A Survey of Securities Markets Risk Trends 2014

Methodology and Detailed Results

June 2014

Staff Working Paper of the IOSCO Research Department

Author: Shane Worner [1]

[1] The author is a Senior Economist within IOSCO's Research Department. The author would like to thank all survey participants that took the time to complete the survey.

About this Document

The IOSCO Research Department produces research and analysis on a range of securities markets issues, risks and developments. To support these efforts, the IOSCO Research Department undertakes a number of annual information gathering exercises including, but not limited to, extensive market intelligence in major financial centres and data gathering and analysis through independent surveys.

One such information gathering exercise undertaken by the Research Department on an annual basis is a risk survey; an in-depth survey formulated to collect views of financial market regulators and experts globally on those risk areas that are of concern. This edition of the survey was conducted in March 2014. The main purpose of the survey is to gather views on emerging risks to/within securities markets and help identify/highlight pockets of risk that may not be captured by normal statistical analysis or desk research. It is not an attempt to rank risks through a survey. The survey should be seen as a way to gather global views and opinions and an important supplement to the market intelligence and other data research exercises undertaken by the research function of IOSCO. The results of this survey constitute an important input into the annual production of the IOSCO Securities Market Risk Outlook, which will be posted in late September 2014.

Executive Summary

This report presents the results of an in-depth survey to the IOSCO Research Department's "Expert Network" and IOSCO's regulatory members on their views on risks to/within the global securities markets. The purpose of the survey is to gather expert views on the current concerns within the financial markets. This is the third year this particular exercise has been undertaken. The body of the report offers a synthesis of expert opinions with the main areas of concern summarised under the following points:

- Issues considered "macro-prudential" in nature are high on the concerns of respondents, especially in the areas of banking vulnerabilities and capital flows.
- More micro-prudential risks clustered around the areas of corporate governance, financial risk disclosure, shadow-banking activities and, especially, regulatory policy.
- Responses differ by organisational type; regulators see risk emanating from illegal conduct, corporate governance, financial risk disclosure and benchmarking issues, while market participants are more concerned with risk in the areas of search of yield, resolution and resolvability plans, CCPs and market fragmentation.
- Respondents saw very few "risks" sourced within securities markets. Securities markets were more likely to transmit and/or amplify shocks from outside.
- On the question of the impact on the economy, respondents thought that banking vulnerabilities and capital flow volatility would have considerable impact. Concerns of risks emanating from the housing market also continue to increase.
- Over time some risk areas have gained attention while others have lost attention. The speed of change can be very fast. Sovereign debt and the global economic slowdown were prominent two years ago, but not now.
- However three risks have been consistently and frequently mentioned during these three years: regulatory uncertainty; banking vulnerabilities; and capital flows.
- Other noteworthy trends include a growing recognition of the threat of cybercrime or cyber-related issues to systemic stability; financial risk disclosures and resolution and resolvability framework.

Contents

Introduction

The IOSCO Research Department produces annually its flagship publication namely, the *IOSCO Securities Market Risk Outlook (The Outlook).* The Outlook is the product of a number of informational inputs that help to identify emerging and potentially systemic risks to and within securities markets. These exercises include data gathering and analysis, construction of quantitative systemic risk indicators, extensive market intelligence interviews in major financial centres, risk roundtables with prominent members of industry and regulators, risk reports and presentations by experts to the Committee on Emerging Risks, and, the focus of this note, a survey on emerging risk to the market and regulatory community.

To canvas the numerous and varied opinions within the financial industry, the IOSCO Research Department developed an online survey that was emailed to industry, academia, regulators and self-regulating entities. The survey provides an easy, cost-effective and confidential means by which to collect and collate expert views, while helping to identify the major risk areas that could impact securities markets, in both the short and long run. The survey also has a number of additional advantages including:

1. obtaining a wide range of opinions from around the globe;
2. quantifying the nature and importance of the pre-determined risk topics, according to expert responses;
3. collecting information on their likely impact on the economy;
4. highlighting any significant risks not included in the initial selection of risks to the securities markets that featured the survey; and
5. providing a time series of how responses have changed given that this is the third iteration of the survey.

This staff working paper provides an analysis of that risk survey. Following is a discussion on the underlying methodology used to collect the data, as well as a breakdown of responses and comments.

Purpose of this Report

As part of IOSCO's mission and objectives,[2] member regulators agree to monitor, regulate and develop securities markets, while:

1. Protecting investors;[3]
2. Ensuring markets are fair, efficient and transparent; and
3. Reducing systemic risk.[4]

The report addresses this last point.

[2] IOSCO Objectives and Principles of Securities Regulation [see http://www.iosco.org/library/pubdocs/pdf/IOSCOPD154.pdf
[3] IOSCO has set up a new Committee on Retail Investors issues. Also see IOSCO's recent report, 'Investor Education: Initiatives Relating to Investment Services', February 2013.
[4] See IOSCO, *Securities Markets Risk Outlook 2013-2014*, October 2013

Structure

This staff working paper is structured as follows: **Chapter 1** outlines the initial steps and survey design along with a discussion on the methodology used to compile and analyse the available data, questions and the list of risks presented to respondents is also included. **Chapter 2** identifies some of the detailed statistics on each respondent's organisational type, geographic region and economy. **Chapter 3** provides a snapshot of the major trends related to risk as seen by market practitioners. Additionally, a discussion on how those views have changed over time is also presented. **Chapter 4** concludes**.**

1. Methodology

The initial steps - An outline of the survey design

The survey on the major risk areas that could impact securities markets is structured into six questions that are sent to all experts of the Research Department´s network and the member regulators of IOSCO. Compared to the survey of 2012 and 2013, the 2014 iteration of the survey was condensed into six questions; three of which were devoted to collecting opinions on emerging risk areas.[5,6] Only one survey was sent out to all potential participants, streamlining the process, providing a more consistent survey methodology and aiding the collection of more consistent and comparable data.

The first substantive question on the survey on emerging risks asks participants to "*identify from the list, five areas that you see as most important to explore for your jurisdiction when it comes to maintaining financial stability."* To guide participants, the final version of the survey included a pre-determined list of risks. This list, however, was not created in isolation. The list presented to survey respondents identified a number of areas where risks could be building-up. The list was composed on the basis of over 70 market intelligence meetings and/or roundtables with industry, regulators, international organisations and academics globally. These meetings began in August 2012 and have continued since.

The final list of potential risk areas included in the online survey is presented in Table 1 below. The list is comprehensive and covers many issues within financial markets including market microstructure changes, product innovation, behavioural spill-over effects and macro-prudential shocks (which are beyond the control of securities market regulators). However, in order to avoid framing of the responses and to add additional flexibility the "Other (Please specify)" option was included; a free-comment field allowing respondents to outline areas of concern not included in the list of options. In order to keep the responses impartial, the risks were listed alphabetically within the survey.

Table 1: **List of "Emerging risk" areas presented in the survey**

Options presented in survey participants
Banking vulnerabilities
Benchmarks
Capital flows
CCPs
Collateral management
Corporate governance
Cyber security
Exit strategies
Financial risks disclosure
Fragmentation
High frequency and algo trading
Housing market
Illegal conduct
Leverage
Over the counter derivatives

[5] For the purposes of this note, the terms "emerging risks", "areas of concern", "risk areas" mean the same thing and will be used interchangeably.

