicted `crunch' in respect of the volume of assets to be collateralised did not materialise as expected, a crunch is still coming: in terms of the number of collateral accounts that need to be opened. The operational resources required for processing – including account set-ups, reconciliations and legal agreements – will become a more pressing priority for clients. Despite legislative exemptions from many of the regulatory reforms that have transformed the derivatives market, sovereign investors are feeling the indirect effects of the impact of these reforms on their counterparties. Recognising and responding appropriately to that impact will deliver cost and risk benefits over the second half of this decade.

Hani Kablawi is Executive Vice President, CEO of EMEA Asset Servicing and Co-Chair of MEA, BNY Mellon.

The importance of collateral for sovereign institutions

Bahar Alsharif, International Finance Corporation

In an investment environment of low to negative yields, active collateral management and repo trading can prove a steady and rewarding source of income even for the most conservative investors with high quality liquid assets.

Repos combine the benefits of a secured and flexible investment with the opportunity to earn a competitive rate of return, creating an exceptionally useful financial tool for investors. Moreover, many aspects of a repo transaction can be negotiated to reflect an investor's unique risk/return parameters, liquidity requirements and operational preference.

Transactions can be for the exact maturity, size, currency and collateral requirements of the investor. As such, repo trading is an ideal cash management tool for central banks and official institutions because it enables them to manage their reserves and excess positions with a flexible, customised product.

High quality liquid assets can be lent out in the market and proceeds can be invested for additional returns. Through active management and a view on the direction of interest rates and central banks' policy decisions, portfolio managers can minimise borrowing costs while optimising returns.

Bahar Alsharif is Deputy Treasurer at the International Finance Corporation.

Urgent steps are needed to sustain adequate collateral fluidity

David Hiscock, International Capital Market Association

The financial crisis and subsequent changes in how financial markets and institutions are regulated have given rise to a system in which collateral effectively underpins the functioning of the capital markets.

For users and facilitators of capital markets, collateral management has become inseparable from liquidity management and risk management. In many ways, collateral has become the new cash, underpinning the smooth functioning of funding, and, in turn, providing the basis for economic growth. This was the topic of the International Capital Market Association's European Repo Council paper 'Collateral is the New Cash: The Systemic Risks of Inhibiting Collateral Fluidity'.

It is essential to encourage fluid, efficient and effective collateral markets in the EU. Public sector efforts which have been made to date are to be applauded. But more steps are urgently needed as pressures build.

Forthcoming regulatory changes may prove problematic, including the EU Central Securities Depositories Regulation's imposition of mandatory buy-ins. The European Central Bank's quantitative easing programme stands to drain significant liquidity from euro area government bond markets. Without an associated well-functioning securities lending facility, this will significantly squeeze collateral fluidity.

This OMFIF report is a welcome way in which to take forward the essential debate in this arena.

David Hiscock is Senior Director of Market Practice and Regulatory Policy at the International Capital Market Association.

Securing adequate collateral as a cornerstone of financial stability

Aerdt Houben, De Nederlandsche Bank

In the wake of the financial crisis, amidst widespread uncertainty and lack of trust, transactions needed to be secured and the demand for collateral soared. This sparked a policy debate about whether the global supply of collateral was sufficient and how potential collateral shortages could be addressed.

Against this background, the Committee for the Global Financial System at the Bank for International Settlements, which brings together policy-makers from the major central banks, analysed the factors driving collateral scarcity and sketched out the policy implications. Their findings are brought together in the report 'Asset encumbrance, financial reform, and the demand for collateral assets'.

Following extensive research and debate within the committee, the CGFS report concluded that, in aggregate, there is no evidence of collateral shortage. Even though the demand for high quality collateral was expected to increase by up to $4tn over the next several years, the supply of high quality bonds was expected to rise even further, primarily on account of large public deficits.

However, the CGFS stressed that temporary supply-demand imbalances could arise in specific countries or jurisdictions. The recent European Central Bank decision to buy government bonds in the context of quantitative easing may contribute to such a (temporary) supply-demand imbalance in Europe. This report is thus timely from a European perspective.

It sets out a number of measures that can alleviate collateral shortages, including better collateral management, collateral re-use and collateral transformation. Sovereign investment institutions can play a facilitating role by setting broader eligibility criteria for collateral assets in private transactions.

Aerdt Houben is Director of the Financial Markets Division at De Nederlandsche Bank.

Key role for sovereign institutions on world financial markets

Pooma Kimis, OMFIF

Sovereign investment institutions or Global Public Investors have become highly influential players on world financial markets. They are able to play a key role in providing collateral for private sector banks and other market participants in the wake of new regulatory requirements, with the potential to increase the investment efficiency and return of their own funds, stabilise the financial sector and provide banks and intermediaries with an additional tool to safeguard portfolios and minimise risks. Sovereign institutions now have an invaluable opportunity to increase their activities in this area, as a consequence of a juxtaposition of extraordinary circumstances that has led to dramatic changes on world capital markets.

In view of deflationary worries, interest rates have turned negative for many prime-rated bonds, underlining an excess of demand for safe assets over ever-shrinking supplies. An extreme search for yield has brought the capital markets into a negative-yielding netherworld. This development will eventually come to an end as interest rates normalise, but during this period of aberration markets' lack of an adequate supply of safe stores of value may increase vulnerability to systemic instability.

These circumstances are disconcerting for investors, especially those seeking to match liabilities for pensions or other payments to governments or other pivotal organisations. All this creates both a need and an opportunity for sovereign institutions to take action to help buttress the safety of the system. OMFIF is very pleased to carry out this research in co-operation with BNY Mellon to demonstrate how sovereign institutions can increase their activities in this field.

Pooma Kimis is Director of Markets and Institutions of OMFIF.

At the heart of market liquidity and financial stability

Manmohan Singh, International Monetary Fund

Collateral flows lie at the heart of any proper understanding of market liquidity, and hence of financial stability. No other market is so critical to the functioning of the financial system, and yet so poorly understood. In addition, as policy-makers begin to acknowledge the inadequacies of traditional theories of money and lending, collateral flows are increasingly recognised to be just as important a driver of credit creation as money itself.

Manmohan Singh is Senior Financial Economist at the International Monetary Fund.

Collateral key to world financial transactions

Richard Woolhouse, British Banking Association

Collateral remains a very important part of the financial system, supporting a huge proportion of transactions as secured funding markets have grown significantly in recent decades. It underpins the smooth functioning of funding and capital markets and thus supports investment, job creation and economic growth.

Since the financial crisis the regulatory landscape has changed beyond recognition. Capital requirements and other regulations have increased the need for collateral, in particular the need for high quality collateral. There remain concerns about the degree to which high quality collateral exists to fill this gap. At the same time central banks have lowered their eligibility requirements for collateral. As a result, efficient collateral management is becoming a key priority for banks and a driver of competitive advantage.

