Remaking financial services: risk management five years after the crisis

A survey of major financial institutions

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Findings at a glance

Firms have been working post-crisis to remake their risk governance frameworks, and many of the themes seen in previous years remain a feature of this year's study. The largest shift this year is a renewed focus on risk culture. While risk culture has been a high priority since the crisis, senior management and boards have become less certain of the culture prevailing in different business units. In addition, management has shifted its focus to operational and reputational risk following high-profile conduct cases.

Chief risk officers (CROs) pointed out that the challenge is twofold, requiring both buy-in throughout the organization and the tools to monitor and assess that buy-in. Fifty-nine percent of survey respondents cited the balance between a sales-driven front-office culture and a risk-focused culture as their top organizational challenge; 38% cited a lack of systems and data, the second most frequent challenge raised. CROs noted that without adequate risk data and systems, accountability for risk is undermined and can damage the culture.

Other key findings include:

- Although 43% of banks said they have achieved a strong culture, up slightly from last year, more than half believe there is further distance to travel, underscoring the need for a sustained effort over a long period to effect significant cultural change.
- Banks are taking different approaches to assessing risk culture, but what stands out is the degree of momentum behind taking action. More than 85% of North American banks have programs to assess internal culture, and the figure is similar for Latin America. In Europe and Asia-Pacific, 60% or more of banks have programs to assess internal risk culture.
- There is continued ratcheting up of board oversight; 51% of respondents reported an increase in focus in the past 12 months, with risk appetite being the area of greatest influence.
- As boards' risk mandates continue to grow, 34% of respondents' boards have added members with increased risk expertise in the past year, and 60% have programs in place to train board members on key areas of responsibility.
- The stature and role of CROs have increased markedly since the crisis: 81% report either to the CEO or jointly to the CEO and risk committee. Partnering effectively with business units continues to be a challenge, as does data and information technology (IT).

- Risk appetite continues to be an essential part of risk governance, but the industry continues to be challenged to embed risk appetite into business decisions. There is also an emphasis on trying to cover different risk types in the framework, particularly operational and reputational risk.
- Banks are still working to improve stress-testing methodologies and frameworks. Sixty-seven percent reported implementing new methodologies and frameworks over the past year — but integrating these into a flexible management tool remains an aspiration for many banks. Extracting and aggregating data is the largest challenge to improving stress testing.
- Liquidity risk remains at the top of agendas, with banks starting a slow move away from governance through asset-liability committees toward balance sheet committees or shared responsibility with risk/executive committees. Data availability and quality are the top challenges to liquidity risk management for most banks.
- Capital management is being rethought across the industry. With regulatory capital now much higher than economic capital, 55% of respondents said they are aligning capital allocation with regulatory capital. Eighty-three percent reported they have placed a greater focus on managing capital by entities or geographies.
- A strong theme this year is the pressure on business models from the Basel III requirements. Eighty-one percent of respondents said they are evaluating portfolios, and 44% said they are exiting lines of business, up from 29% last year. This is being driven by pressure to mitigate falls in return on equity following the capital increases.
- Recovery and resolution planning continues to progress unevenly, with recovery planning more developed. Understanding regulatory expectations is one of the greatest challenges, particularly cross-border regulatory expectations for international firms. Of the firms that have completed recovery plans, half took six months to a year to complete them and almost a quarter took one to two years. For those that have completed resolution plans, 36% took six months to a year and another 36% took one to two years.
- Improving risk transparency remains an ongoing initiative that partly requires changing existing tools to reduce under-reading of risk. Almost half of the banks surveyed are balancing economic capital with other metrics, with 79% reporting an increased focus on stress testing.
- Investment in data and systems continues to be a significant challenge — and an area that will take up considerable funds for years to come.

Executive summary

Remaking financial services: risk management five years after the crisis is the fourth annual study of risk management in banking and insurance conducted by EY in conjunction with the Institute of International Finance since the 2007-08 financial crisis. Seventy-six firms across 36 countries participated in the study, encompassing 50 interviews with CROs and other senior risk executives and 68 online survey responses. The study paints a picture of continued improvement and focus on risk management, but with some change in priorities to reflect recent developments. It also highlights the extent to which embedding changes and renewing IT and data infrastructure will continue to be areas of significant investment for many banks.

Despite a broad range of responses to changing regulatory requirements, market unease and internal pressures, there is agreement that aligning the board, the leadership team and the business units of a firm around a shared understanding of risk culture is crucial to changing, monitoring and managing behavior.

Five key themes run throughout the study:

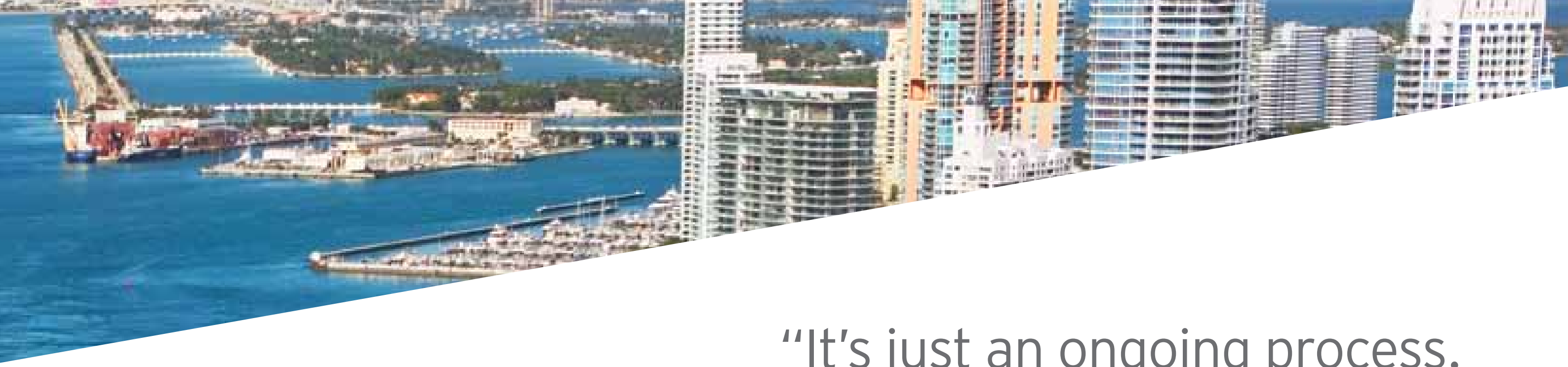
- Banks are reviewing their cultures across legal entities and business units following several high-profile conduct scandals.
- There is a much greater focus this year on operational risk and reputational risk, including the issue of risk appetite.
- Banks, having moved to enhance the structure of risk management post-crisis, are still working to fully operationalize those policies — with most banks still finding it difficult to embed risk appetite.
- Risk transparency is driving further enhancement of stress testing and sizable further investment in IT and data.
- Business models are being rethought in light of the regulatory changes, with banks exiting from activities, businesses, markets and geographies.

Almost universally, risk governance is more central to the management of the banks and has much more senior management and board attention placed on it than was the case pre-crisis. Banks, however, are still on a journey toward embedding new structures and processes, new tools are being developed, and difficult areas remain. Despite considerable investment in recent years, data and IT remain challenges, and enhancements continue year in and year out. Against this backdrop, new conduct issues have arisen, leading to a refocused effort. Culture, which was an issue identified at the time of the crisis, is now center stage, with most banks carrying out some kind of review or audit. The change and momentum in risk governance are set against a backdrop of evolving business models and overall strategy made more complex by economic and regulatory uncertainty.

Our first survey, undertaken in 2009, found an industry measuring itself against the industry best-practice recommendations for risk governance[1] and already moving forward in a variety of areas. Most banks had programs in place to fill gaps in line with the recommendations. Since then, our surveys have shown banks making significant progress toward change in governance frameworks. Board risk committees are now almost universal. The time that boards have spent on risk has substantially increased, board skills have been enhanced through training or a change in the mix of board members, and the role and influence of the CRO and risk function have broadened. At the same time, the CRO's seniority and status have been enhanced.

This year's survey shows an industry continuing to wrestle with the process of embedding the risk governance framework in the organization and, in particular, moving risk appetite out of the boardroom and into the business units. The industry continues to focus on how to ensure adequate risk transparency. One of the challenges is how to take a standard tool like stress testing and enable it to sit at the heart of decision-making. Sixty-seven percent of respondents to this year's survey reported that they have created and implemented new stress-testing methodologies in the past 12 months, and 60% said they have created new management reports on stress testing in the past 12 months.

[1]Final Report of the IIF Committee on Market Best Practices: Principles of Conduct and Best Practice Recommendations, July 2008



"It's just an ongoing process. You talk about it, you communicate, you recognize it, you applaud it, you put into practical effect what that culture should suggest."

The degree of regulatory change is posing a challenge for bank business models; rethinking strategy in an uncertain environment is difficult and is taking up large amounts of senior management's time. The rules around Basel III have been finalized now in many jurisdictions, including Europe and the US. But more is being added to the regulatory agenda all the time.

The effects of the changes to date are driving a retreat to core activities and core geographies, with a corresponding need to reduce costs and increase margins. Cost reduction at a time of substantial investment in data and IT infrastructure is difficult. "We are all in the same boat in the industry," one executive said. "One of the bigger challenges is the increased cost of regulation, both in terms of increased capital requirements, as well as the internal costs to keep up with regulation. The challenge is to adhere to the regulatory changes, to incur the costs that go with that in operational costs and capital costs, and still turn out a profit in a macroeconomic environment that is a bit cloudy. We're all going to be a less profitable business."

The pendulum has undoubtedly swung toward more conservative risk management and de-risking of businesses over the past five years. As one executive said, "If you look at where we are in terms of the structure of the organization and the staffing of the risk management team, we're fairly well equipped. The priorities are very simple. They are to make sure that we're conservative in our liquidity planning, to make sure that we're conservative in our capital planning, and to make sure that we also enable ourselves to really meet all the requirements of the various stakeholders." The challenge is to ensure that the pendulum does not swing back too far the other way when markets improve. It's a challenge that firms seem to be keenly aware of as they refocus on building risk awareness in the front office, embedding risk appetite throughout the organization and assessing risk culture.

Keys to continued progress:

- A core challenge is embedding risk appetite in business decisions; risk appetite must be broadened to encompass reputation and operational risk.
- Firms cannot assume that culture is consistent across large organizations; reviews are a fundamental tool to assess the state of culture throughout the enterprise.
- Clarity is needed regarding the values of the organization, supported by training and communication.
- Tools like stress testing should be enhanced so they can be used as flexible management tools while appropriately covering the risk profile.
- Continued investment in IT and data is essential to facilitate timely transparency; how firms deploy people, time and money toward improving IT will be a major consideration for years to come.
- Strategy should be rethought in light of the effect of new regulations on the profitability of different businesses.
- The combination of regulation, increased pressure from investors and uncertain economic environments cannot be underestimated as banks contract their activities back to core portfolios and core countries.