[6] The other three questions relate to capturing "demographic" information to aid in the analysis of the data.

Recovery and resolution plans
Regulation
Repo funding and securities lending
Retail financial products & services
Search for yield
Securitisation
Shadow banking
Structured products
Other

Source: IOSCO Research Department

1.1. The online survey

As mentioned above, for the 2014 edition of the risk survey, only one online survey was developed for delivery to all participants. Participants can be separated into two broad categories: 1) IOSCO members (Ordinary, Associate and Affiliate) and those that are a part of the Research Departments external expert network. [7] The surveys were sent to approximately 1000 participants in total in March 2014, with responses requested by the beginning of April 2014.

The survey was designed to capture the following information from participants:

1. at a high level, the five most important areas of concern that could impact on the financial system;
2. at a more granular level, the trends, risk or activities within those five broad categories that were of particular concern to respondents;
3. the potential impact on the economy;
4. the means of identifying/mitigating those risks;
5. the categorisation of those risks (that is, are the risks transmitted through the securities markets (*transmission*), is the risk amplified by the securities markets (*amplification*), or sourced from within the securities markets (*source*) and other); and
6. obtain additional information and data sources on the risks.

Respondents were encouraged to identify areas of concern, as they saw them, to global securities markets, even if they were outside the control of the securities markets. It was made clear that all individual-level responses would be kept confidential to allow for impartial and frank views.

In order to ascertain which risks were important to regulators and industry, recipients of the surveys were asked the following question: "…***identify from the list, five areas that you see as most important to explore for your jurisdiction when it comes to maintaining financial stability.***" Respondents were asked to choose from the list of risks presented above in Table 1.

Additionally, survey recipients were asked to elaborate on the particularities within each of the categories chosen, providing more granular arguments as to why the areas chosen were of a concern for them. Survey participants were asked "…***for each area, please specify in a few words the particular activity, behaviour, development or situation that you see as contributing to risk build-up.***"

[7] The IOSCO Research Department's external expert network comprises individuals and organizations from the financial markets and academia. A list of those external respondents who agreed to be mentioned is listed in a separate section of the appendix.

Furthermore, survey recipients were asked to indicate whether the areas of concern were transmitted through securities markets, amplified by the securities markets, or sourced within the securities markets. Specifically, ***"…specify, for each of these five risks, whether you see them as being transmitted through securities markets, amplified by securities markets or sourced from securities markets themselves.***"

The final feature of the online survey is that it asked respondents to assess which risk would have the greatest impact on the economy if it materialised. In other words, respondents were asked which risks were more likely to become of systemic concern: "**In the event of a significant shock, of the risks you selected, what would most likely have the greatest impact on the real economy?"**

Additional ancillary questions were asked in support of the main questions (geographical, organisational type, economy).

1.2. Caveats

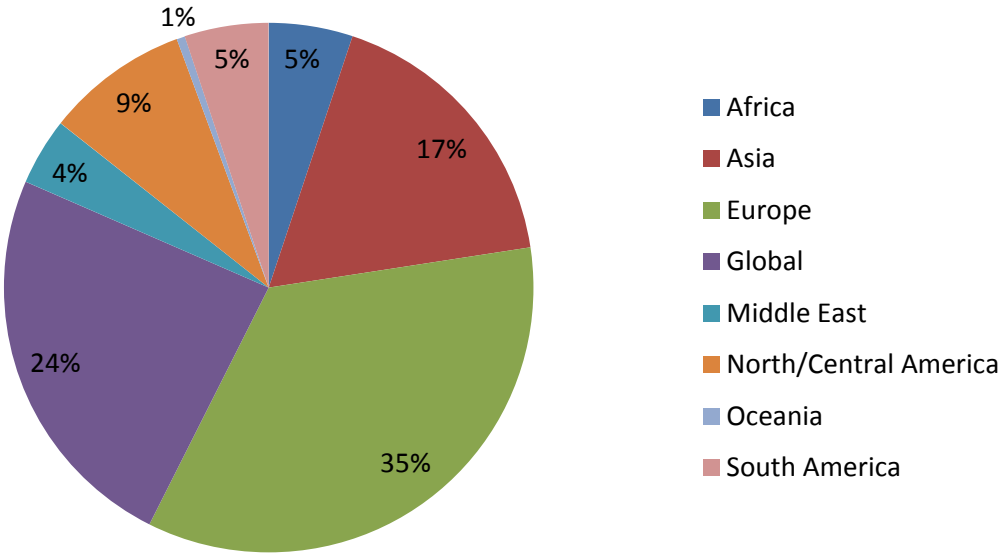
The data and the results presented are based on the un-weighted responses to the survey. No attempt has been made to filter and weight the data based on organisational type, especially where an organisational view has been provided rather than an individual view. Regional balances of the data are skewed towards Europe and North America and developed market responses. However, given the predominance of these areas within global capital markets, this is an expected outcome of the survey design.

Finally, the figures, tables and opinions expressed in this report are only a synthesis of the responses received from survey respondents. Any and all views expressed in this report are interpreted from individual responses and do not necessarily reflect the views of IOSCO and its members.

2. Summary statistics of the respondents

Following below are some descriptive statistics highlighting the "distribution" of respondents (Figure 1, Figure 2 and Figure 3). The survey was sent out to 1000 external recipients. Of these, 202 participants completed the survey. The survey response rate was 20.2 per cent.

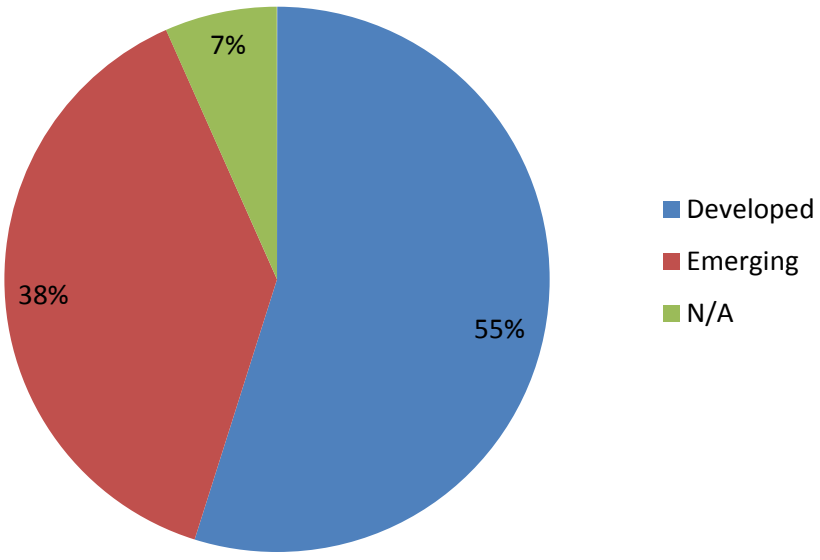
Figure 1: Geographic distribution of survey respondents