Authorities in the US estimate there is enough collateral to meet the needs of regulation. However, concerns remain on two fronts. First, is the collateral able to move around the system to meet demand conditions as required? This concept of 'collateral fluidity' is vital to ensure that secured financing markets continue to operate smoothly, and was raised in the recent European Commission paper on Capital Markets Union.

Second, given the unprecedented degree of unconventional monetary policy stimulus which has been applied globally, there is concern that markets are being distorted. Since the crisis few markets have been truly stressed and we may see liquidity dry up just when it is needed most, due to the changed nature of incentives around market-making.

Against this background, the OMFIF report is very welcome, addressing the challenges and opportunities for sovereign wealth funds in this area.

Richard Woolhouse is Chief Economist of the British Banking Association.

Sovereign institutions in a new environment

Sovereigns on the world financial scene

- Sovereign institutions share two sets of common characteristics that buttress their central importance on the world financial scene yet also often restrict their ability to derive full benefits from this position. These institutions are large, with assets under management of nearly $30tn, around 40% of world GDP, giving them considerable influence as well as responsibilities across a broad swathe of the international economy. Yet they are also highly conservative, checked in their investment behaviour by myriad obligations to taxpayers, governments and the general public good, inhibited by regulatory and fiduciary oversight, and normally subject to wide accountability and scrutiny by political bodies, public opinion and the media, within and beyond their own jurisdictions.

- As a result of a series of market and governmental interactions with large repercussions for collateral supply and demand, these institutions may now strengthen further their decisive place in capital markets, in a manner that is all the more striking for having been generally not predicted.

- Post-crisis action by western policy-making authorities in both the regulatory and macroeconomic spheres has led to a series of changes and imbalances on financial markets, with considerable repercussions for sovereign institutions.

- One central point concerns a disequilibrium in the demand for and supply of collateral. Put simply, regulatory and macroeconomic action has been acting in two diametrically opposite directions.

- In the regulatory area in the years since 2008-09, new rules, especially on derivative transactions, have placed a premium on counterparties gaining access to appropriate high-quality collateral. Yet, in the field of macroeconomic policy, a combination of developments has resulted in a fall in available supplies of this collateral – producing simultaneously a great challenge for markets and a large-scale opportunity for official holders of these securities.

Supply-demand mismatch

- Central bank action to buy government securities through quantitative easing has greatly increased the stocks of this paper in official hands and away from the traditional suppliers of these securities in the banking and broking community. A fall in the number of top-rated governments (resulting from higher debts and more stringent analysis by credit rating agencies) has further restricted supply. And all this has been compounded by a progressive decline in issuance. After an initial burst of debt-raising as the world reacted to the 2008-09 turbulence with demand-stimulus measures, lower debt issuance by the highest-rated governments has constrained anew the availability of fresh available collateral.

- This mismatch represents a source of concern and a potential disturbance for the smooth functioning of markets. In a sense, Gresham's Law, (under which, famously, 'bad money drives out good'), is being demonstrated: 'good money' (in the form of holdings of securities that could be used for collateral) remains in the hands of the official sector, while 'bad money' (in the form of poorly rated collateral that is of progressively less use in financial transactions) circulates relatively freely.

- This mismatch has been in evidence in the US and UK, two countries that took quantative easing action shortly after 2008-09. In the US, a large increase in Treasury securities in the hands of the People's Bank of China (which traditionally takes a very constrained approach about lending on these stocks to the market) has been a significant factor behind a worrying squeeze in prime-rated paper available to the broker-dealer community for use in securities repurchase operations. In the UK, the government's debt management office (DMO) was called into action to act as fiduciary agent for the Bank of England to lend back to the market (mainly for repo transactions) stocks of UK government paper acquired through the central bank's QE.

- The shortfall is especially marked in continental Europe, where low or non-existent credit growth has been a major factor behind the sluggish recovery from recession, and where the supply of adequate collateral to back many types of financial activity involving public and private sector counterparties is a vital ingredient of measures to overcome economic weakness. The European Central Bank's QE programme that started in March 2015 (six years later than equivalent action in the US and UK) will add to pressures on supply of prime-rated euro-denominated government paper.

A new opportunity

Sovereign institutions/GPIs can help to rectify this supply-demand imbalance. They have the opportunity to enlarge their trading activities to supply high-quality securities, in much greater quantities and at higher returns than hitherto, for use as collateral for many varieties of counterparties.

The benefits for sovereign institutions are fourfold. First, they can escape some of the constraints of a generally low-yield environment by achieving additional returns without encumbering themselves with additional material risks.

Second, they can add to mutually rewarding relationships with counterparties by allowing them access to additional liquidity to overcome market impediments.

Third, by underpinning financial market activities with effective collateral, they can actively support regulators' goal of damping the possibility of fresh crises.

Fourth, they can help to augment the performance of the real economy, not just in their local economies but on a worldwide basis. Ultimately, this will feed back into greater wealth and prosperity and thus raise the value of their overall stock of investments.

The new circumstances pose tests for the institutions and their advisers. The innate conservatism of many of these public sector bodies may hinder them from taking full advantage of these opportunities. The challenge for globally operating advisers and custodians is to educate and guide their sovereign clients with a view to enlarging their field of action in an area that promises very large benefits for performance yet risks few, if any, deleterious consequences. Additionally sovereign investors, by enlarging their collateral operations, may be acting in enlightened self-interest, by augmenting liquidity in markets that are vital for securing their smooth investment performance.

Encouragingly, both the institutions and their advisers can rely on behind-the-scenes help from parts of the official community that have an interest in overcoming potential liquidity squeezes. For example, to combat the counterproductive effects of its QE programme, the ECB is inaugurating a significant securities lending programme by participant central banks. This has been the subject of discreet preparatory conversations between the ECB and the British authorities to profit from the UK's post-QE experience.