From December 2012 through February 2013, EY, on behalf of the IIF, surveyed a sample of IIF member firms using two methods. An online quantitative questionnaire was distributed to the top member firms (by asset size). In addition, the team conducted telephone interviews with CROs and other senior risk executives of many of the largest global firms. A total of 76 firms across 36 countries participated in the study either online, by telephone or both, comprising 50 interviews with CROs and other senior risk executives and 68 online survey responses.

Africa/Middle East

Ahli United Bank
Arab Bank
FirstRand Bank
National Bank of Kuwait
National Commercial Bank
Standard Bank Group

Asia-Pacific

ANZ Banking Group
Agricultural Bank of China
Bank Mandiri
Bank of the Philippine Islands
China International Capital Corporation
China Merchants Bank
Commonwealth Bank of Australia
DBS Bank
Kasikornbank
Kookmin Bank
Macquarie Group
Maybank
Mitsubishi UFJ Financial Group
Mizuho Financial Group
National Australia Bank
Nomura Holdings
Norinchukin Bank
Sumitomo Mitsui Banking Corporation
Suncorp Group
Westpac Banking Group

Europe

Allianz
AXA Group
Barclays
BBVA
BNP Paribas
Banco BPI
CaixaBank
Commerzbank
Credit Suisse
Danske Bank
Deutsche Bank
DNB
Erste Group Bank
Generali Group
Grupo Santander
HSBC
ING
Intesa Sanpaolo
KBC
Lloyds Banking Group
Natixis
Nordea Bank
Piraeus Bank Group
Royal Bank of Scotland
SEB
Société Générale
Standard Chartered Bank
Swiss Reinsurance Company
UBS
Zurich Insurance Group

Latin America

Banco Bradesco
Banco de Chile
Banco de Crédito del Perú
Banco Nacional de Costa Rica
Bancolombia
Itaú Unibanco
Mercantil Servicios Financieros

North America

AIG
BNY Mellon
CIBC
CLS Bank International
Citi
Goldman Sachs
JP MorganChase
MetLife
Royal Bank of Canada
Scotiabank
State Street Corporation
Prudential
Morgan Stanley

Risk culture

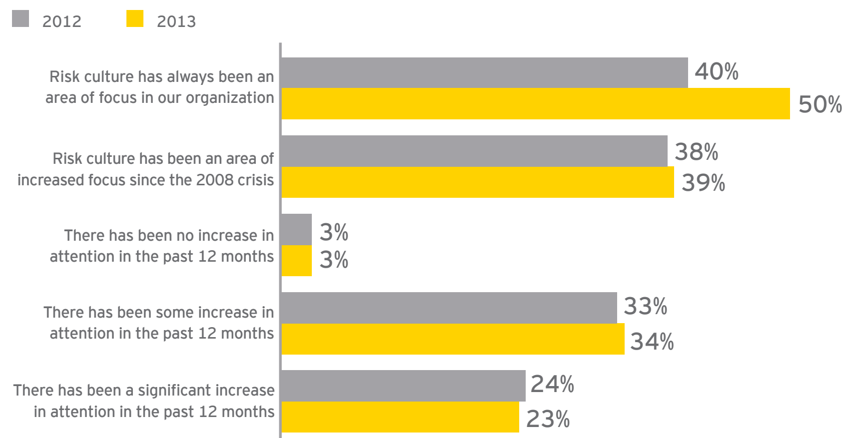
Progress has been made, but embedding risk culture throughout the organization continues to challenge banks

While there is still debate about the components of a strong risk culture, and how best to integrate them into a firm's approach and operating model, there is broad agreement that getting culture right creates the foundation on which effective risk governance rests. As one CRO said: "There's no silver bullet. I think that's the first important thing to recognize. Culture is such a diverse thing. It means different things to different people, but at the end of the day, it's really how people behave." This year, in the face of some high-profile risk failures, banks are turning in earnest to review or audit their cultures in an effort to gauge how well the code of ethics is being implemented across all business units.

Despite a broad range of responses to changing regulatory requirements, market unease and internal pressures, there is uniform agreement among interviewees that aligning the board, the leadership team and the business units of a firm around a shared understanding of risk culture is crucial to changing, monitoring and managing behavior. A critical factor in creating that culture is improved communications, reflecting focus on risk as a priority at the very top and throughout the organization. "The risk culture has to be built up from the top, primarily from the board and then from the senior management executive committee, and the CEO has to pay great attention to the risk management," said one executive. This sentiment was echoed consistently throughout our discussions with CROs and other senior bank executives in every region of the world, and it has been a theme since the crisis in 2008.

Toward this end, survey results indicate that risk culture continues to be a priority for senior management. Although there has been an increase in the proportion of firms that believe that risk culture has always been an area of focus (Exhibit 1), half of survey respondents reported an increase in focus in the past year, and 23% reported that senior management is showing a significant increase in attention. For the firms that felt the greatest impact from the crisis of 2008, that number rises to 35%, versus 14% for those moderately impacted by the crisis and 17% for those least impacted (Exhibit 2). This increasing focus on culture is cumulative, building on the increased attention in the direct aftermath of the crisis. For banks where review of culture was already underway, there has been further work on implementation and

Exhibit 1: Senior management's attention to risk culture

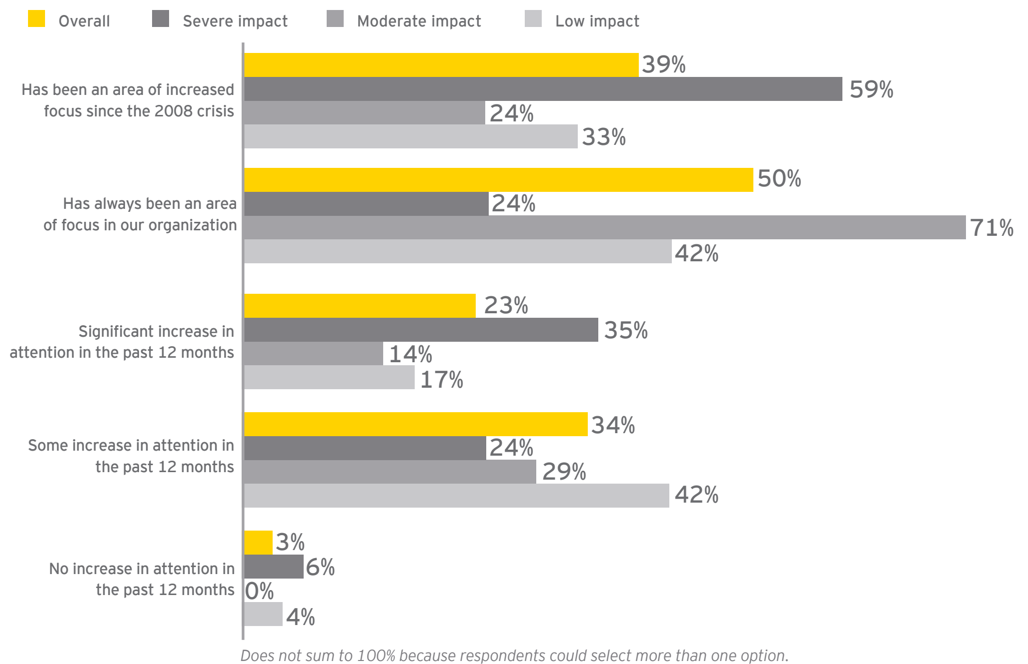


Does not sum to 100% because respondents could select more than one option.

operationalization to embed an improved culture. "The magic word is 'embedding,'" said one executive at a bank severely impacted by the crisis. "Risk culture should be part of everything we do."

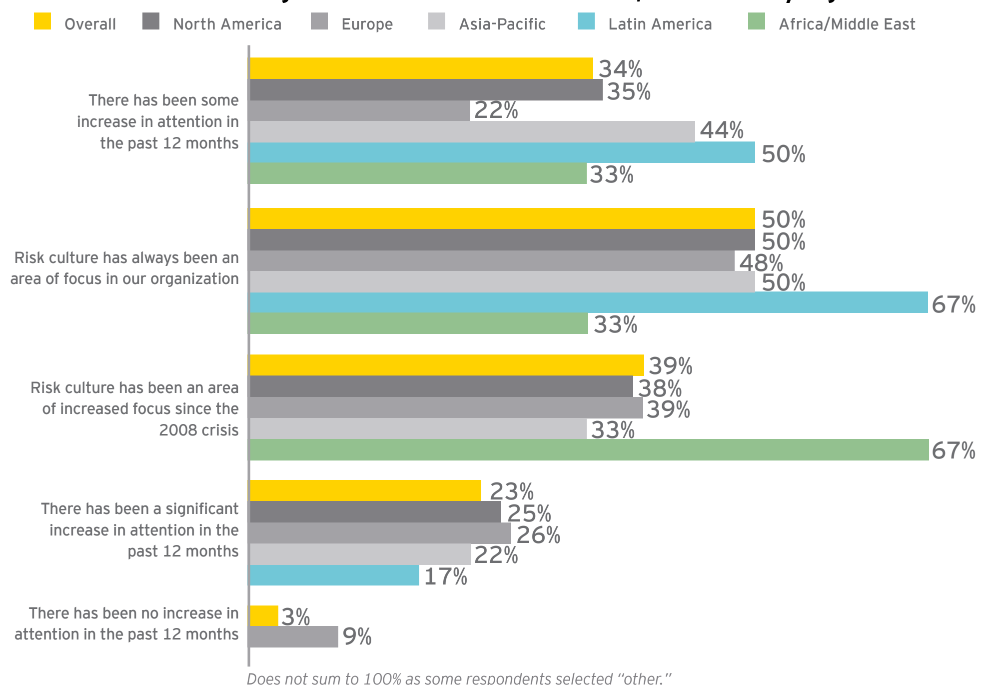
Those geographies that were most affected by the crisis have more mature programs in place. However, a sharp increase in focus on culture is clear even outside Europe and North America, perhaps reflecting the widespread public discussion of bank culture in the past year. Sixty-seven percent of firms in Latin America, 66% in the Asia-Pacific region and 33% in Africa and the Middle East indicate that risk culture has received increased attention in the past 12 months (Exhibit 3).

Exhibit 2: Senior management's attention to risk culture, overall and by level of impact from the 2008 crisis



Does not sum to 100% because respondents could select more than one option.

Exhibit 3: Senior management's attention to risk culture, overall and by region



Does not sum to 100% as some respondents selected "other."