Total responses: 202

Source: IOSCO Research Department

Figure 2: Distribution of survey respondents by economic classification



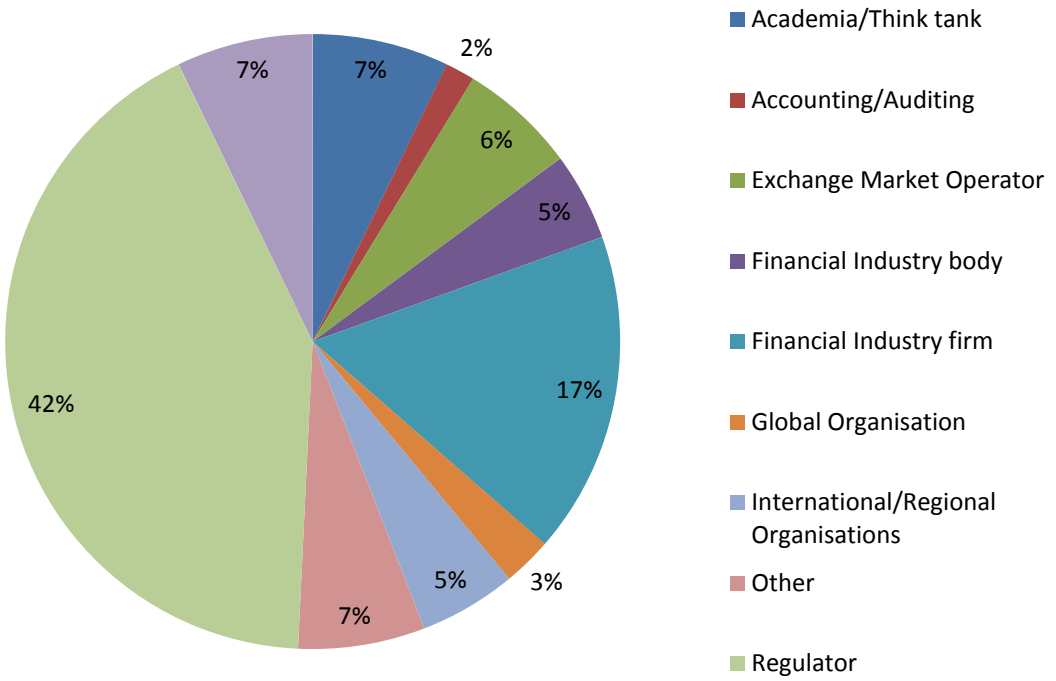
Total responses: 202

Source: IOSCO Research Department
Note: N/A no response to the question was recorded

Figure one shows that the largest response rates came from Europe (35% of respondents), followed by institutions who described their activities as global (24%), Asia (17%) and North and Central America (9%).

Figure 2 shows the distribution of the respondents according to their economic classification. 55% of the respondents defined themselves as operating predominantly in developed markets, 38% in emerging markets and 7% did not classify, meaning that they operate equally in both markets.

Figure 3: Distribution of survey respondents by organisational type



Total responses: 202

Source: IOSCO Research Department

Figure 3 shows the distribution of respondents according to the type of organisation. 42% of the respondents are regulators, mainly securities market regulators that are members of IOSCO. Another 7% of the respondents are self-regulatory organisations. Adding these two together shows that roughly half of the responses are from the regulatory community and the other half are from other market experts. The non-regulatory group of respondents has a wide range of institutions. Of the responses, 17% come from experts within financial firms, followed by academia with 7%, exchange market operators with 6%, international and regional organizations with 5% and financial industry bodies with 5%.

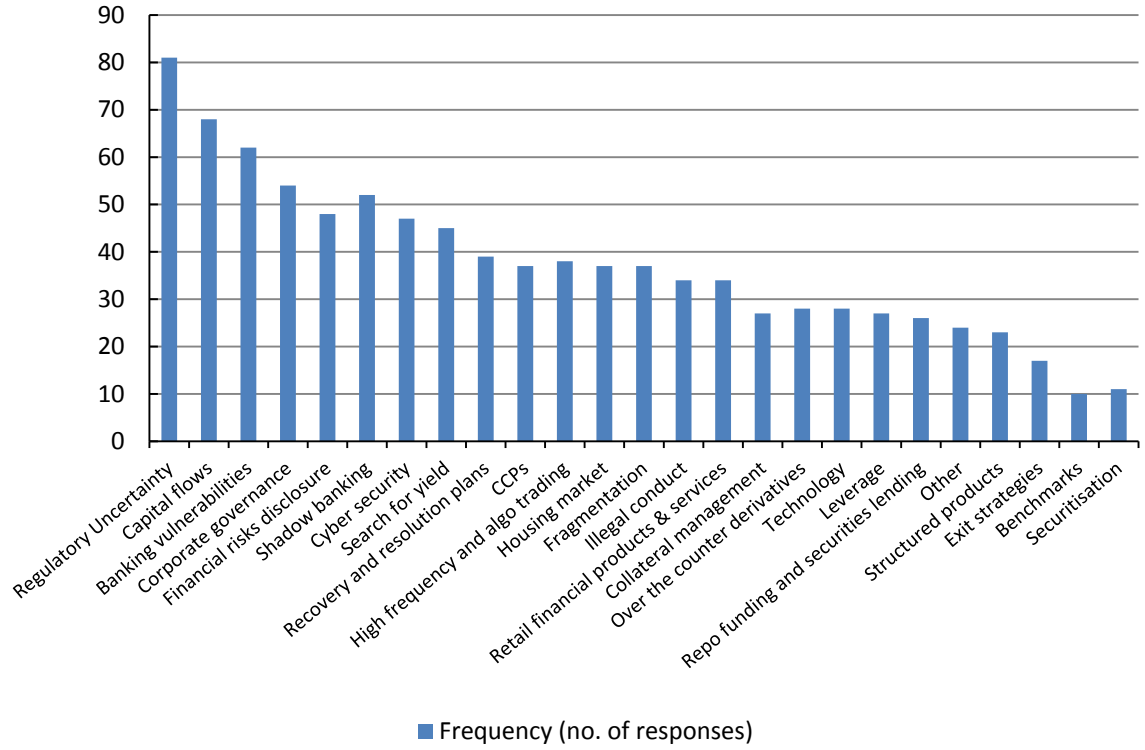
Additionally, on an initial cut of the data the largest proportion of responses comes from regulatory members. This is more a consequence, however, of the granularity of category choices given to market participants, rather than an indication of an overweight sampling. In other words, market participants had more options to choose from. When financial institutions, industry firms, global and regional representative bodies (predominately trade associations) are added together, financial market institutions make up 34% of respondents.

3. Main results from the risk survey

Below is a general discussion on the breakdown of responses to the risk survey. Final results are calculated from an un-weighted sample and are categorised as per the survey questions. The chapter can be divided into two sections. First, there is a general discussion about the results of the 2014 survey including detailed analysis of responses to risk categories, how responses differed by organisational type and the risks with the biggest likely impact on the real economy if it were to materialise. Given that this is the third iteration of this particular exercise, the second section of the chapter combines the 2014 results with past responses to provide a snapshot on how responses have changed over time.

3.1. Responses to "*five areas that you see as most important to explore for your jurisdiction when it comes to maintaining financial stability.*"

Figure 4: Frequency of responses to areas of risk/concern



Source: IOSCO Research Department

Note: "Other" includes: Market Liquidity in fixed income products, commodity prices, prime brokerage credit, Sovereign Debt, Deleveraging and Personal debt level.