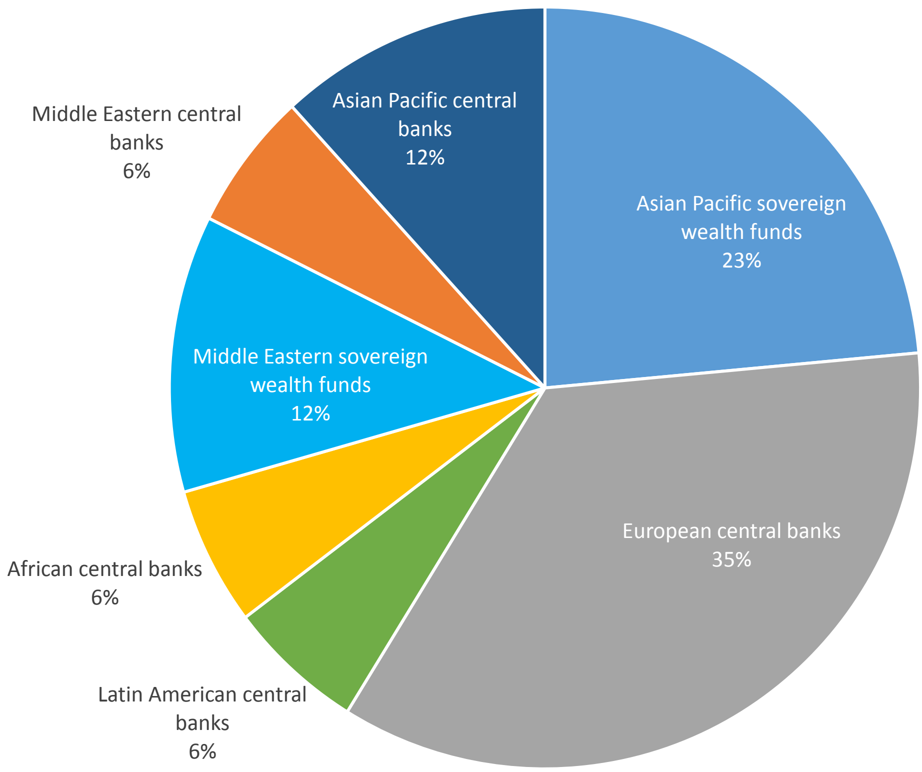
Once the lending programme gets under way, many sovereign institutions from around the world holding prime-rated European government paper may be expected to participate. This creates major opportunities for many sovereign institutions to build up expertise in securities lending both to facilitate standard securities repurchase trades and for more general collateral supply purposes.

OMFIF research approach

This report analyses the opportunity for collateral trades between sovereign institutions and counterparties.

In investigating what is potentially a highly propitious area of action for sovereign institutions, OMFIF has adopted a three-pronged approach by carrying out:

- A wide-ranging series of conversations with regulators, officials and experts in the collateral/securities lending/balance sheet enhancement fields
- A survey with a wide range of international sovereign institutions, conducted on the basis of anonymity, regarding general attitudes to collateral trades
- A series of in-depth interviews with selected sovereign institutions on detailed aspects of collateral trades that they are considering or implementing



Distribution of responses. Source: OMFIF collateral survey, February-March 2015

Regulatory and macroeconomic background

Regulatory action after the crisis

The financial and economic upsets of 2008-09 and their aftermath demonstrated a twin set of shortcomings in the international regulatory framework. Banks were unable effectively to calculate risks. Worldwide supervisory and regulatory authorities were unable to identify these risks and take action to combat them until the crisis emerged and it was (almost) too late. Financial reregulation has consequently been on the rise. A new wave of regulations - Basel III, the European Markets Infrastructure Regulation and the Dodd-Frank Act – is reshaping the risk management strategies of banks and other financial market participants.

Further changes, for example to the reporting and collateralisation of the OTC market, or to the functioning of foreign exchange and credit markets, can be expected as a result of various revelations of malfunction, irregularities or abuse, and from the new regulatory frameworks that are being negotiated through national and international bodies in Europe, North America and Asia.

In April 2009, the G20 nations pledged to 'promote the standardisation and resilience of credit derivatives markets, in particular through the establishment of central clearing counterparties subject to effective regulation and supervision.' The new regulations aim generally at increasing trading transparency, making systematically significant institutions more robust at dealing with losses and market volatility, and creating disincentives against excessive risk-taking.

Competitive effects

The effect has been to increase regulatory demand for high quality assets, in particular, collateral assets that, for a variety of reasons, are subject to supply pressures. The regulations in some senses reorient banks away from active steps to provide credit and liquidity towards more passive measures geared towards absorbing shocks: through raising capital, extending risk coverage, enhancing liquidity standards and, in particular, holding more and higher quality collateral.

The regulatory changes have added to structural and cyclical factors raising demand for collateral. There has been a persistent shift from unsecured to secured funding resulting from banks' revised risk preference. Basel III has increased the requirements of capital liquidity. EMIR margin requirements for OTC derivatives have introduced a further layer of regulatory constraints.

Banks that are able to embrace the new regulations will gain a clear competitive advantage over institutions that have difficulties to adopt the new regulatory standards. Thus both sovereign institutions and their private sector counterparties will have a clear incentive to seek counsel from trusted intermediaries such as collateral advisers and custodians to secure routes for remaining competitive in a more regulated market.

Macroeconomic influence on collateral

As a sign of how falling inflation, weaker oil prices and generally sluggish demand in many leading countries have changed the investment landscape, investors across the world are accepting negative yields on sovereign debt. As of mid-May, the amount of negative-yielding paper had fallen to $1.7tn from more than $3tn a month earlier as a result of enhanced bond market volatility amid expectations that inflation had bottomed out in the euro area and pressure would grow on the ECB to restrain its quantitative easing programme. Significantly more than $1.7tn of government bonds are estimated to carry negative nominal interest rates, with significant effects on financially conservative sovereign investors which, by their very nature, are driven to be very large holders of prime-rated government bonds. Euro money market fund yields are also turning negative.

In effect, the centuries-old pattern under which debtors paid creditors to lend them money has been turned on its head, and hard-headed investors are paying governments for the opportunity to place funds in their bonds – circumstances which were not seen in the Great Depression of the 1930s, let alone in other more recent periods of contracting economies.

Parallel with the fall in yields, the reservoir of safe assets available for collateral use has itself shrunk as a result of macroeconomic fluctuations, caused by lower issuance in recent years and more stringent scrutiny by ratings agencies accused (with some legitimacy) of taking far too lenient a line on sovereign debt before 2008. In terms of the bond market's acceptance of lower 'spreads' over German bonds, much sovereign paper in the euro area is now thought safe again following the ECB's never-requited 2012 pledge to buy up potentially unlimited quantities of paper to protect weaker countries. But there is still a dearth of triple A-rated paper (see p.26). In the global government bond market demand is running ahead of supply, not least because of central bank buying.

One of the paradoxical features of monetary union in Europe has been that it was designed to improve stability – but it lowered the number of truly safe bonds of governments that have their own currency and central bank. Investors recognised in recent years that, far from being buttressed by supranational support, euro area members with balance of payments disequilibria were subject to default risk in the absence of a power to print money in individual euro bloc countries.

If the definition of safe assets is extended to include repurchase agreements, the shrinkage is even sharper. It is estimated that repo balances have fallen from more than $5tn before the crisis to about $2.5tn today, reflecting banks' new risk aversion as well as tougher regulation of banks. The ECB's QE will exacerbate the shortage of safe assets, especially since regulations require banks and other financial investors such as insurance companies to hold assets in domestic government bonds.

Compounding this, shortage of adequate investment possibilities in emerging markets, combined with a build-up of financial savings in these countries from both public and private sector investors, has led to an outflow from these areas seeking relief at home for their assets abroad.