Embedding risk culture

For many banks in Europe and the US, the challenge now is to link the culture directly to operating models in the business units that have different approaches and market environments. As one CRO put it: "What we find is that the cultures of the business units are different, and you do need to be quite flexible in terms of looking at risk culture, because it will always be different in different business units." In contrast, other interviewees said there should be a single culture.

Banks reported they are making headway, and almost half of the respondents said they have made progress in building a strong risk culture. This is affected by the perceived starting point. Banks that were most affected by the crisis are less confident that they have achieved a strong risk culture (only 29% of the sample) even though they have generally had increased emphasis over a longer period and programs have been more intensive. There is a slight increase this year in the percentage of firms that believe they have achieved a strong culture, but overall, the response is similar to last year's, underscoring the need for a sustained effort over a long period to effect significant cultural change (Exhibit 4).

Many see the need for continuing steady progress rather than attempting change that can be achieved quickly. "It's just an ongoing process, and everything you do reinforces the culture; you talk about it, you communicate, you recognize it, you applaud it, you put into practical effect what that culture should dictate or should suggest," said one executive.

Although progress is iterative and many perceive that they still have a way to go, progress since 2008 is tangible. "The last year has really been a complete evolution of those changes," said one executive. "If you were to compare 2010 to 2007, there was this tremendous change in the top-level oversight of risk at the management committee level, at the board level."

While the theme of setting the tone at the top came through loud and clear in all of our executive discussions, creating an operating model for the risk culture is a complex and slow-moving process, and one that requires changes to policies, processes, infrastructure and incentives.

Effective actions

There is a striking consistency in the initiatives underway to strengthen risk culture. As was the case last year, the top three initiatives cited are bunched closely together. Respondents reported "strengthening risk roles and responsibilities" as the top initiative (73% in 2013 versus 69% in 2012), followed closely by "enhancing communications and training regarding risk values and expectations" (71% in 2013 versus 67% in 2012) and "reinforcing accountability regarding risk management" (69% in 2013 versus 61% in 2012). These three initiatives are followed by "aligning compensation with risk-adjusted performance metrics" (56% in 2013) (Exhibit 5).

There is broad agreement that risk culture cannot simply be mandated; rather, it is essential to drive changes from the very top of the organization and work to embed such changes through policy and process. Similarly, the 2012 *IIF Report on Governance for Strengthened Risk Management* found that embedding risk culture at all levels of the organization is essential to building a strong risk

Exhibit 4: Progress in achievement of a strong risk culture

Does not sum to 100% because some respondents selected "other."

culture. Executives believe this should be communicated through timely and transparent communications, training, collaboration, and clear prioritization of risk management throughout the day-to-day operations. "Proactive risk culture needs nurturing," one interviewee said.

Communications and training were repeatedly raised as the most effective tools for raising awareness and shifting culture. One executive referred to the importance of his firm's "risk academy," which he sees as "a way to distribute, or to share, risk culture, risk awareness and risk tactics among risk people and the business." Indeed, implementing formal risk education was also cited in the 2012 IIF report as critical to changing behavior. Some interviewees refer to the importance of enhancing their programs for trainees. When asked what was important in achieving a strong risk culture, one executive said, "Firstly, in-house communications training around risk values and risk expectations." Others stressed the importance of the CEO, CRO and whole board "doing road shows in the bank" as well as using internal newsletters.

Another recurring theme was the importance of a formal code of ethics to create a clear framework for behavior and to give staff a frame of reference against which to test behavior. Executives stressed the need to drive toward specificity in the bank's expectations in order to take risk culture from theory to practice.

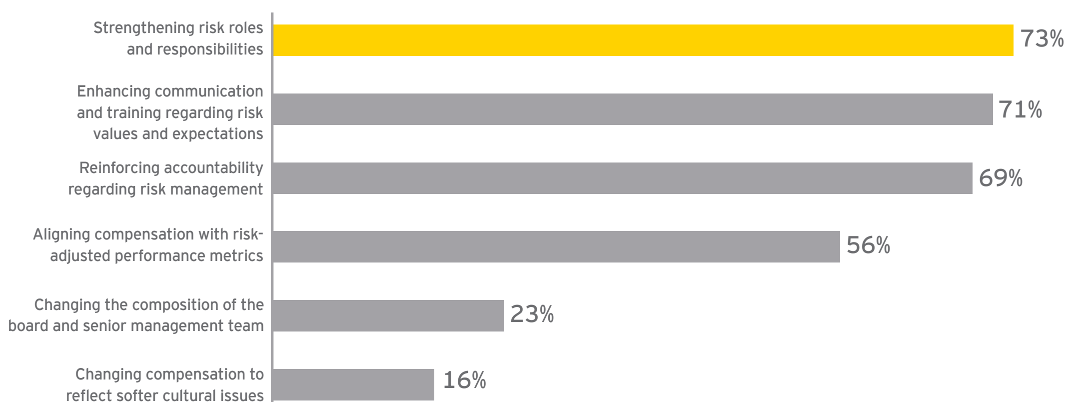
The importance of risk appetite

Nonetheless, there is also a realization that actions to embed a risk culture need to go beyond training. One aspect a number of interviewees mention is developing a clearer risk appetite. "Getting a risk appetite framework in place is a key element for building a strong risk culture," one executive said. Interviewees underscored the need to make sure risk appetite is relevant to the entire enterprise and is cascaded down to the business units. "There is going to be a lot of attention to further detailing and operationalizing the risk appetite," said one executive. "Most banks have high-level statements, but I think this needs to be refined in practical limits at the business unit level and country level." Some executives are finding varied geographic challenges with regard to risk appetite and expressed different levels of sensitivity to them. One area of increasing concern is making sure reputational risk is part of the risk appetite, interviewees noted.

A central issue is making the expectations regarding culture live and breathe. Interviewees stressed the need for clear accountability and consequences when roles and responsibilities are not followed. In their post-2008 assessments, many firms found confusion around risk oversight expectations and gaps in risk processes and responsibilities throughout their organizations. Since then, significant progress has been made, with increased emphasis on accountability. "What we have done over the last several years is have much better clarity around the organization, in terms of roles and responsibilities," one executive said.

The need to make accountability transparent was also underscored. One banker cited a requirement that a large proportion of staff have an annual test on the firm's code of conduct. Even banks

Exhibit 5: Components of firms' initiatives to strengthen the risk culture



Does not sum to 100% because respondents could select more than one option.

that indicated that their culture is already strong pointed to the need to follow up with accountability reviews when things go wrong. While 69% of respondents said reinforcing accountability is a firm-wide initiative (Exhibit 5), only 23% cited "enforcing accountability" as one of their top three challenges, down from 43% a year ago, indicating significant progress (Exhibit 6).

Most interviewees believe that adherence to risk guidelines cannot be maintained without enforcement. As one CRO said, "The best driver is consequences for people who fail to deliver on their accountability."

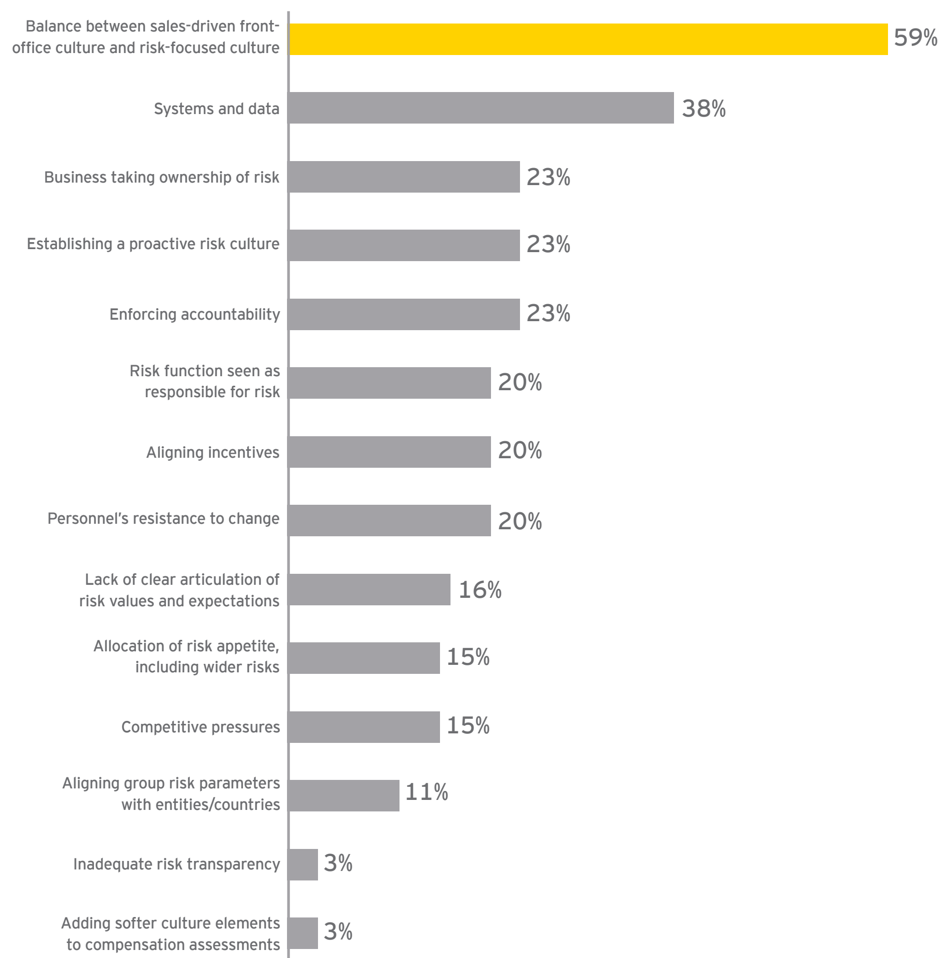
Metrics

According to executives, aligning performance metrics with both business needs and risk appetite can be difficult. However, finding the right metrics is critical, particularly for risk-adjusted performance. One executive said, "Accountability for us starts with performance reporting, both at the business plan level and at the individual level. There's a rating by the risk management group of each of the businesses' adherence to the risk appetite/risk culture." Fifty-six percent of the respondents indicated that aligning compensation with risk-adjusted performance metrics is a firm-wide initiative (Exhibit 5). But other mechanisms "after the event" are also playing an important role. Many executives cited clawback mechanisms as an important part of achieving accountability.

Banks continue to work on developing effective forward-looking risk metrics. An executive in North America said: "I'm sure most firms are constantly trying to figure out what the best KRIs are, whether they're the most revealing or the most important. We're constantly trying to refine our KRIs around the different types of risk so they're a better signal for us that something's awry."