The figure shows two important stories:

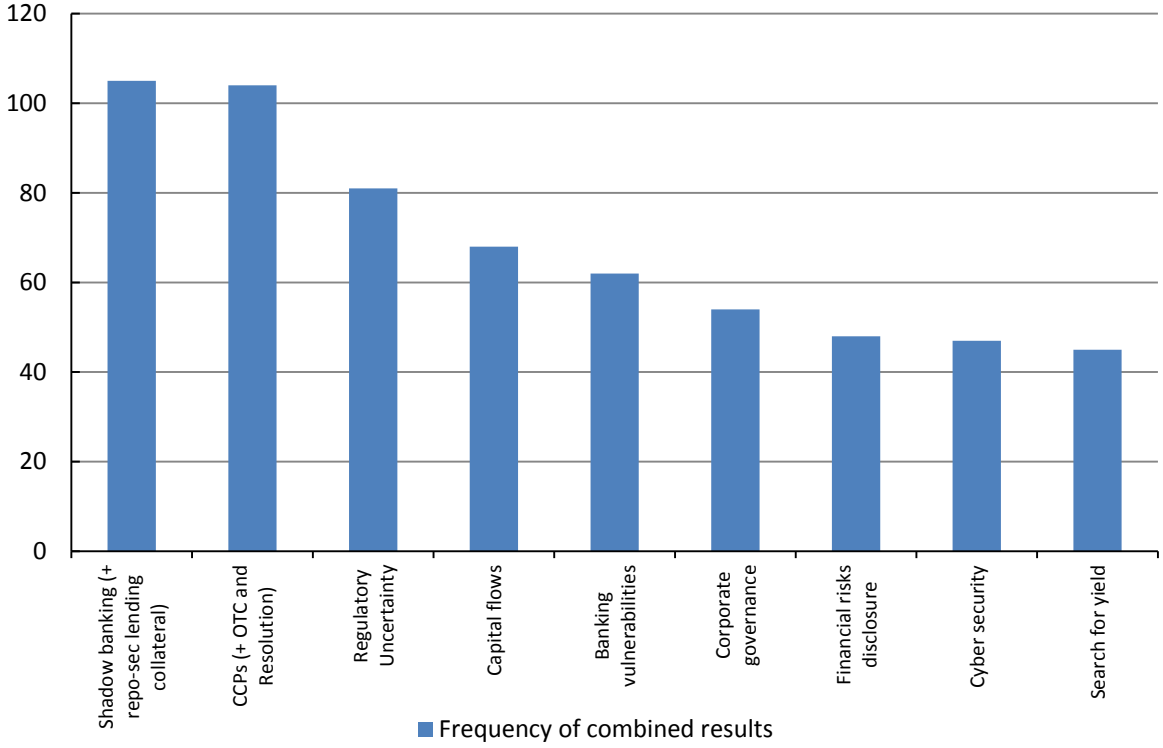
- Issues considered "macro-prudential" in nature are high on the concerns of respondents, especially in the areas of capital flows (68 responses) and banking vulnerabilities (62 responses). These are not generally within the remit of securities regulators, but do impact on securities markets. For example the repercussions of a bank failure can be transmitted through the

securities markets (See Figure 6) and volatile capital flows can and do affect securities markets.[8] As such, due to the linkages between macroeconomic phenomena and securities markets, these risks can still have serious spill-over consequences and ultimately impact securities markets.

- If the macro prudential risks emanating outside securities markets are excluded, the following issues raise the most concerns: corporate governance (54), financial risk disclosure (48), shadow-banking activities (52) and, especially, regulatory policy (81).[9]

- However, some of these risk categories are quite interconnected (for example, the international regulatory work regarding CCPs also involves OTC markets reform and resolution and resolvability issues). Combining those risks, Figure 5 highlights concerns around enlarged shadow banking activities; CCP's and other market reforms around OTC and resolution and resolvability; leverage and search of yield in a low interest rate environment.

Figure 5: Frequency of responses with combined risk categories



Source: IOSCO Research Department

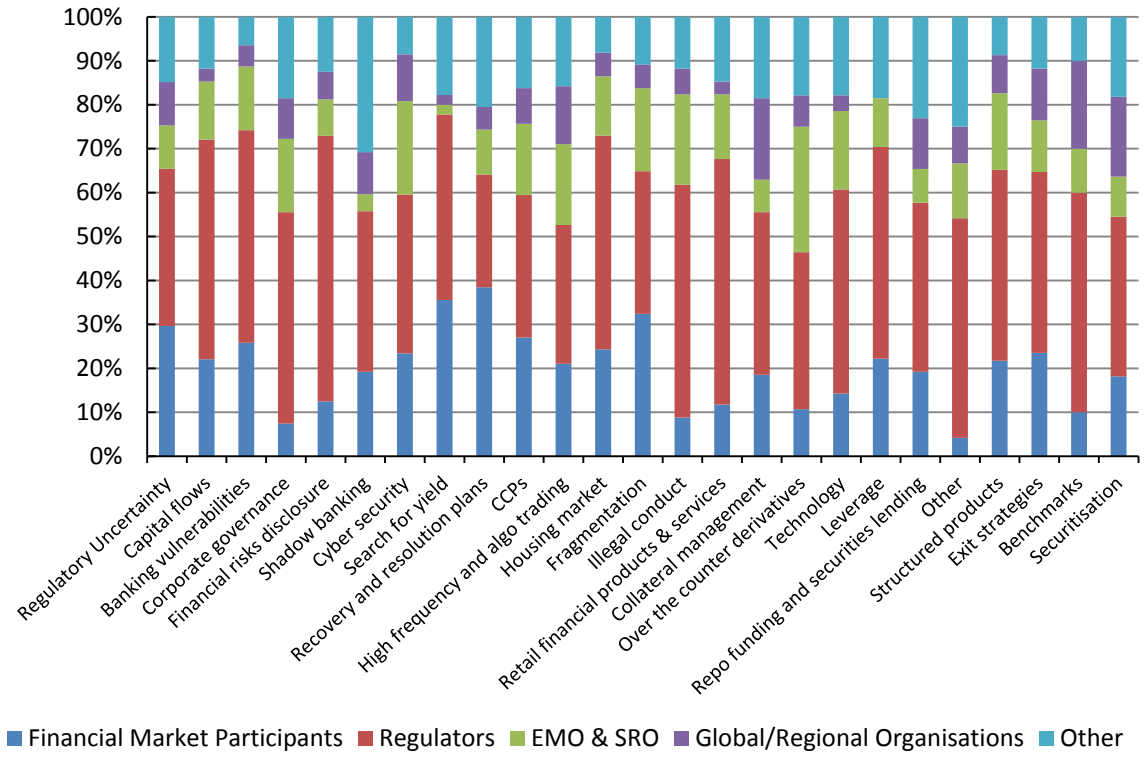
[8] For a detailed discussion on the impact to securities markets from volatile capital markets flow (especially from an emerging markets perspective), please consult the IOSCO Securities Market Risk Outlook 2013-14 [http://www.iosco.org/library/pubdocs/pdf/IOSCOPD426.pdf]

[9] A detailed breakdown of responses to "Regulation" can be found later in the chapter.

3.1.1. How responses differed by organisational type

The types of responses to potential areas of risk differ by the type of organisation. Different organisations see different facets to risks and as a consequence they provide a different perspective on the importance of the risk to their institutions or jurisdiction. For example, one would expect differing views between regulators and market participants and therefore differing degrees of importance given to by them to the impact of regulation. Below Figure 6 presents the results delineated by organisational type.

Figure 6: Risk categories by organisational responses



Source: IOSCO Research Department

Note: "Other" includes: Market Liquidity in fixed income products, commodity prices, prime brokerage credit, Sovereign Debt, deleveraging and personal debt level.