Decline of triple-A rated sovereigns

	S&P		Moody's		Fitch	
	Mar 2015	Dec 2006	Mar 2015	Dec 2006	Mar 2015	Dec 2006
Euro area						
Belgium	AA	AA+	Aa3	Aa1	AA	AA+
Austria	AA+	AAA	Aaa	Aaa	AA+	AAA
France	AA	AAA	Aa1	Aaa	AA	AAA
Germany	AAA	AAA	Aaa	Aaa	AAA	AAA
Luxembourg	AAA	AAA	Aaa	Aaa	AAA	AAA
Netherlands	AA+	AAA	Aaa	Aaa	AAA	AAA
Finland	AA+	AAA	Aaa	Aaa	AAA	AAA
Other European Union						
Denmark	AAA	AAA	Aaa	Aaa	AAA	AAA
Sweden	AAA	AAA	Aaa	Aaa	AAA	AAA
United Kingdom	AAA	AAA	Aa1	Aaa	AA+	AAA
Other Europe						
Norway	AAA	AAA	Aaa	Aaa	AAA	AAA
Switzerland	AAA	AAA	Aaa	Aaa	AAA	AAA
Non-Europe						
Australia	AAA	AAA	Aaa	Aaa	AAA	AA+
Canada	AAA	AAA	Aaa	Aaa	AAA	AAA
Hong Kong	AAA	AAA	Aa1	Aa3	AA+	AA-
Japan	AA-	AA-	A1	Aaa	A+	AA
Kuwait	AA	AA	Aa2	Aa3	AA	AA-
New Zealand	AA	AA	Aaa	Aaa	AA	AA+
Singapore	AAA	AAA	Aaa	Aaa	AAA	AAA
United Arab Emirates	AA	AA	Aa2	Aa3	AA	AA
United States	AA+	AAA	Aaa	Aaa	AAA	AAA

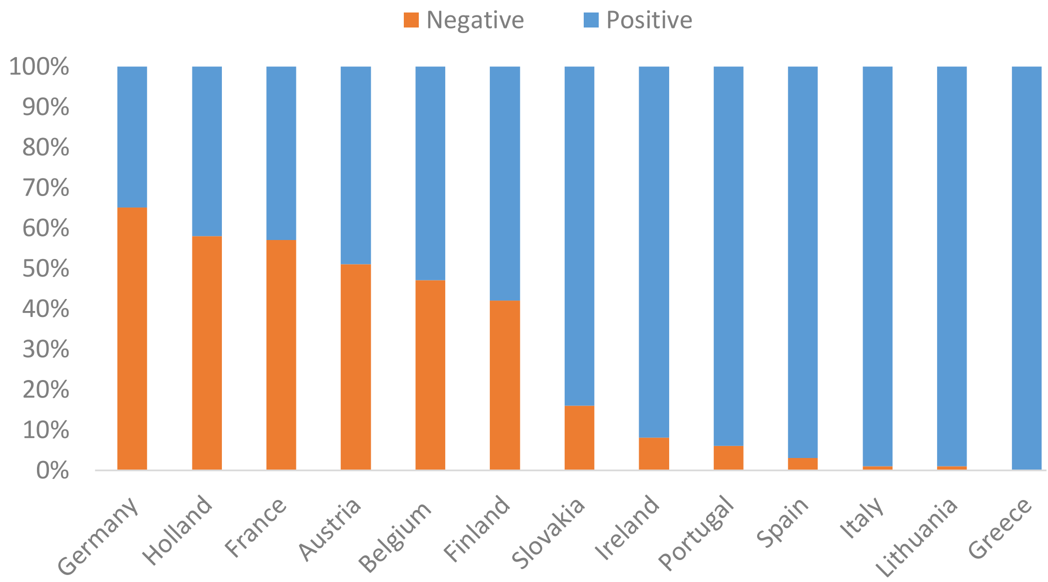
Source: S&P, Moody's and Fitch. Figures are correct as of publication date.

The shrinking of triple-A rated assets has been particularly severe in the euro area, precisely the region where supplies of adequate collateral to help propel credit growth and faster recovery are most badly needed. Before the financial crisis, six euro area countries – Germany, France, Netherlands, Austria, Finland and Luxembourg – had triple-A ratings, according to Standard & Poors, making up 68% of euro area GDP. In May 2015, the number has fallen to two, making up 27% of euro area GDP. By contrast, five non-euro area European counties – the UK, Sweden, Switzerland, Norway and Denmark – have maintained their triple-A rating. Just four other countries – Canada, Australia, Singapore and Hong Kong – have kept their top rating. Before the crisis, six of the club of 16 top rated sovereigns (which then included the US) were from the euro area (38%), while in 2015 the figure was two out of 11 (13%).

The yield landscape

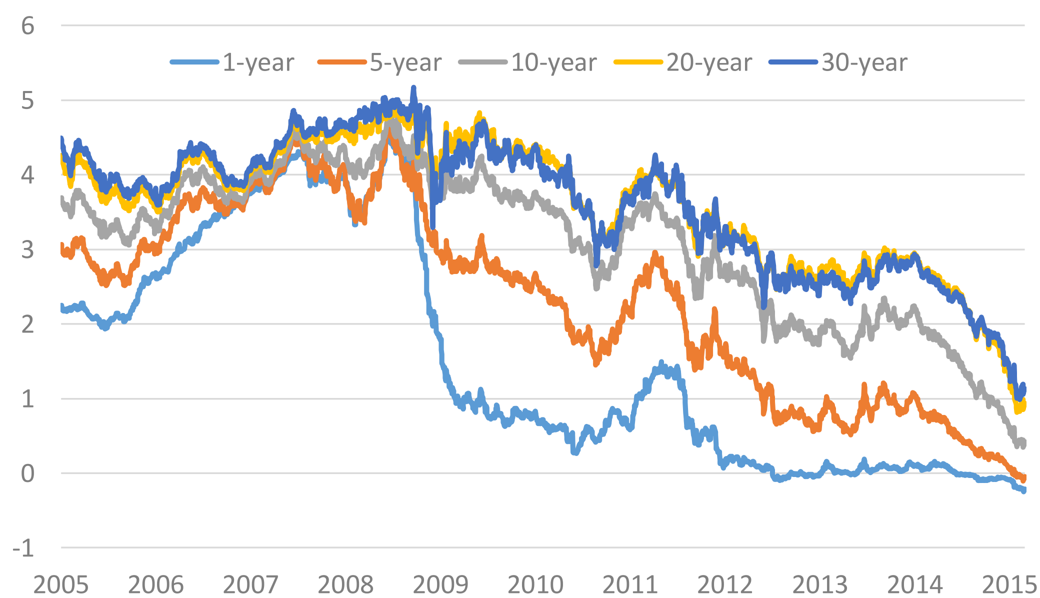
The negative yield environment increased many sovereign institutions' desire and need to use their balance sheets more effectively to make additional returns without adding to risk. Exploiting an ability to use securities in their balance sheets for collateral purposes, and making use of these institutions' lower exposure to burdens from enhanced regulation, compared with many of their counterparties, is a natural reaction to the shifting circumstances.