Just how firms assess their risk culture, align their performance metrics with business strategy and risk appetite, and link those metrics to compensation is as much art as science. Interviewees find that the tools to do so vary widely and often rely on subjective judgments. One executive spoke of the balancing act between metrics and behavior: "When things go wrong, as they inevitably do, how do the board, the CEO and the relevant group executives tackle those issues? It often is how you behave when things don't go right that is important." Still, the same executive counsels balance: "There have to be appropriate consequences, but we're not typically bringing out the big stick when things go wrong. That's not the culture that we want either. We want open culture, so we've got to be careful on that score." An open culture includes encouraging people to admit and correct mistakes. Others took a harder line, referring to zero tolerance for certain types of behavior. Some also stressed the importance of having a whistle-blower procedure in place.

Exhibit 6: Top challenges of strengthening the risk culture



Each respondent could select three challenges.

Assessing culture

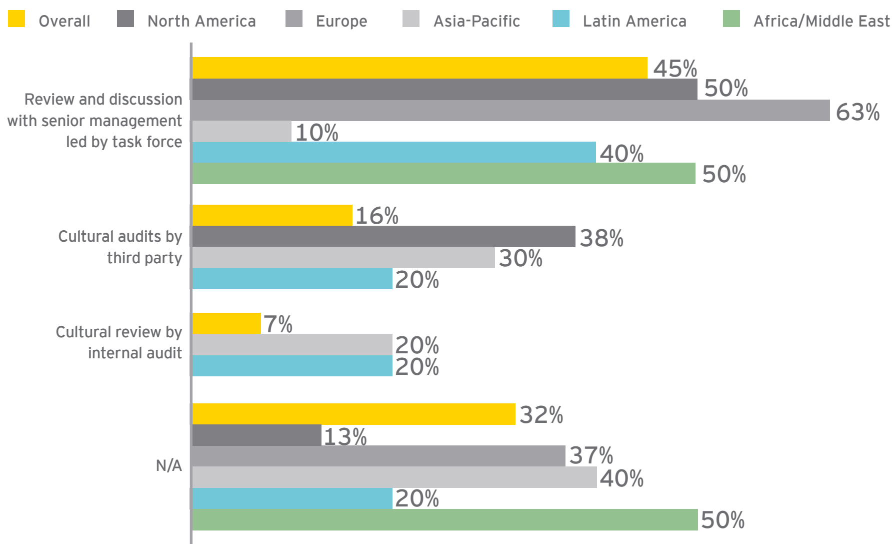
Banks are taking different approaches to assessing risk culture, but what stands out is the degree of momentum behind taking action. More than 85% of North American banks in the survey have programs in place to assess internal culture, and the figure is similar for Latin America. In Europe and Asia-Pacific, 60% or more of banks have programs to assess internal risk culture (Exhibit 7).

The most preferred route for assessment of culture is review and discussion with senior management led by a task force. The second most popular approach is the use of cultural audits by a third party. Respondents said they rely most heavily on discussion with senior management to assess risk culture (45%), far more than on audits by internal or external teams. Sixteen percent of respondents use cultural audits by third parties, but only 7% employ cultural reviews by internal audit (Exhibit 7). However, in North America, 38% of firms are using cultural audits by a third party. One interviewee said his bank had a review by a third party and "at least it helped to identify some elements of where we saw problems across risk." Another banker said that in 2012, his bank had tried to measure risk culture through engagement with employees. "We engaged a third party to help us, and they did a survey to get a health check of where we think our culture is." Following that, the bank produced an action plan.

In contrast, some bankers felt that the topic was too subjective for a third-party audit. One interviewee said, "I think the most important thing, at the end of the day, is what you call gut feel. You can get a perfect, flawless report, but if you're not comfortable that there's open and transparent discussion and challenge about the issues, then you've got an issue."

Several CROs pointed out the ultimate reality check: losses. "Well, I think there's the easy one, which is the trend in losses against the marketplace," said one CRO. "So, it's how do you marry the risk element and culture into the business performance and monitor that on a regular basis over time? That just tells you how well it's working and whether or not you need to step up reinforcement."

Exhibit 7: Action taken to review internal risk culture



While culture is considered a "soft" concept, interviewees are near consensus on some specific measures to monitor risk culture, including:

- Number and frequency of broken risk limits
- Causes of limits being exceeded
- Number of problems identified in internal audit reports
- Manner in which audit problems are addressed
- Percentage of self-reported risk problems
- Degree to which information is filtered as it is escalated
- How the firm deals with staff who have violated risk policy

Top challenges

CROs pointed out that now that risk programs are more mature, the challenge is less about creating risk policies and procedures and more about managing the businesses within risk frameworks. Fifty-nine percent of survey respondents cited the balance between a sales-driven front-office culture and a risk-focused culture as their top organizational challenge, a change from a year ago when respondents said inadequate systems and data was their top challenge (Exhibit 6). The balance between sales culture and risk culture is the top challenge in all regions other than North America, where inadequate systems continues to be the top challenge because data and systems need to be strong enough to support risk identification and accountability. There are considerable geographic differences in the degree to which banks see a conflict between a sales-driven front-office culture and a risk-focused culture. Only 22% of North American banks see this as an issue, compared with 83% of Latin American banks and 70% of West European banks. A little less than a quarter of all respondents cited the allied topic of ensuring that businesses take ownership of risk as a top challenge (Exhibit 6).

Executives interviewed warned that there is a tendency for a sales-driven culture to take a minimum-compliance approach to risk, particularly as revenue pressures grow. Ironically, they pointed to the positive effects of poor public perception and tough markets as a constant reminder, and they worry about maintaining a strong risk culture in better times.

This year, lack of systems and data is the second most frequently cited challenge (38%), but it is down significantly from a year ago (Exhibit 6). However, it remains the top challenge for North American banks. Interviewees confirmed that increasingly banks are looking to data and systems to enable adherence to risk policies. Several interviewees pointed to the need for continuing investment to achieve higher-quality and more timely reports with the right metrics. Interviewees underscored that risk management continues to depend on improved data and systems; banks are investing in initiatives to improve data aggregation, in particular to support liquidity and capital management and to strengthen internal stress-testing processes. More broadly, the demands on systems, reporting and analytics continue to grow.

Firms also reported progress in the development of stress testing, although issues remain in turning it into a more comprehensive tool that can give a holistic view of potential risks and their impact on the entire organization. Many have added new metrics to better measure risks and concentrations, but the quality and timeliness of reporting is an area that continues to require significant ongoing IT investment. Risk transparency is essential to a strong culture, and stress testing plays a key role.

Business taking ownership of risk is seen as a key factor in four of the five regions: Western Europe, Eastern Europe (where it was second highest), Asia-Pacific and Latin America. In North America, people being resistant to change and allocation of risk appetite feature highly, although this is not the case in other regions.

One culture

Some banks questioned the extent to which it is desirable to seek a single culture across a group. An executive from a geographically diverse bank said it is important to respect different national cultures: "What we need to do is put out the high-level requirement but leave it to the countries to fine-tune it, based on their own cultures." Another issue raised was whether there could be a single culture across business units. As one executive put it: "What we find is that the cultures of the business units are different, and you do need to be quite flexible in terms of looking at risk culture." In contrast, other banks stressed the importance of a single group-wide culture.

One executive at a bank severely impacted by the crisis summed up work remaining to be done: "First of all, we have to adapt to regulatory changes. We have also to elaborate more and more our stress-testing capabilities. We also have, because of the regulatory changes, but also because of risk management, to strengthen the risk reporting systems; the same for liquidity and developing liquidity risk. Then, at the same time, we need to enhance the risk culture into the organization. The main protection in risk management is to have everybody in the organization aware of risk."

It is notable that only 20% of respondents cited resistance to change as a top challenge in achieving a strengthened risk culture, down from 25% a year ago (Exhibit 6). One CRO said, "The procedures are set up so that people who don't work [the right way] don't last in the organization." This emphasis on people was echoed by another interviewee: "It's all about picking the right people and picking people for the ability to properly balance risk, rewards."

"Ultimately it's the tone at the top, from the board and CEO down. There are great examples of companies before the crisis that had great risk metrics, but the risk group was ignored by the senior management."

Risk appetite

Turning board guidance into actionable tools

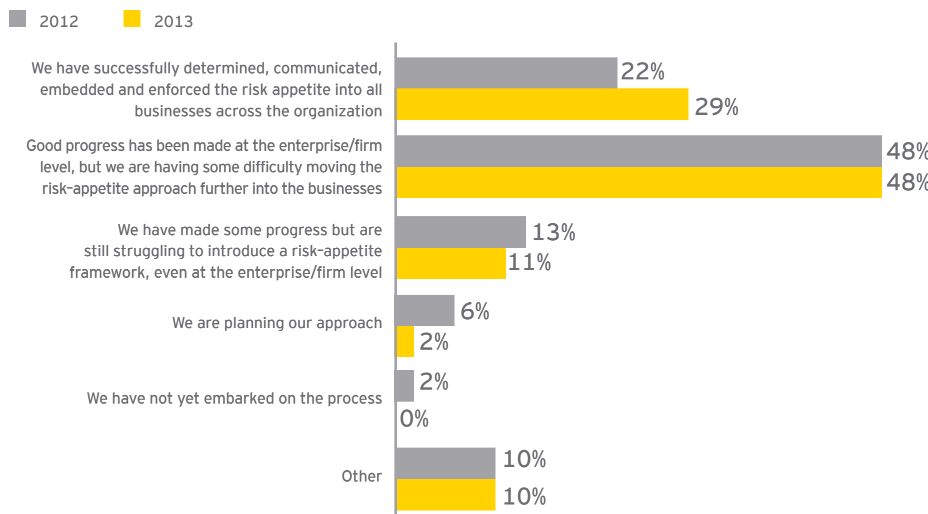
An effective and well-articulated risk appetite is now seen as an essential part of risk governance. The majority of banks have put in place risk appetite statements at least at the enterprise or group level, but the challenge continues to be embedding the risk appetite down through the organization. In its 2013 Risk Governance Peer Review,[2] the Financial Stability Board (FSB) makes clear the importance of integrating the risk appetite statement into a firm's internal processes and embedding it into risk culture. Industry executives confirm that importance. As one executive said: "The risk appetite framework must not be something that is done in isolation at the board level. It is critical that it is defined through operating limits through the business units." But many also underscore the difficulty they are experiencing in doing so. Despite an emphasis on risk appetite at the board and CRO level over the past year, many firms are still finding that there are difficulties translating that focus into tangible tools to link it to decision-making. (A discussion of governance follows in the next chapter.)