Table 2: Top responses, by frequency, from financial market participants and regulators

Issues highlighted by financial market participants	Percentage of responses	Issues highlighted by regulators	Percentage of responses
Recovery and resolution plans	38%	Financial risks disclosure	60%
Search for yield	36%	Retail financial products	56%
Fragmentation	32%	Illegal conduct	53%
Regulatory Uncertainty	30%	Capital flows	50%
CCPs	27%	Benchmarks	50%

Source: IOSCO Research Department

Based on percentage of responses, a list of the top areas of concern for both regulators and financial market participants are outlined in Table 2 above.

A noteworthy point is that a clear distinction appears to exist between financial market participants and regulators in the types of areas that are considered important from a risk perspective. Regulators are more concerned with issues of disclosure and conduct while market participants are clearly focused on changes in market behaviour. Predominantly regulators see risk emanating from illegal conduct, poor corporate governance, financial risk disclosure and benchmarking issues, while only a small fraction of financial market participants recognise these topics as potential risk areas. Market participants are more concerned with risk in the areas of search for yield, resolution and resolvability plans, CCPs and market fragmentation.

3.1.2. How responses differed by economy

Table 3 highlights the distinction between risks reported by respondents from developed markets compared with those from emerging markets. Not surprisingly, Capital Flows features highly in responses from emerging markets. Uncertainty around regulation is common among both groups of respondents.

Table 3: Top responses, by frequency, from developed and emerging market respondents

Issues highlighted by developed economy participants	Percentage of responses	Issues highlighted by emerging economy participants	Percentage of responses
Regulatory Uncertainty	8%	Corporate governance	11%
Banking vulnerabilities	8%	Capital flows	10%
Search for yield	6%	Financial risks disclosure	9%
Shadow banking	6%	Regulatory Uncertainty	9%
Cyber security	6%	Retail financial products & services	6%

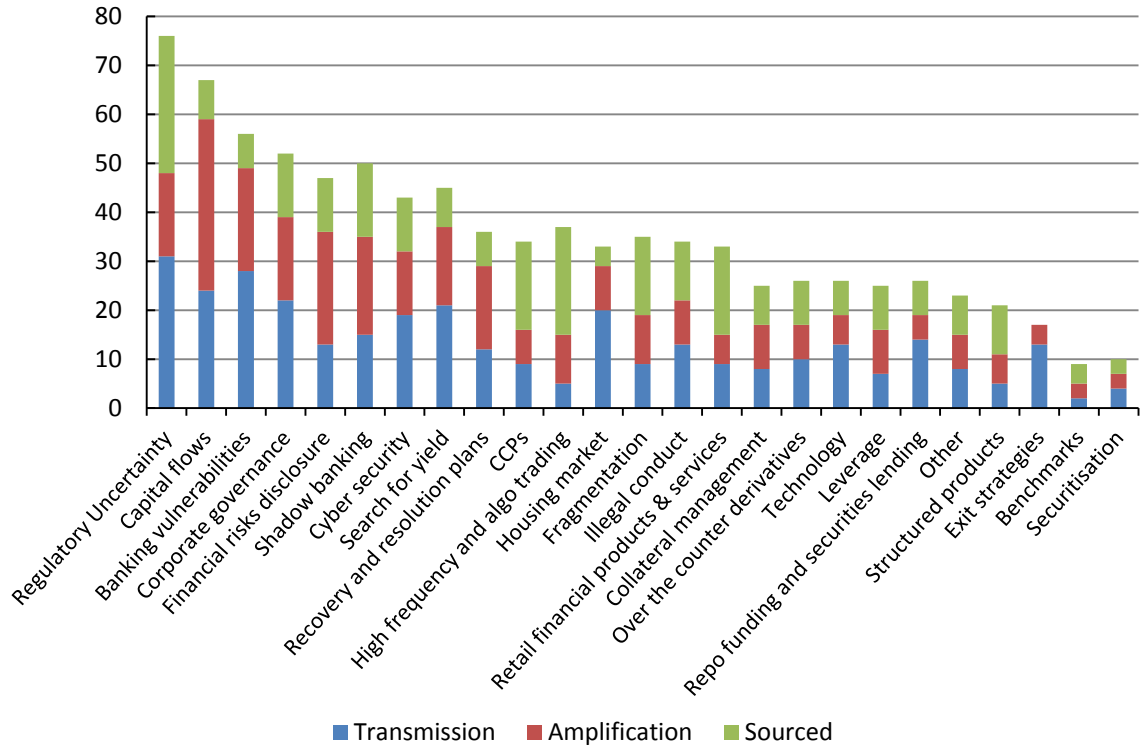
Source: IOSCO Research Department

3.2. Responses to "*whether the risks were being seen as transmitted through securities markets, amplified by securities markets or sourced from securities markets themselves.*"

Figure 7 provides a picture on how respondents saw risks being transmitted by securities markets. In general, respondents saw the effects of those risks being transmitted or amplified by securities markets. That is, very few "risks" were thought to be originated or sourced from securities markets themselves. Those risk categories that 40% or more of respondents thought were sourced to securities markets were:

- High Frequency and algorithmic trading (*59% of respondents surveyed*)
- Retail financial products and services (*55%*)
- Central Counterparties (CCPs) (*53%*)
- Structured products (*48%*)
- Fragmentation (*46%*)
- Benchmarks (*44%*)

Figure 7: Risk categories and whether they are transmitted through securities markets, amplified by securities markets or sourced from securities markets themselves



Source: IOSCO Research Department

Given the central role real estate had in the last financial crisis, another noteworthy issue includes respondents view on how securities markets would transmit the effects of any crystallisation of risk pressures in the housing market. Over 60% of respondents thought that the securities market would act as a conduit to for possible effects, with another 28% believing these effects would be amplified by securities markets.

Focusing on these categories, what follows below is a brief synopsis of the detailed responses from respondents.

3.2.1. High frequency and algorithmic trading

In general, respondents thought that high frequency trading (HFT) and algorithmic trading posed challenges to regulators although consequences may be hard to fully assess. Specific areas included a concern that regulators were not keeping up with systems developments and infrastructure. Additionally, that HFT activity had the potential for market abuse, creating market stress or damaging confidence in the integrity of the market overall. This is especially true if confidence in markets is damaged by public perceptions that HFT is in some way gaming the market at the expense of investors. Many respondents highlighted concerns with the ghost or phantom liquidity HFT provides markets and its potential impact on volatility in stressed times. In the long run, some respondents indicated that the systemic impact of this behaviour by some HFT operators may deter institutional activity and growth-enhancing investment and harm price discovery and efficiency of markets.

3.2.2. Retail financial products and services

The main thrust of the concern amongst respondents in this area was that financial market products are becoming increasingly more complex in nature and more widely available to retail investors.

These complex products could be mis-sold to retail investors who, due to a lack of financial literacy or financial education, were ill equipped to understand the risks embedded within the products. This was compounded by risk disclosure often being inadequate and the products not well understood by clients or advisors. It was acknowledged that these products in isolation should not normally cause large loss in absolute monetary terms, but since they are now marketed to large numbers of individual investors, in aggregate, losses could be a significant financial sum leading to declining confidence in financial markets, which are already suffering from other reputational issues.