Percentage of bonds with negative yields in the euro area, May 2015



Source: RBS Credit Strategy, Bloomberg

How euro area bond yields have fluctuated, 2005-15



Source: ECB

State of the collateral market

Collateral, particularly High Quality Liquid Assets (HQLA) and High Quality Assets (HQA), is being squeezed both on the demand and supply sides, giving rise to the need for collateral to move through the system more effectively to meet demand. As demand increases, so too does the need for collateral to move fluidly and to be used efficiently.

Demand for collateral has increased, and is projected to increase further. This stems from regulations such as Basel III which requires banks to maintain larger and higher quality capital buffers, and EMIR, which increases the margin requirements for cleared and uncleared OTC derivatives trades. The trend reflects, too, the influence of new risk evaluation models and deleveraging.

In theory, there is no great shortage of these high quality assets, in view of the paper issued to cover government and corporate financing needs, as well as broader HQA eligibility. However, the effective supply is much lower, owing to the widening of central banks' quantitative easing (most recently the ECB's €60bn a month asset purchase programme that started in March 2015), and 'hoarding' of these assets in foreign exchange and other reserves.

The introduction of euro area QE creates considerable challenges as the Bundesbank and other national central banks will have difficulties buying their expected monthly quotas of bonds, with private sector banks reluctant to part with securities prized for collateral and regulatory compliance. Further, national central banks will not be able to make high profits from the new QE action, as they previously did with earlier ECB bond purchasing.

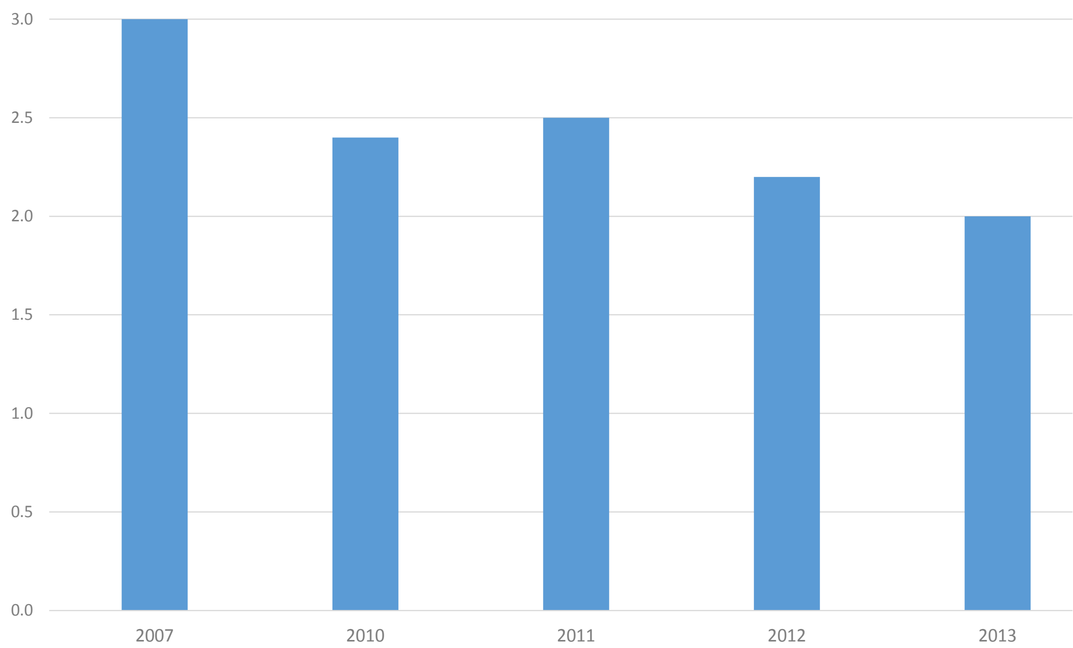
Private sector banks, which are required to hold HQA, do not have access to the supply in the hands of institutions that are holding this material for investment rather than regulatory reasons. This supply-demand mismatch brings to the fore the need for sovereign institutions to make more effective use of their position as potential suppliers of collateral and liquidity to the world financial system.

Velocity of collateral

The reuse of collateral pledged by non-banks is a key part of the lubrication of the global financial system. Since the financial crisis, the decline in the availabilty of source collateral, the velocity of collateral, in a similar fashion to the multiplier effect, has reduced the amount of available collateral by at least $4 to $5tn worldwide. Coupled with increased regulation and requirements to hold collateral, this further puts pressure on the lubrication of the financial markets. The chart below demonstrates how the velocity of collateral has decreased from 3.0 in 2007 to 2.0 in 2013.

Year-on-year since 2011 the velocity of collateral has decreased. At the end of 2007, it is believed there was over $10tn in secured collateral operations. This now is at a level of just $6tn. The evidence suggests that the longer lending chains, a result of reduced supply of collateral from primary source clients are due to the counterparty risk of the dealers, and the demand for higher quality collateral by the ultimate clients.

Fall in the velocity of collateral, 2007-13



Source: IMF Working Paper 'Collateral and Monetary Policy' - Manmohan Singh

Navigating the collateral landscape

New balance sheet equilibrium

Research carried out by OMFIF as part of this investigation has involved conversations and survey interactions (conducted on an anonymous basis) with about two dozen sovereign institutions/GPIs around the world. The research shows that sovereign institutions are plainly aware of their position as systemically important bodies that are integral to the financial markets.

Often the initiators of more stringent regulations, they are not subject to the same regulatory pressures as their counterparties. They recognise that the regulatory and macroeconomic landscape provides an opportunity to providing liquidity to the markets, either in a continuation of operations they carry out in their normal procedures, or in a conscious act to develop their business models. Through securities lending and other collateral trades, sovereign institutions can make more efficient use of their asset base. However, a prime consideration is to bring balance sheet optimisation, risk management and liquidity assurance into a better equilibrium.

Most institutions are only at the beginning of finding the right approach to these issues. For these bodies, desire to optimise balance sheets and to demonstrate returns is a secondary consideration, as these assets are primarily held to provide liquidity, for example, to their respective government when needed. In view of low oil and commodity prices, this need has become increasingly important for GPIs from natural resource-supplying nations. In the securities lending/collateral fields, many sovereign institutions are concerned less about direct counterparty risks, generally held to be minimal, and far more about risks associated with further lending to others in the collateral chain, which could result in unacceptable burdens and problems for sovereign investors.

These risks can be mitigated through specific contractual clauses on transaction limitations and transparency, in line with sovereign institutions' increasingly adept approach to risk and liquidity management, as well as to regulatory exposure, institutions engage proactively with regulators. The circle of regulatory change now forms a key part of risk and liquidity management.

OMFIF survey – broad results

OMFIF spoke with two dozen sovereign institutions in February and March 2015 to gather their views and reflection on collateral trades. The sovereign institutions involved have over $2tn in combined assets, representing 7% of total assets under management by sovereign institutions worldwide. Central banks, broadly speaking, show a smaller interest in securities lending than other GPIs such as sovereign wealth funds and public pension funds. However, some larger central banks are looking to undertake these trades in highly liquid developed markets to enhance income. Returns on these trades are expected to be around 20 basis points, according to the OMFIF survey.