CROs are creating new risk appetite frameworks, but the form that the risk appetite framework should take is still evolving. Some executives said their banks have developed detailed frameworks that include specific limits, and others pointed to briefer, high-level frameworks intended to guide the strategy. In all cases, making risk appetite applicable to business units with very different business drivers and tying those guidelines to day-to-day decision-making is the key to effectively using the risk appetite framework, they said. "It's really an education in how you can affect our risk appetite in your daily job," one executive said. However, interviewees painted a mixed picture of how they perceive risk appetite, indicating that further work is required at both the industry and the firm levels. For example, one executive said, "Almost anything you do in a bank, you can link to risk appetite. So the question is, 'Where does it begin and where does it end?'"

Survey results and discussions with executives show three closely related areas necessary to making risk appetite frameworks effective:

- Cascading risk appetite through the organization
- Creating a link between risk appetite and the planning process
- Developing risk metrics that are tied to business decisions and compensation

Exhibit 8: Experience in the development and implementation of risk appetite

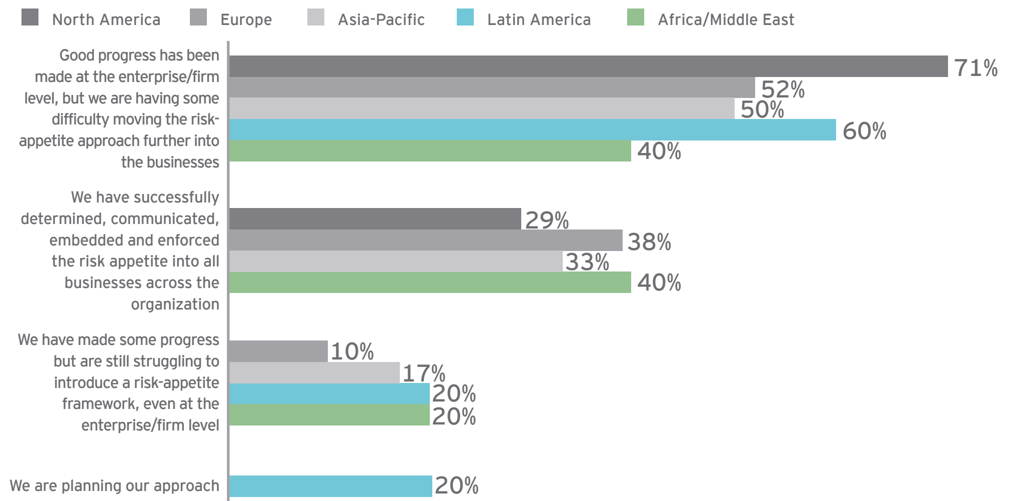


[2] *Thematic Review on Risk Governance*, Financial Stability Board, February 2013.

Cascading risk appetite

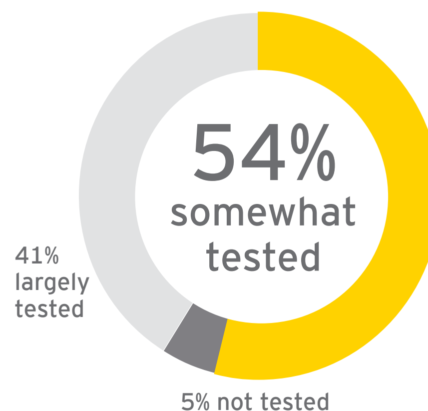
While survey respondents reported that risk appetite is the top area of focus for boards, and almost all respondents have a risk appetite framework in place and are linking it to planning and strategy, they also acknowledged the challenge of implementing it in their businesses. Forty-eight percent of respondents indicated they have made good progress but are having some difficulty moving that approach into the businesses. That percentage is unchanged from a year ago (Exhibit 8). In North America, the percentage is higher, at 71% (Exhibit 9). Only 29% of banks have made good progress in communicating and embedding the risk appetite, and 13% are struggling to introduce it even at the firm level or are still in the planning stages (Exhibit 8). Additionally, only 41% consider individual business decisions to be "largely" tested against risk appetite, and 54% view decisions as "somewhat" tested against risk appetite (Exhibit 10).

Exhibit 9: Experience in the development and implementation of risk appetite, by region



Regional data has been adjusted to remove the response 'other.'

Exhibit 10: Testing of individual business decisions against risk appetite



The difficulty, executives said, is bridging the gap between senior leadership and those on the ground. "People need to understand that this is a real statement," one executive remarked, "rather than some generic aspiration." Executives agree that staff must understand exactly what risk appetite means to them. "While the board should have a clear risk appetite statement," one executive said, "a junior underwriter probably needs to just know his underwriting limits." In fact, 63% of respondents ranked effectively cascading the risk appetite statement through the operational levels of the organization as their top challenge (Exhibit 11).

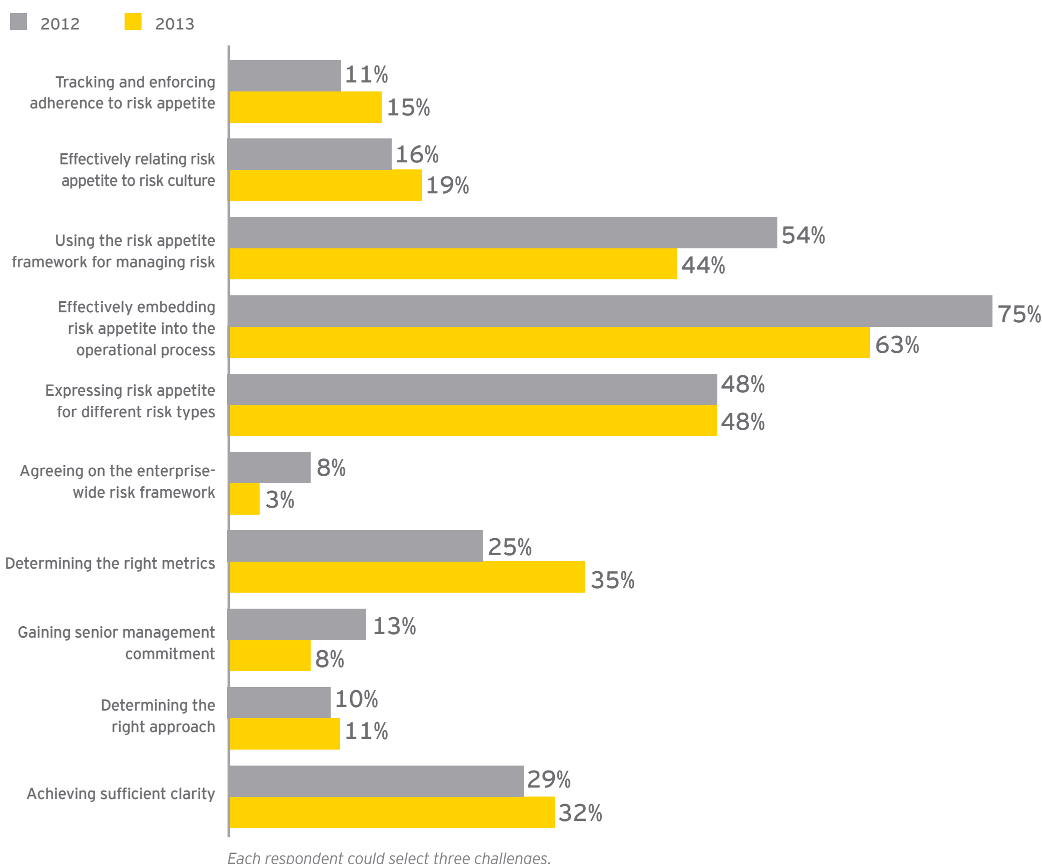
Interviewees said that risk appetite must be set at the top but that the key to successful implementation of risk appetite is collaboration between the board, the CEO, the CRO, the CFO, risk teams and business unit leaders. Interviewees counsel a flexible approach — flexible, in the words of one executive, "not in the way of tolerating breaches, but having a continuous dialogue about refining it to ensure that top-of-the-house objectives can be achieved while the business units, which have more specific issues, can also have them addressed."

The top-down approach is effective in setting broad guidelines and policy, according to interviewees, but the practical application of those guidelines must come from the business unit leaders themselves. Risk teams can act as integrators, helping to communicate board directives to the businesses and business definitions upward. And several executives underscored the need for information technology systems to measure and monitor application of risk appetite as defined by the firm.

Risk and planning

Executives said that cascading risk appetite throughout the organization depends on tying it to the planning process. The risk appetite framework should affect a range

Exhibit 11: Top challenges of risk-appetite development and implementation



Each respondent could select three challenges.

of business decisions, including resource allocation, new business opportunities, liquidity and capital planning. And while some banks cited a top-down approach and others a bottom-up approach to developing the framework, all spoke of the benefits of integrating risk appetite into strategic planning and financial planning. "The key thing," one executive said, "is to make sure there is a real linkage between risk appetite and the bank's strategic focus."

More than 75% of survey respondents said strategic goals affect setting risk appetite (Exhibit 12), and, of course, it is a two-way path. Risk appetite also has to influence strategy. However, there are varying views on the extent to which banks have been successful in linking risk appetite to the firm-wide planning process — although the majority have been relatively successful. Fifty-eight percent said there is significant linkage between risk appetite and firm-wide planning, and 40% see some linkage (Exhibit 13). One executive who has effectively connected the two described the dependency: "We have our risk appetite, our strategic planning and our financial planning fully integrated. They work in lockstep with each other. They will be discussed by the board at the same time, by management and the board at the same time. Risk appetite can be a constraint on our financial plan or our strategy, and vice versa. You can't have a strategy which might constrain your risk appetite, potentially, or modify it in any way."