3.2.3. Central Counterparties

Survey respondents generally acknowledge that CCPs have reduced systemic risk and have helped improve market liquidity. However, other outstanding issues were raised. Respondents suggested that as the use of CCPs grows, regulators will need to monitor new types of risk such as portability of assets between CCPs. The interaction of and compliance with several regional regulations in conjunction with the existing global rules is still ambiguous, respondents said.

Additionally, respondents saw regulation forcing markets to concentrate large risks into CCPs that are becoming too big to fail. The concentration of such varied risks means that daily supervision may prove impossible with a potential stress event (a default of a large member, for example) quickly escalating into a systemic concern. Effective risk management by CCPs is essential. However this could be potentially undermined by competition among CCPs, which drives the search for cost savings in their business models.

By creating new systemically important infrastructures that are inadequately capitalised for a crisis situation plus a lack recovery and resolution plans implies CCPs may not be as safe as first thought. The primary requirement of central clearing should be to ensure transactions are always honoured and the recovery of a CCP should not rely upon the haircutting of end-investor variation margin as this will be pro-cyclical, potentially escalating any financial distress, in the opinion of survey participants. Finally, CCPs may create incentives to clear products that, in the search for new business, should not be cleared.

3.2.4. Structured products

Similar to the issues raised under Retail products (see point b=3.2. above), respondents noted that structured products were opaque in nature to investors and regulators alike, with many embedded, hidden options visible only in crisis situations. With the issuance and use of such products on the increase, concern was raised that the complexity of products, and therefore the risk entailed in them, are not well understood by both institutional and retail investors. This is especially acute where market liquidity in the products is limited. In other words, investors are not adequately informed of the risks; nor do they have the information required to make proper assessments. Additionally, respondents mentioned that regulators needed more training in order to properly evaluate the risks associated with such products.

3.2.5. Fragmentation

Respondents were concerned that uncoordinated regulation might create a fragmented marketplace which will impact on liquidity levels and trading volumes. Of additional concern was that "*…compromised international standards were causing uncoordinated regulatory actions (including various structural measures) at the local level, which could cause* cross border regulatory arbitrage and more complex financial architecture." A more fragmented market would continue to increase

costs and complexity in trading (firm costs and regulatory costs) and decrease transparency, respondents feared.

3.2.6. Benchmarks

Given the number of financial market scandals in recent years, risk around benchmarks represented a further reputational risk and financial risk for markets and market participants, who might have been involved in manipulation. Additionally, respondents pointed out that under such scenarios, other risks within the benchmark space include the potential for benchmark discontinuations and related issues, such as misrepresentation of performance due to questionable or non-existent benchmarks; decreases in the confidence of existing benchmarks due to the erroneous or manipulative submissions to others and the immense exposure of retail and wholesale markets and products that reference benchmarks as part of their pricing structure.

Other responses

3.2.7. Corporate Governance

Respondents felt that in order to maintain robust and efficient financial markets, solid corporate governance is necessary. There was limited implementation of good corporate governance practices in companies and that these deficiencies could lead to extra pecuniary consequences such as conflicts-of-interest and excessive (or even worse, unidentified) risk-taking. These deficiencies in Corporate Governance have negative effects on value creation; shareholder investment and market confidence in general. The enhancement and strengthening of corporate governance in all firms, whether large, small or family-owned, remains vital in shaping how a company monitors and oversees risks.

3.2.8. Regulatory Uncertainty

Comments and concerns from respondents in the area of regulation were quite varied. Many felt that the existences of regulatory gaps in and among various pieces of legislation; and national protectionism and inconsistency in local regulatory implementation were creating uncertainty in the marketplace that would continue to impact market participants, reduce market liquidity, damage price discovery function and potentially create unwanted arbitrage opportunities.

Additionally, some respondents felt that the complexity of regulation and political intervention were masking to the true costs and benefits of proposed regulatory reforms. Overlapping, contradicting and unstructured regulation was subject to tight deadlines with no regard for proper economic assessment or a holistic approach to regulatory reform. As such it was noted that there is a danger of unintended consequences through lack of a comprehensive view of the impact of regulation on banks, their business models and how business would shift to other actors within the marketplace. In other words, some respondents considered there is the potential for regulation to force activity from mainstream banking to less well regulated areas making it more difficult to spot systemic risk build-up. With the ultimate result being a negative impact on the macro-economy, proper cost/benefit and impact assessment was seen as being needed to determine whether the set of regulations:

- could cause a negative impact on financial markets and the real economy as a whole;
- could result in a distortion of the level playing field in the financial sector of each country; and
- exacerbate issues of regulatory arbitrage and circumvention.

3.2.9. OTC Derivatives

While respondents felt that the push for central clearing was good, regulators needed to be mindful of impact of the reform of OTC derivatives. Mandatory clearing as well as margin requirement were an expensive process change that increased the cost to do business; leading to loss of liquidity. Additionally, development of the OTC markets (although low for the moment) could lead to a growing percentage of transactions taking place outside standardized markets. This fact, according to the respondents, undermines the normal functioning of the financial system contributing to the build-up of systemic risk.

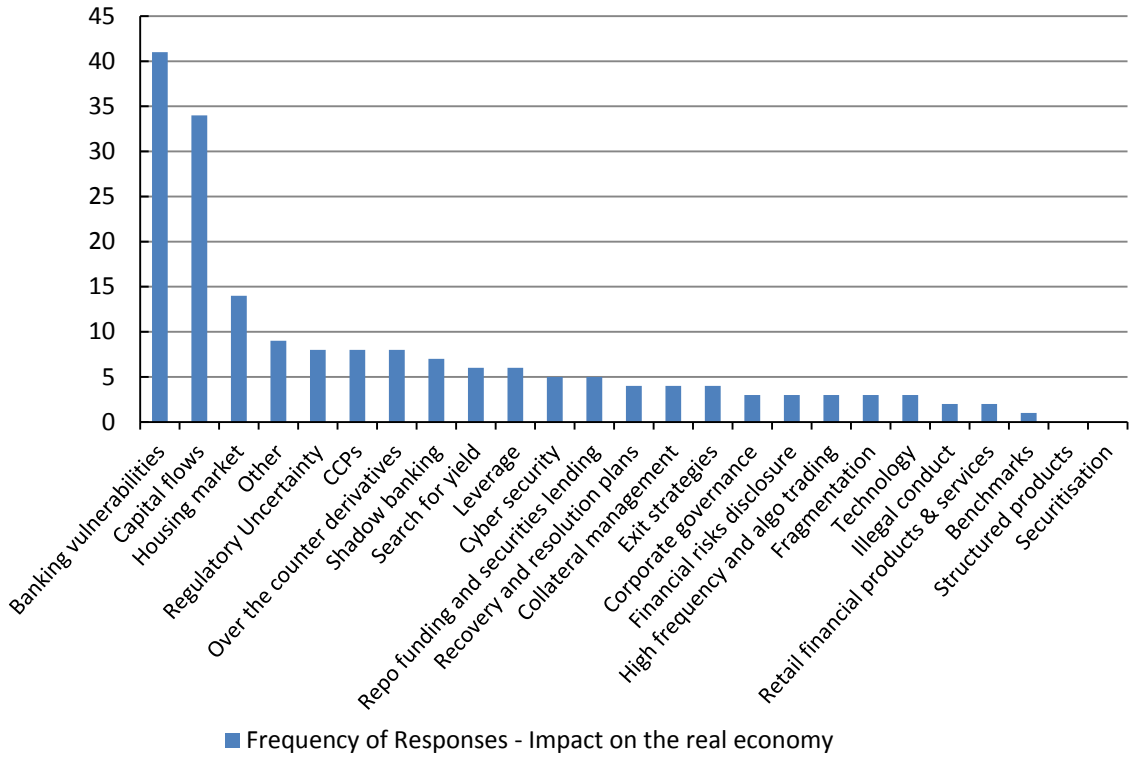
3.2.10. Capital flows

Respondents argued that financial markets are dependent on capital flows, especially in a globally, interconnected world. The risk of large movements in a very short time may cause disturbances to the stability of a national financial system. For example, flows to and from emerging markets ahead of a potential rise in US real interest rates increase the risks to EM securities markets. Generally, capital markets in emerging markets are small; inflow and outflows of capital can cause big movements in securities markets. Sudden reversals can complicate macro-economic management according to respondents.