One issue raised by central banks was the need for more operational robustness for a wider range of securities and for greater certainty in the timely settlement of transactions. Additional requirements were increased transparency and risk monitoring. A crucial issue is the reliability of reports from securities lenders as to the status of transactions.
Sovereign funds have received increased inquiries in the last 12 months, with many responding positively as a result of requirements for an enhanced income stream.

Sovereign funds, depending on the type and duration of trades appear to be looking for higher returns than central banks, at between 40 and 120 basis points. Many sovereign funds, although they are not regulated like banks or their counterparties, are subject to internal restrictions, particularly on securities lending, on a best return per unit of risk basis.

This may explain the requirement for higher returns. Sovereign funds are less worried than central banks about lack of transparency and risk monitoring in this market segment. Additionally they show a similar lack of concern over apparent barriers to trade, which they do regard as a significant impediment.

OMFIF survey – detailed results

1. Increased volume of inquiries

'Inquiries have picked up, both from traditional custodial lenders as well as third-party lenders.'
- Portfolio Manager, Asia Pacific central bank

Of the two dozen institutions surveyed, 66% said they had experienced increasing inquiries on collateral trades in the last 12 months. Sovereigns looking to carry out these trades regarded these transactions as part of their day to day operations. These institutions are discussing the matter with their custodians on a case-by-case basis to see how individual trades would unfold as a guide to future practice. One central bank said inquiries were picking up, both from traditional custodial lenders as well as third-party lenders.

2. Varying patterns of demand

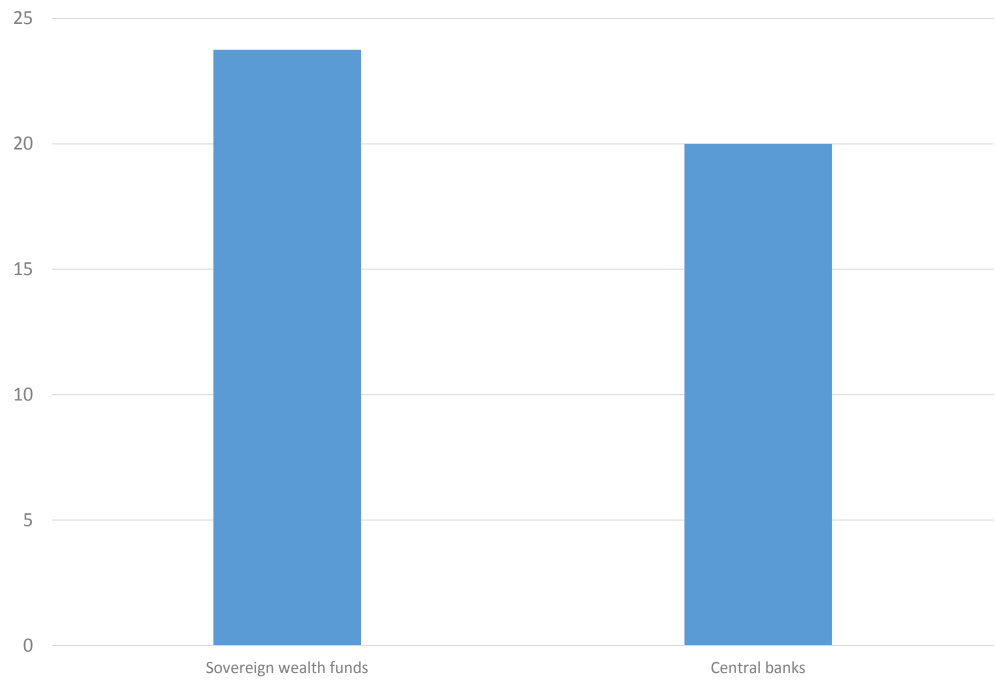
'In the current environment of low oil prices, the liquidity framework becomes more important so investment activity can continue. We must make sure the liquidity profile is appropriate, prioritising liquidity over returns. In future, maintaining the liquidity management framework is the key.'
- Chief Risk Officer, Middle East sovereign fund

Of the two dozen institutions surveyed and receiving inquiries, 37% are in advanced stages of considering these trades or are already carrying out these trades. The remainder are receiving inquiries but are not investigating these types of trades for the moment. Institutions in advanced stages of considering these trades are experimenting on how these trades would fit into their risk and liquidity management frameworks. A risk manager from a prominent sovereign wealth fund said the liquidity profile remains the priority over returns in the environment of low oil prices. The sentiment was echoed by the risk managers counterparts in other sovereign institutions. 37% of sovereign institutions are considering or already undertaking trades after receiving inquiries.

3. Balance between risk and return

'With strict conditions on the subsequent lending of the collateral, returns are expected at around 20 basis points.'
- Portfolio Manager, Asia Pacific central bank

Sovereign institutions have a wide range of often differing objectives. Many institutions hold high quality collateral not for yield, but as a vital part of their liquidity management framework. In this case, return is a secondary concern. However, even with liquidity taking priority, these institutions do need to use their balance sheet effectively and efficiently. These institutions take great care in managing risk when examining these trades, to ensure their collateral is safe once lent out. As one institution put it, 'If a trade is allowed by regulations, it does not mean it is a correct trade to carry out from a risk management standpoint.' Many institutions recognise that sovereign funds are an integral part of the world financial system, and they see there is now a greater need to provide liquidity in the markets by carrying out these trades. However, they remain very cautious about the balance between risk and return. One sovereign investor, citing the need for strict conditions on the subsequent lending of the collateral, expected returns of around 20 basis points. Another investor said that these trades could only yield 2 to 3 basis points, if they could be carried out. However, other institutions indicated significantly higher returns would be required for transactions viewed as carrying higher risks.



Average expected returns from collateral trades (basis points). Source: OMFIF collateral survey, February-March 2015

4. Identifying opportunities

'There is nothing to prevent us exploring these trades. We manage our balance sheet proactively and we, like other institutions, ensure we are using it intelligently. We have many contingency plans. We are prepared for any outcome.'
- Chief Risk Officer, Middle East sovereign fund

All respondents identified the opportunity of these trades. It allows institutions to use their balance sheet more efficiently and effectively, utilising their high quality collateral to yield extra return. As one institution said, 'There is nothing to prevent us exploring these trades.' He added, 'We are very aware about risk from on-use of collateral. We are open to the idea of rehypothecation.'