Exhibit 13: Risk appetite linkage to the annual firm-wide business planning process

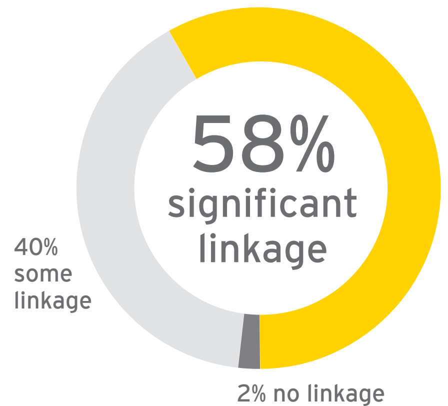
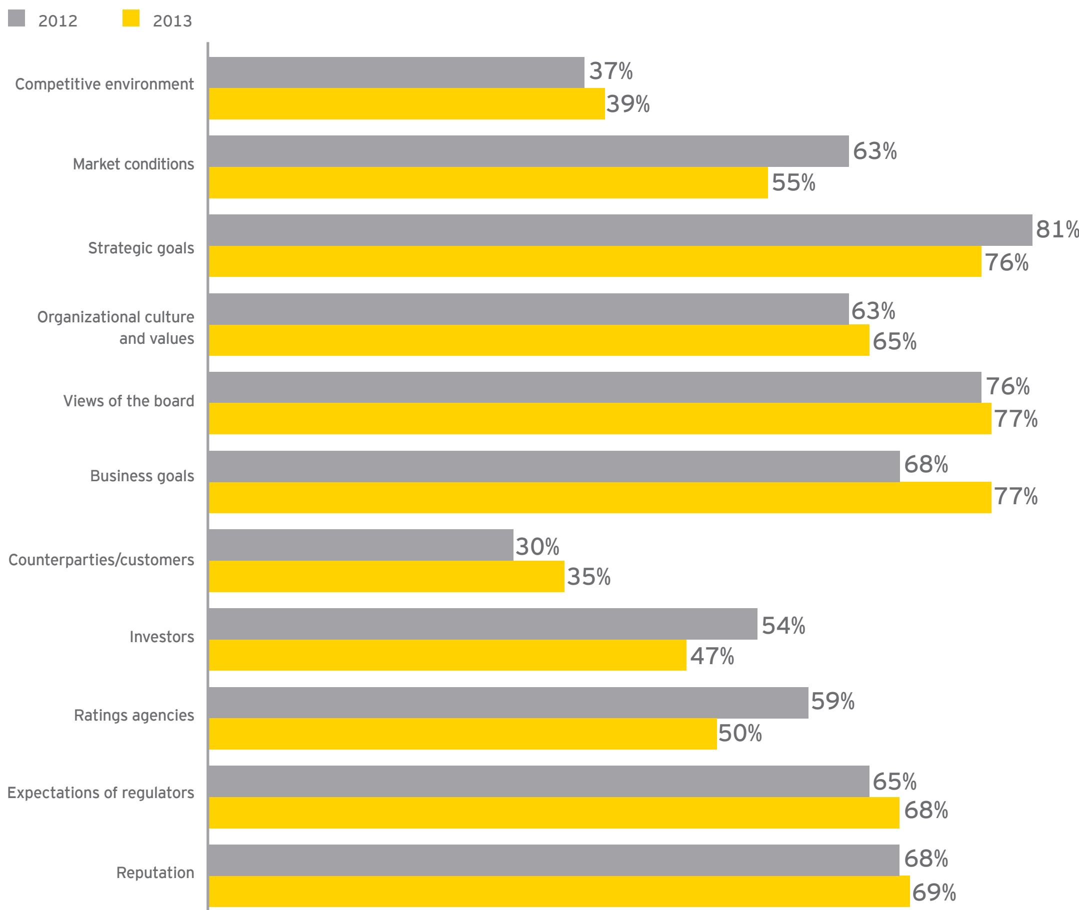


Exhibit 12: Qualitative issues affecting the setting of risk appetite



In addition, the views of the board, external reputation and expectations of regulators all contribute significantly to setting risk appetite. More than half of survey respondents cited market conditions, and 39% said the competitive environment affects risk appetite, indicating that risk appetite is often reined in during difficult times and expanded when markets pick up (Exhibit 12). This underscored banks' stress on the governance aspects of risk appetite, which become more important as market conditions improve.

The very process of developing a risk appetite forces the board and senior management to consider what type of organization they want to create. One executive described his experience: "What I did is hold a mirror in front of my colleagues in the executive committee, as well as my board members, to basically say, 'Let's sit down together and decide what kind of animal we want to be.' Once we have done this, how do we then police this? How do you make sure that you actually manage it? I hate to say it, but the value was in the journey, not so much in the outcome."

Risk metrics

Tracking, reporting and adjusting the risk appetite framework were all raised as important components of a successful program. Interviewees stressed the need for the criteria to be "measurable and simple," as far as possible.

Even so, many said they struggle with just how to judge less quantifiable attributes, such as reputational risk and even liquidity. "It's very hard to cascade the nonquantifiable risk strategy down," one executive said, "and to ensure that you prevent breaches. I would say operational risks, reputational and even liquidity risk. Then the question, really, is, 'How much buffer do I need to build in?' Liquidity risk, you cannot breach. Reputational risk, you cannot breach. So it's very hard to manage risk in a black-and-white environment."

Consensus about which quantitative metrics should be used to set and monitor risk appetite is beginning to emerge. The overwhelming majority of survey respondents are using capital ratios, concentration limits, and funding and liquidity measures at the group level. There is also increasing use of different kinds of overall potential loss metrics for extreme periods: stress test results, operational losses, earnings at risk, enterprise value at risk (VaR) and loss in extreme events at the group level (Exhibit 14).

Almost all banks use limits at the business unit level to implement risk appetite, including a variety of limits focused on different issues, including single name limits and limits on particular high-risk portions of the book. Banks also use concentration limits, such as country or industry limits. Stress test results and loss in extreme events are less widely used at the business unit level to set risk appetite than at the group level (Exhibits 14 and 15). This highlights the difference between the structure of metrics at a group level, which are focused on the overall risks of the firm (usually broader metrics), and the more granular metrics used to deliver the risk appetite at the business unit level. Internal ratings, operational losses and provisions are all metrics used to monitor whether more risk is being taken at a business unit level than is consistent with the overall risk appetite.

Exhibit 14: Quantitative metrics used to set and monitor risk appetite at the group level

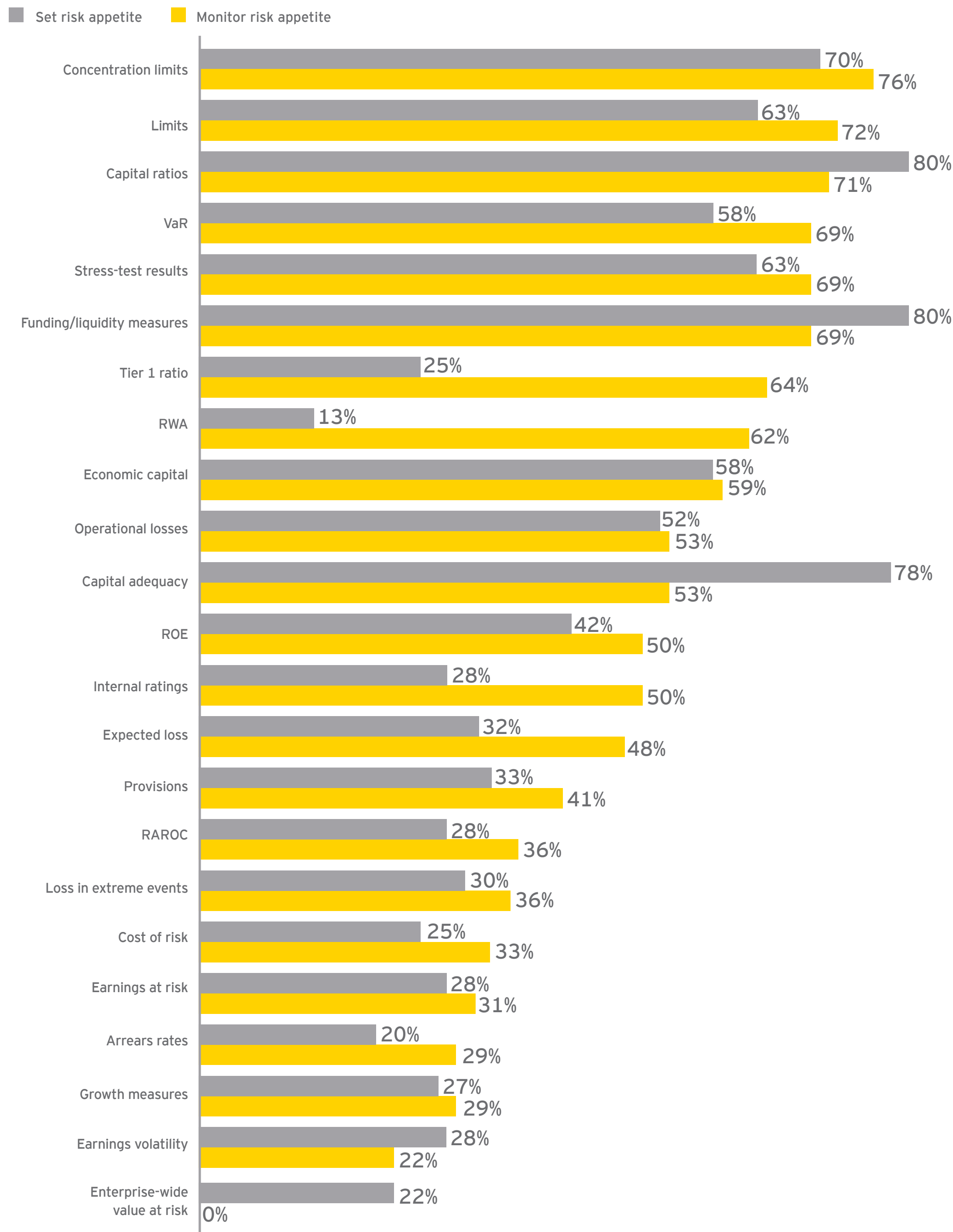


Exhibit 15: Quantitative metrics used to set and monitor risk appetite at the business unit level