Additionally, respondents highlighted that, with monetary policy in many advanced economies remaining very accommodating, asset prices are being inflated by the foreign capital influx, which may result in market-wide revaluation. Capital outflows will have a greater impact than capital inflows on asset prices, which have been inflated by the use of leverage.

3.3. Responses to impacts on the economy

Figure 8: Impact on the real economy – What risk would have the greatest impact if it materialised?



Source: IOSCO Research Department

Note: Category "Other" includes responses such as: Sovereign Debt, Personal debt levels, Oil Prices, Liquidity in Corporate bond markets

Survey participants were also asked "*in the event of a risk materialising, which would most likely have the greatest impact on the real economy*" Figure 8 indicates the frequency of responses to that question.

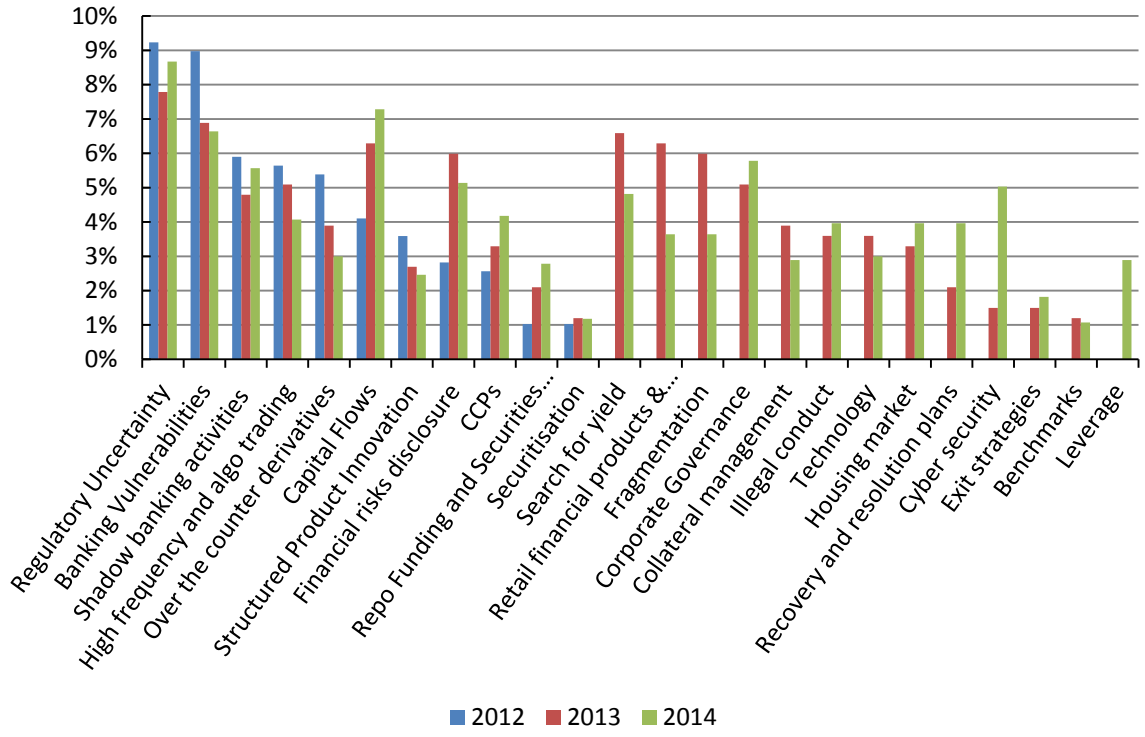
Based on the number of responses, the figure shows three clear issues, banking vulnerabilities, capital flows and housing markets. By far the greatest number of respondents thought that banking vulnerabilities would have the greatest impact on the real economy (43%). 36 per cent of respondents thought that capital flows would have a considerable impact. This is an interesting result, as it predominately relates to emerging markets. Emerging markets, in recent times, have been the greatest recipients of capital flows to their countries, with the Securities Market Risk Outlook 2013-2014 initially highlighting the risk that volatility in such flows could cause. Arguably, one of the main causes of the previous crisis was the housing market. 15% of respondents thought that risk from the housing market could have the largest impact on the real economy.

From a securities market perspective, these risks are not generally within the scope of regulators. However, as Figure 7 highlights, over 85% of respondents also felt that the securities markets had a role in either transmitting or amplifying the effects of such risks on the real economy. From that stand point, securities markets are an important factor in the end-behaviour of macro prudential risks.

3.4. Changes in responses over time

As mentioned in the introduction section, this is the third iteration of this exercise to gather the views and opinions of markets participants and IOSCO regulatory members and therefore provides an interesting opportunity to investigate how views and opinions have changed over the past three years. Figure 9 and Figure 10 below show the changes in responses over time 2012-2014).

Figure 9: Changes in responses over time - *five areas that you see as most important to explore for your jurisdiction when it comes to maintaining financial stability*.