5. Importance of risk

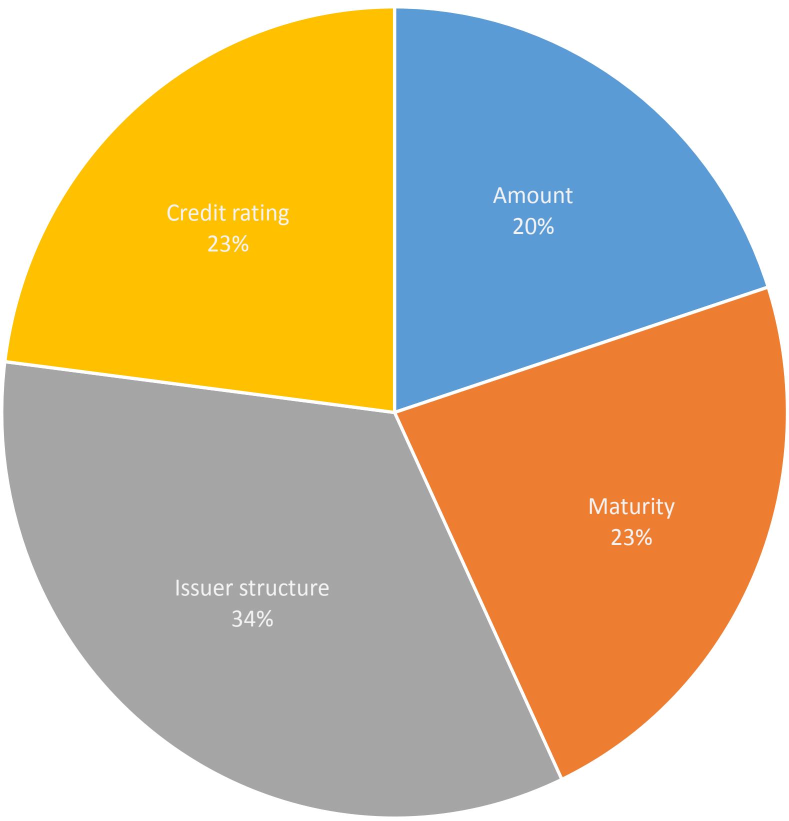
'Risks are dependent on reports from securities lenders as to the status of the transactions.'
- Portfolio Manager, Asia Pacific central bank

Transparency and risk monitoring are seen as a major issue by only a relatively smaller number of institutions, with only 17% of respondents viewing this as a significant concern. On the whole, there was relative comfort from the general level of information on risk and credit rating of the issuers of the securities in question. One risk manager from a prominent central bank considering these trades, who stated risks were dependent on reports from securities lenders as to the status of the transactions, indicated that these reports were generally adequate for the purposes of the trade.

6. Asset quality

'Some transactions we have been offered allowed rotation within the pool of positions in the reference portfolio, usually in capital relief transactions.'
- Senior Adviser, Asia Pacific sovereign fund

Institutions have relatively few restrictions on the amount, maturity, issuer structure and credit rating of the paper they can lend out. On the whole these securities are managed, as one sovereign institution stated, on a 'best return per unit of risk' basis. Another institution stated it was trying to focus on higher quality securities and shorter maturities. In terms of the actual trade, one institution said the specifications of the paper eligible to be lent out for collateral purposes were agreed in advance with counterparties, along with the 'haircuts' on the collateral posted. Other more complicated structures are possible.

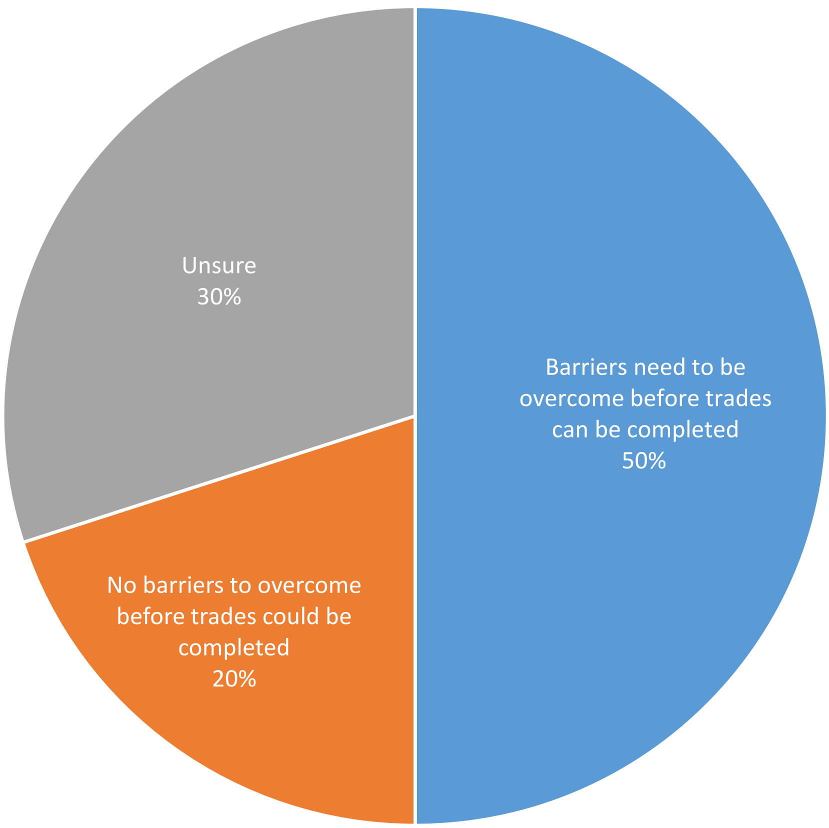


Distribution of level of importance. Source: OMFIF collateral survey, February-March 2015

7. Barriers to build-up of collateral trade

'A full time desk is needed for these trades to be carried out. But if the return is only around 2 or 3 basis points, the costs may outweigh the small potential yields from this activity.'
- Senior Economic Adviser, Asia Pacific sovereign fund

Around 50% of the institutions in advanced stages of considering these trades described barriers to be overcome before such trades could be completed. One sovereign said that operational robustness for wider ranges of securities needs to be increased. There also needs to be a system, or a clause within the contract, ensuring the timely settlement of transactions and the ability to recall the capital in full at short notice. Another barrier is the cost-benefit trade-off. One manager said institutions needed to recruit and retain the necessary personnel.