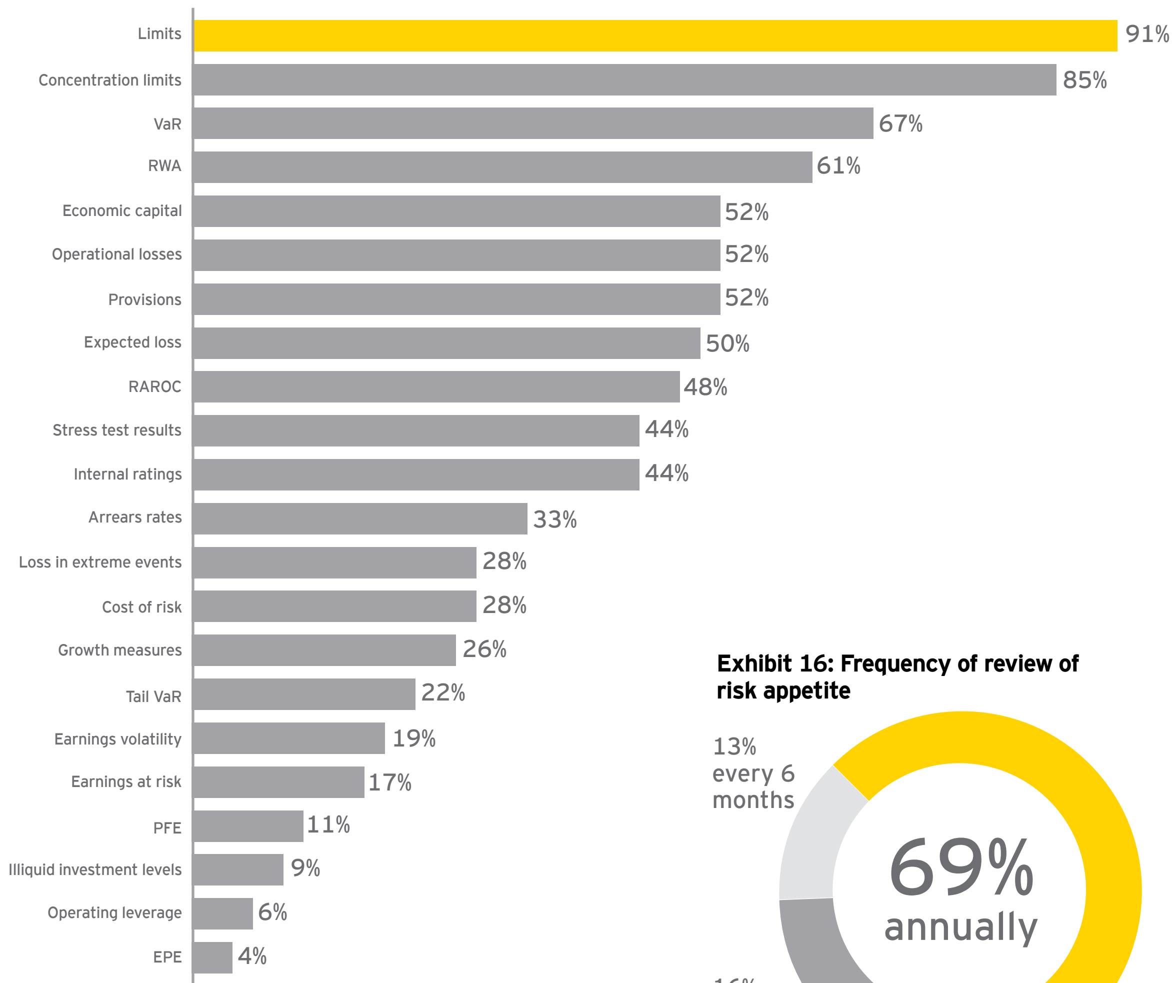
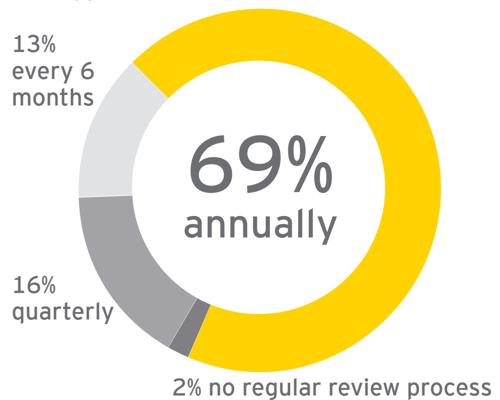


Exhibit 16: Frequency of review of risk appetite



In its October 2012 *Report on Governance for Strengthened Risk Management*, the IIF suggests some considerations for developing and maintaining a risk management framework, including:

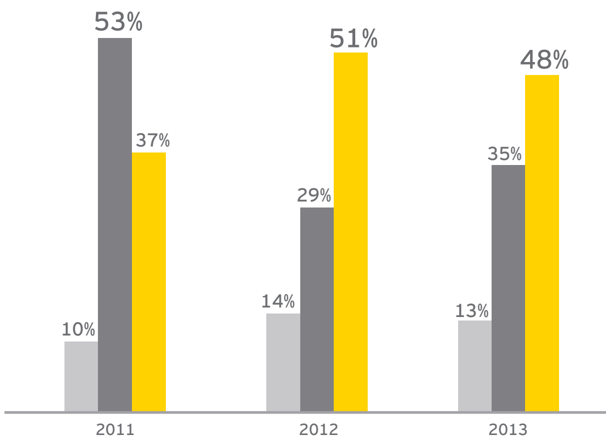
- It is unlikely that any framework will be fully able to anticipate all innovations in financial markets and products.
- Any risk management framework has the potential to be arbitraged and should therefore include some high-level principles in addition to "hardwired" processes, procedures and limits.
- The risk function has to be engaged in material acquisitions, new products deals and transactions before they are completed. This is to ensure that risk is able to voice any concerns in advance and potentially stop the process if required.
- Models are not infallible, and judgment is needed in decision-making.

One challenge is to reconcile the quantitative measures with more qualitative issues — business goals, strategic goals, the views of the board and external reputation lead the list — which can be hard to apply across different business units. "It's very difficult," one executive said, "to reconcile this macro approach with the micro approach. It's every year looking back and revisiting what has been done." Toward this end, 69% of survey respondents said they review risk appetite annually, up from 56% a year ago (Exhibit 16). Thirteen percent report reviews every six months, and 16% report quarterly reviews. In 2012, 11% reported no regular review process; this year, that number has dropped to 2%.

Challenges to implementation

While the industry does not view agreement on an enterprise-wide framework or board and senior management commitment as issues, there is broad consensus that effectively cascading risk appetite to the operational levels, defining less quantifiable risk and using risk appetite as a tool for managing risk are the top challenges. Relative to last year, though, fewer firms see using risk appetite to manage risk and embedding it into operational processes as key challenges. Still, the percentage of firms struggling with these aspects remains high. Determining the right metrics for risk appetite has become a more prominent challenge, reflecting the greater focus on embedding. Effectively cascading risk appetite is the top challenge for every region except North America, where it came second. In North America, the top challenge is expressing risk appetite for different risk types. Tracking and enforcing adherence and relating risk appetite to culture are named as top challenges by only 15% to 20% of banks overall. This year, a slightly smaller number of banks than last year said they have made excellent progress in their ability to track and enforce adherence to risk appetite, although the number is substantially higher than in 2011, showing the general progress (Exhibit 17).

Exhibit 17: Ability to track and enforce adherence to risk appetite



Does not sum to 100% because some respondents selected "other."

This is partly because the industry is breaking new ground in implementation of risk appetites, executives said. Risk appetite statements are not new, but using them to constrain business decisions down through the organization is more of a change. Executives agree that relating risk appetite to the specific dynamic of the business units is a significant challenge. As one executive said, the "challenge is really how far down do you go, to what level of detail, trying to bridge between the type of activities and risks we carry." This also raises the issue of how to deal with different risks; half of respondents reported having difficulty expressing risk appetite for different risk types. However, it is clear that risk managers and regulators will continue to seek more refined and more effective translation of risk appetite through all layers of an organization. The FSB made clear that a goal is to broaden the framework to all risks, including those that are difficult to quantify, such as operational, reputational and compliance risk.[3]

Some interviewees said the difficulty is in making broad risk statements relevant to specific areas of business. "Before you can actually throw it down into the business lines," one executive said, "you need to link risk appetite to the budget. If you don't do that, then it's a futile, theoretical exercise."

Others see the challenge in terms of getting buy-in. "As you get further down the organization," one executive said, "people don't understand what the risk appetite means to them."

Another issue identified by interviewees is keeping continuous discipline around risk appetite. "The challenge," one executive said, "is doing it all the time, avoiding complacency." But executives did express concern about dampening acceptable risk-taking and pointed to the need to exercise judgment and not just rely on models to test compliance with risk appetite.

Executives shared an array of methods for finding that balance. Some banks reported trying to translate the risk appetite into a series of limits for individual business lines against which decisions could be tested; others are trying to look at a broader concept of earnings at risk at the business unit level. Generally, accountability is seen as key regardless of the metrics and approach, and all agree that limits need to be clearly articulated and enforced.

Executives are unanimous in their call for accountability, as well as the metrics to define it, the systems to track it and the importance of applying it to the business units. Enforcing business decisions; holding people accountable; putting proper early warning systems and triggers in place to flag problems before they become material; and making certain that results are transparent, consistent and regularly reviewed are all viewed as critical. Half of survey respondents reported making excellent progress in their ability to track and enforce adherence to risk appetite, and 35% reported moderate progress (Exhibit 17).

[3] *Thematic Review on Risk Governance*, Financial Stability Board, February 2013.

> "It's all about policy, procedure and communication. The limits have to be effective, and they have to be clearly articulated, and the enforcement has to be consistent."

Throughout, consistency is paramount. "We put our risk appetite in a box, which we then provide for business units so they can develop their risk appetites in a relatively consistent manner," one executive said. "Have we really gotten from boardroom to banker completely? Not completely. Bankers need to know that they can do X amount of business in a certain industry, or in a certain geography, or whatever the case may be. As long as you've got those metrics in place, that should guide what they do. As long as that's consistent with appetite, then they're OK. We've come a long way on appetite." In contrast, others see a need to move to a broader ownership of risk by the business beyond just meeting limits.

While the ways that risk appetite is monitored varied, executives all said continuous monitoring is crucial. Many executives said monitoring takes place on a daily basis. And when it comes to breaches, interviewees pointed to clearly defined escalation processes, documentation and, when the breach is deemed inappropriate, real consequences to those involved. "The first thing to understand," an executive said in a typical response, "is what are the underlying reasons for the breach. Did the market move? Was it a business decision? And then, based on that, we can take disciplinary measures, or at least consider them."

The FSB outlines key features of a risk appetite framework in its 2013 peer review report, *Thematic Reviews on Risk Governance*:

- Risk appetite frameworks (RAFs) help drive strategic decisions and moderate a firm's risk profile.
- RAFs establish an explicit, forward-looking view of a firm's desired risk profile in a number of scenarios and set out a process for achieving that risk profile.
- RAFs include a risk appetite statement that establishes boundaries for the desired business focus and articulates the board's desired approach to a number of businesses, risk areas and product types.
- The more developed RAFs are flexible and responsive to environmental changes yet are still clear and consistent enough to discourage strategic drift.
- RAFs set expectations for business line strategy reviews and facilitate regular discussions about how to manage unexpected economic or market events in particular geographies or products.

The FSB also raises the issue of a common language for risks in the risk appetite framework.

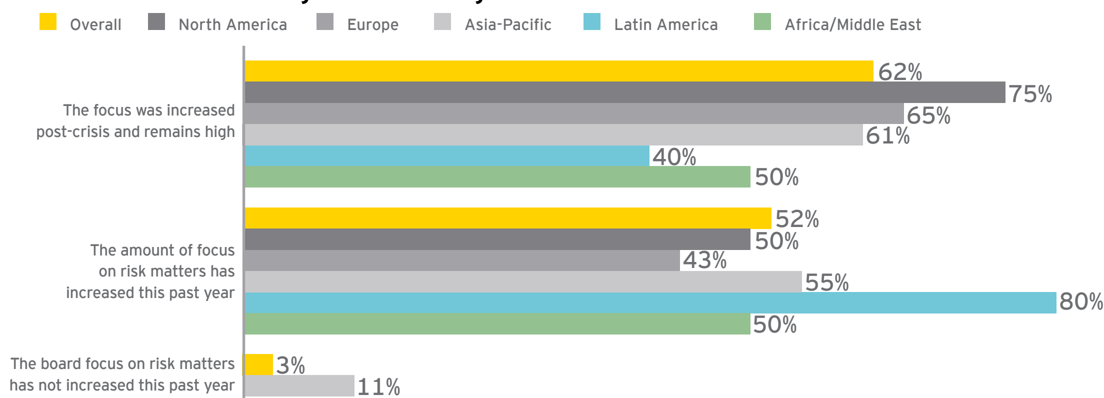
Governance roles and responsibilities

Operational risk management becomes a board issue; CROs work to balance the needs of regulation and business-focused risk management

Boards and board risk committees have critical roles in strengthening risk governance, but finding the right mix of oversight[4] and execution continues to be a challenge. Interviewees underscore the importance of the board setting the right tone, reviewing strategy and approving the firm's risk appetite, but they also question just where to draw the line as boards effectively get more involved in operations. Simultaneously, structural changes have made great improvements in ensuring the independence of CROs, while CROs continue to look for better ways to bridge policy such as risk appetite with day-to-day business practices.