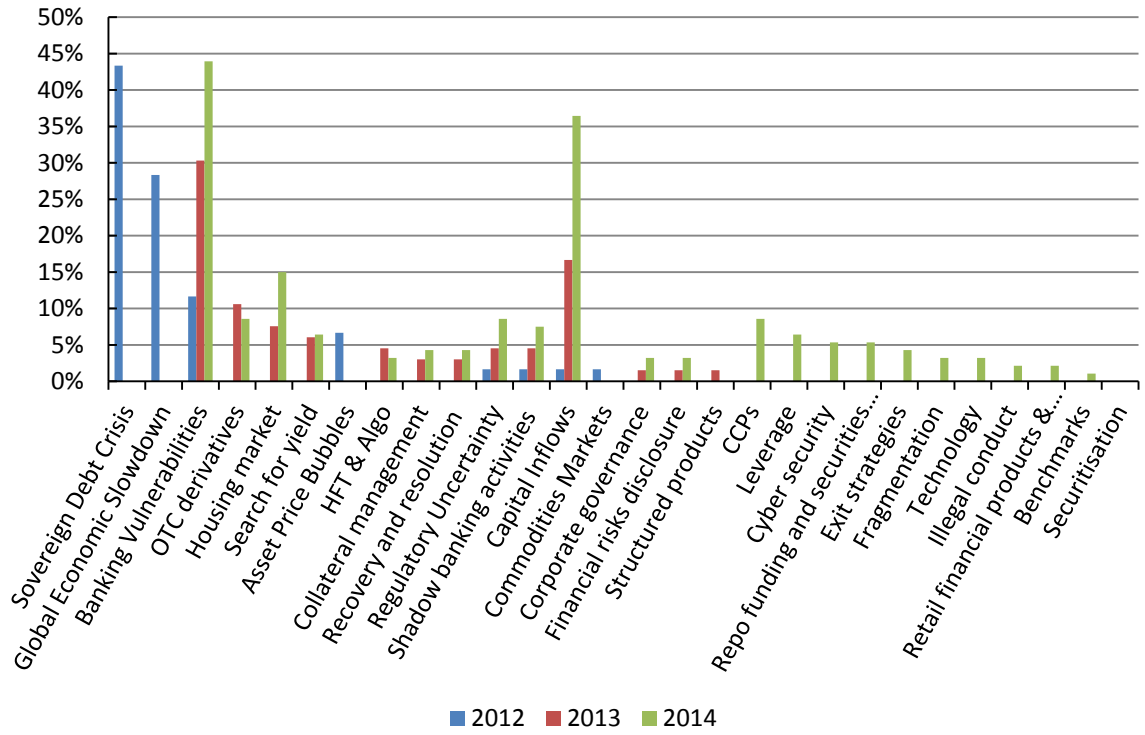
Source: IOSCO Research Department

The figures highlight some interesting trends. Overall, some risk areas have become more popular while others have become less so. On the question of important risk areas, there are three clear constants across the three years:

- regulatory uncertainty;
- banking vulnerabilities; and
- capital flows.

Other noteworthy trends include an increase in the recognition of the threat of cybercrime or cyber -related issues to systemic stability; an issue first highlighted by IOSCO research staff in 2013.[10] Financial risk disclosures and resolution and resolvability frameworks have also continued to increase in recognition. In particular, the number of respondents recognising capital flows as an area worthy of further attention has increased rapidly. Table 4 summarises the major trends in responses.

Figure 10: Changes in responses over time – impact on the real economy: *What risk would have the greatest impact if it materialised?*



Source: IOSCO Research Department

Table 4: Changes in frequency of responses over time 2012-14

Risk area	Trend in frequency of responses over time
Regulatory Uncertainty	→
Banking Vulnerabilities	↓
Shadow banking activities	→
High frequency and algo trading	↓
Over the counter derivatives	↓

[10] Please consult R. Tendulkar, "Cybercrime, securities markets and systemic risk", *Staff Working Paper*, July 2013 for a further discussion on the systemic implications of cybercrime [http://www.iosco.org/research/pdf/swp/Cyber-Crime-Securities-Markets-and-Systemic-Risk.pdf]

Capital Flows	↑
Structured Product Innovation	↓
Financial risks disclosure	↑
CCPs	→
Repo Funding and Securities Lending	↑
Securitisation	→
Search for yield	↓
Retail financial products & services	↓
Fragmentation	↓
Corporate Governance	↑
Collateral management	↓
Illegal conduct	→
Technology	→
Housing market	→
Recovery and resolution plans	↑
Cyber security	↑
Exit strategies	↑
Benchmarks	→
Leverage	*N/A*

Source: IOSCO Research Department

Notes: the direction of arrows indicates the general direction of the trend in responses over the three years. ↑ increase in the number of responses overtime; ↓ decrease in responses over time; → number of responses unchanged.

Finally, there are clear changes in how respondents have viewed risk areas' impact on the real economy (Figure 10). There are two clear stories here. First, during the first iteration of this survey in 2012, the biggest concern was the European sovereign debt crisis, which is reflected in the number of respondents who indicated its impact on the real economy. However, since the worst of that particular issue has passed, the concern on its impact on the global economy has also declined. It is a similar story with the global economic slowdown. Responses have declined, as developed economies look more like they are in the beginnings of an upswing in the economic business cycle. However, with concerns declining in some areas, other have seen sharp rises, none more so than in the areas of banking vulnerabilities, capital flows and housing markets.

3.5. Past input into the Risk Outlook

To help identify possible thematic chapters for past risk outlooks, risks were grouped by common themes. For the 2012 and 2013 editions, [11] risks were grouped into the following categories:

Table 5: Results of combined risk categories from the 2012 survey

Combined Risk Areas (2012)	Responses
Regulatory Uncertainty	36
CCP's and OTC markets	31
Shadow banking activities	23
HFT & Algo	22
Information gaps between Markets and Regulators	15

Source: IOSCO Research Department

[11] The Securities Market Risk Outlook 2012 was an internal publication of IOSCO only.

Table 6: Results of combined risk categories from the 2012 survey

Combined Risk Areas (2013)	Responses
Shadow banking (collateral and repo)	39
CCPs (+OTC reform and Resolution and resolvability)	31
Regulatory Uncertainty	26
Search for yield	22
Capital Flows	21

Source: IOSCO Research Department

3.6. Next steps

The fourth edition of the risk survey already has improvements in the survey design, questioning and information gathered planned. The questions will be further refined with the addition of new risks based on information obtained from market intelligence and desk research. Recognising that risks have a different impact on the real and financial economies, in future editions, survey participants will be asked to indicate which risks will have the greatest impact on the financial economy. The spread of institutions participating will be enhanced by the expansion of the expert network into under-represented geographical areas. Finally, questions will be added to ask respondents about the severity of impact along with probability of materialisation.

4. Conclusion

The third edition of this risk survey provided a cost effective and streamlined way for the IOSCO research function to gather varied views on those areas of concern to market participants and experts who are at the forefront of thinking on areas relating to securities markets.

The results of the survey indicate that risks outside the securities regulators´ domain (such as the vulnerability of banks and cross border capital flows) are most prominent in the minds of experts. Based on the frequency of responses these, along with the potential impacts of the housing market, are seen as posing a strong systemic risk concern to the global financial system and real economy. Many of the areas that received the most responses were outside the remit of securities market regulators. At the same time, securities markets were flagged as playing a role in assisting these risks to materialise by either transmitting or amplifying the initial systemic shock.

Some risks within the securities regulators' domain are, to a lesser extent, also viewed as posing a systemic risk concern. These risks including the international regulatory framework, issues around corporate governance, disclosure of financial risks, shadow banking and high frequency trading.

Since the survey was the third iteration of such an exercise, the report also highlighted the change in how respondents' opinions on risk areas have changed over time. The biggest risk of 2012 – the sovereign debt crisis and the economic slowdown --no longer feature prominently in respondents' views, as the worst of the sovereign debt crisis has passed and developed economies look to positive economic growth. This shows how quickly the perception of risks can change. The impacts of cross-border capital flow, financial risk disclosure and CCPs s have gained more attention between 2013 and 2014. The international regulatory reforms were at the top of respondents concerns in 2012 and remain so in 2014. On the question of the impact to the real economy, the fallout from banking vulnerabilities, capital flows and the housing market are now clearly the top areas, with a seven- fold increase in responses.

Finally, looking deeper, the responses indicate that the international regulatory reform agenda is creating uncertainty. Respondents attribute the main reasons for this to the gaps in the international framework caused by national protectionism and the lack of international coordination, without the requisite economic/impact analysis. At a more micro level, product suitability and risk matching within the retail investor and structured product space require closer analysis in order to understand them better. As the use of CCPs grows, regulators will need to track carefully new types of risk, such as portability of assets, to ensure capital adequacy of such entities and provide clarity around the interaction of regional rules with global regulatory reforms.

ANNEX A – List of Figures and tables