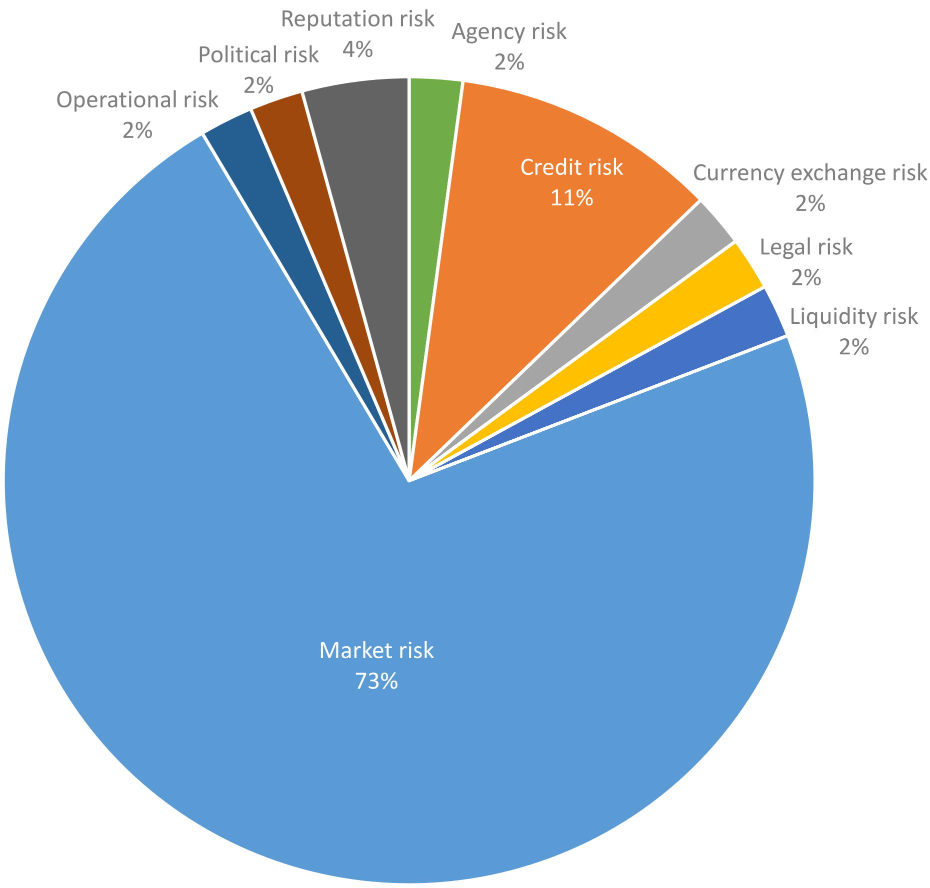


Source: OMFIF collateral survey, February-March 2015

8. Regulations and restrictions

'We go to the regulators and engage proactively. It means a lot to them if we reach out. We must have a view of the regulatory market and is very much a part of risk management.'
- Chief Risk Officer, Middle East sovereign fund

Almost all sovereigns said that, although there are no regulatory impediments regarding lending collateral to third parties, there are internal restrictions. As a part of risk management and liquidity management frameworks, the lending out of securities must adhere to these internal controls. When asked to identifiy risks, 73% of sovereigns identified market risk as the most important risk. However, regulatory risk is becoming increasingly more significant to sovereigns. Regarding regulations, sovereigns engage proactively with the regulators as they feel they must have a view of the regulatory market – an important part of risk management. Some sovereigns are developing in-house teams to monitor regulations and keep close contact with regulators. Regulatory risk has been identified as a real risk within the risk and liquidity management regime. Many institutions are adjusting their personnel and approach in an appropriate manner to keep pace with this development.



Risks identified by respondents. Source: OMFIF Global Public Investor survey, September-December 2014

Definitions and abbreviations

Definitions and abbreviations

Basel III
Set of reforms developed by the Basel Committee on Banking Supervision, aimed at strengthening the regulation, supervision and risk management of the banking sector. These aim to improve the ability of the banking sector to absorb shocks from any source and to improve risk management, governance, transparency and disclosure. Banks will be required to maintain much larger buffers of high quality liquid assets and to operate at lower risk levels. Changes are being phased in by 2019.

Collateral assets
Assets on which market participants rely in collateralised funding transactions. This definition extends beyond HQLA and HQA (see below), including assets such as mortgages. In economic and monetary union, the European Central Bank since 2010 has progressively lowered collateral standards for securities it accepts in central bank transactions.

Collateral fluidity
Collateral fluidity is the efficiency of the flow of collateral from the source to the user. Even if there is sufficent collateral to meet demand, low collateral fluidity restricts the free circulation of the collateral. Market participants will be forced to look wider for new sources of liquidity and collateral.

Dodd-Frank Act
A US federal law implemented in July 2010, affecting many areas of the financial services field and associated sectors, extending oversight and supervision of financial institutions, enforcing transparency and accountability and enhancing rules for consumer protection.

European Markets Infrastructure Regulation (EMIR)
Regulations implemented in August 2012, aiming to improve transparency of OTC derivatives markets, ensuring they should be traded through exchanges or via electronic trading platforms, and reducing risks. Among other provisions, such as reporting of contracts, for certain OTC derivatives that are not centrally cleared, additional risk mitigation techniques apply. These new regulations apply to all EU firms that are counterparties to an OTC derivative contract, including all financial institutions and non-financial companies in such transactions, but excluding pension funds. Inter-group transactions are excluded from the rules.

Financial Market Infrastructures (FMIs)
Enable financial markets to clear and settle transactions as well as to move money and securities across the globe. FMIs intend to strengthen and stabilise markets. If they lack management and supervision, FMIs can be the source of systemic risk.

Financial Stability Board (FSB)
International body that monitors and makes recommendations about the global financial system. The body promotes international financial stability by coordinating national and international standard-setting bodies to develop policies aimed at improving transparency and lowering risk.

High Quality Liquid Assets (HQLA)
Assets with low credit and market risk that are easy to value and are traded in active markets. They are expected to be liquid during times of stress and central bank-eligible.

High Quality Assets (HQA)
These are assets that market participants can use to meet collateral requirement in derivative transactions, the boundaries of which are largely determined by market practice.

International Central Securities Depositories
CSDs for the Eurobond market. Throughout the past 30 years, ICSDs have expanded and now settle international traded securities from a number of domestic markets and across currencies.

International Organisation of Securities Commissions (IOSCO)
Umbrella organisation for regulators of the world's securities and futures markets, regulating over 95% of the world's securities markets covering 182 members and 100 countries. IOSCO recommends a regularly updated set of principles for adoption by its members.

Over-the counter (OTC) derivatives market
Market in derivatives traded outside formal exchanges, with trades usually carried out by broker-dealers. An estimated $691tn in notional amounts outstanding.

Rehypothecation
Lending of clients' collateral by brokers to a third party. If a broker is pledged capital by a client, the broker, once being granted the right by the client, is able to lend this out. In the process this reduces the borrowing cost for the client.

Repurchase agreement ('repo')
Form of borrowing under which a bank or dealer, wishing to raise short-term capital, can sell a security (normally a government security) with an agreement to buy it back at a later date at a higher price, usually overnight.

Reverse repo
The other side of a repurchase agreement. A party buys a security with an agreement to sell the security back to the other party at a higher price, effectively lending the seller short-term capital.

TARGET2
TARGET2 is the real-time gross (RTGS) system for the euro. TARGET2 settles payments in euros in central bank money and functions on the basis of a single IT platform, to which all payment orders are submitted for processing. This means that all payments are received in the same technical form. TARGET2 is legally structured as a multiplicity of RTGS systems (TARGET2 component systems).

The Volcker rule
Included as a part of the Dodd-Frank Act, the Volcker Rule, named after the former Federal Reserve chairman, prohibits banks from proprietary trading and restricts investment in hedge funds and private equity by commercial banks.