Survey results show continuing enhancement of board oversight, with more than half (52%) of all respondents reporting an increase in board focus over the past 12 months, and Latin America doubling to 80% from a year ago. Sixty-two percent of all survey respondents reported an increase of board focus on risk management since the financial crisis, a slight uptick from 2012 (57%), but banks based in North America reported a significant increase, from 43% in 2012 to 75% in 2013 (Exhibit 18). While risk appetite and liquidity lead as the top areas of board focus, at 44% and 42%, respectively, 39% of respondents this year named risk compliance as their third most important area of focus, up from 20% a year ago (Exhibit 19). The trend in terms of time devoted to the board risk committee meetings is to move away from a set frequency of a day a month or a day a quarter; overall, the amount of time devoted to the board risk committee is increasing. Further, as boards' risk mandates continue to grow, 34% of respondents' boards have added members with increased risk expertise in the past year (Exhibit 20), and 60% have programs in place to train board members on key areas of responsibility. Since last year, there has been a shift toward formal training in lieu of other ad hoc approaches.

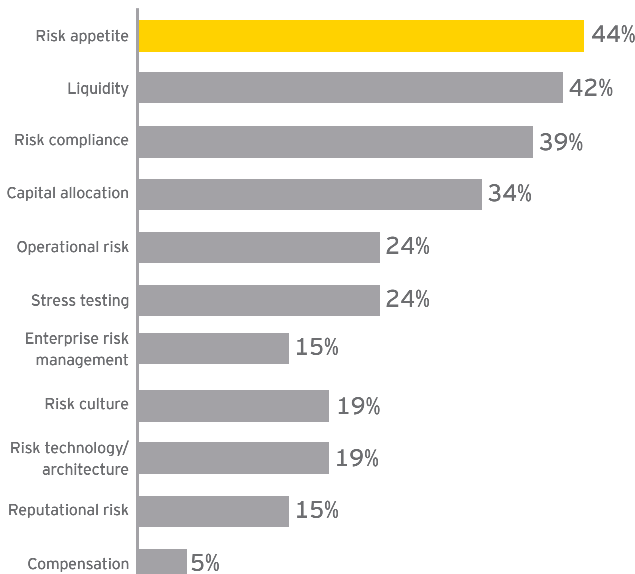
Exhibit 18: Board oversight of risk management



Does not sum to 100% because some respondents selected "other."

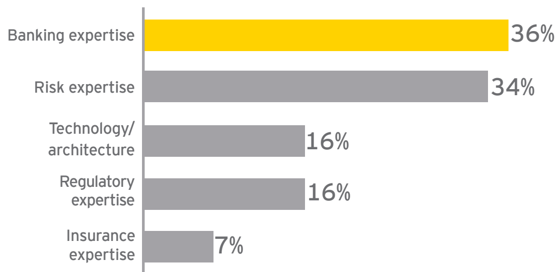
[4]Some regional differences may reflect the two-tier board structure in some countries.

Exhibit 19: Risk areas where board is placing the most focus



Each respondent could select three areas of focus.

Exhibit 20: Changes to board composition to increase expertise in the past year



Survey results show the wide range of areas where the board has influence, but more than three-quarters of survey respondents consider risk appetite to be the area of greatest board influence (Exhibit 21). One executive said that roughly half of papers submitted to the board are on issues related to risk. Many indicated that the board sets the overall framework for risk management and monitors and reviews it. In part, this reflects regulatory pressure, executives said, noting that regulators expect board directors to play a bigger role in defining and managing risk. Several interviewees pointed out that this raises issues in finding the proper balance between the board and management.

While risk appetite also led the list of board areas of influence last year, the second, third and fourth priorities this year — risk compliance (72%), credit risk (70%) and reputational risk (66%) — are all new to the top of the list (Exhibit 21). Many executives acknowledged that they underplayed the importance of reputational risk in the immediate aftermath of the crisis. While reputational risk is a top four area of board influence, it ranks relatively low as an area of board focus (Exhibit 19). Still, many interviewees pointed to reputational risk as a growing area of attention, and several pointed to the need to broaden their risk priorities going forward. As one banker said, "Market risk and credit risk are pretty well understood, but business risk, legal risk, reputational risk and cyber risk are becoming more imperative."

Executives interviewed also noted a newfound interest in board oversight of operational risk. As one CRO said: "The one area which has shifted in terms of focus area would be around operational risk. Historically, the primary focus was on risk-taking activities and operational was more of an afterthought. That's changed considerably in the last 12 to 24 months as we've shifted the operational risk focus much more into accountability." Operational risk has risen in terms of focus and influence, with 46% of respondents ranking it a top area of influence for their boards (Exhibit 21), up from 31% a year ago.

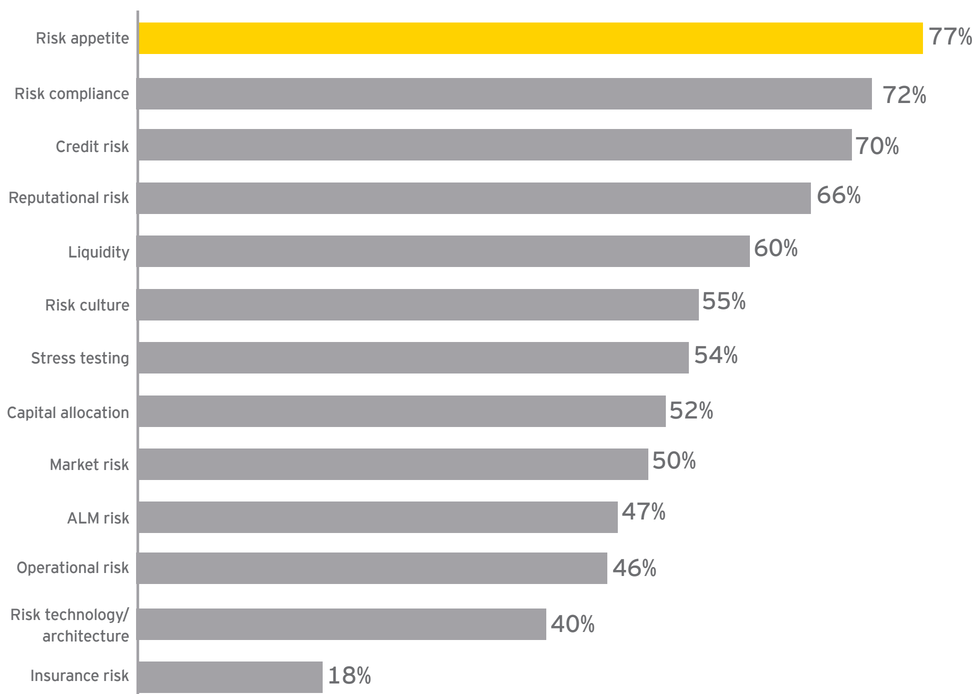
Several executives said that regulators have forced boards more into managing banks rather than simply providing oversight. "The board went from passive to too much execution," admitted one executive. "They need to refocus on strategy." One executive referred to "too many regulatory requirements that require board approval. They are being asked to approve everything from daily liquidity management to models." Another remarked that the regulatory burden is turning risk oversight into a "box-ticking exercise." Executives point out that there are more and more operational areas where boards are required to sign off, including liquidity assessments and capital considerations.

Board influence

Effective risk governance requires that the ownership of risk and accountability for risk be clearly denoted, executives said. There are many procedural variations as a result of varying regulatory requirements, differences in size and complexity of firms, and directors' personal liability in different jurisdictions. Despite the differences, setting the overarching view of risk tolerance clearly sits with the board. One executive from a US bank said, "The board and the board committees are there to provide guidance to management. They make sure they are comfortable with the risks we take." Another said, "The board is in charge of defining the strategy, which means defining the risk appetite for the group." This theme around the role of the board in setting risk appetite came up again, and, as would be expected, in monitoring management's adherence to risk appetite.

Given the increased board focus on risk, boards have continued to shore up their directors' expertise. Thirty-six percent of survey respondents said their boards have increased banking expertise, and 34% said they have increased risk expertise (Exhibit 20). One executive noted the change: "Historically we've often had people who haven't had a good understanding of risk, and maybe haven't been there to ask the right questions or move the organization in the right direction. Now we have a relatively strong team of individuals who are very competent with risk assessment." Another banker pointed to the importance of regulatory and commercial banking expertise

Exhibit 21: Areas where the board is most influential



on the risk and finance committees. Others cautioned that a mix of skills is important. "You want to have risk professionals in the risk committee of the board, but you don't want risk professionals only," one executive said.

One are of concern raised by some banks was that there could be too great a disparity in skills between the members of the risk committee and the overall board membership. One way that banks are addressing overall board skills is through training. Executives said that while board training is complex, it is essential, particularly as new risks emerge and regulations continue to evolve.

Despite some differences in implementation, interviewees agree on several sound practices, including ensuring clarity of roles among the different committees, clear communication of committee decisions to the businesses, and increasing training and director skills around risk issues.

According to a February 2013 peer review report on risk governance conducted by the FSB,[5] regardless of how an organization delineates its risk responsibilities, the guiding principle is that ownership of risk clearly resides with the business. This presents challenges as boards increase their involvement in operations, several executives noted.

The practical considerations of just how the board operates indicated a number of challenges. The majority of survey respondents indicated they are pleased with the quality and timeliness of the information provided to the board. Eighty-eight percent reported that the information the risk committee receives is provided in a manner that makes it possible for the committee to challenge risk, 75% said the information is understandable, and 68% said it is presented far enough in advance to give the board time to digest and discuss. While this general view is positive, there are still issues with board information. Fifty-two percent of respondents reported that they do not yet have a technical secretariat to sort through reports and identify key issues.

One executive referred to the importance of "clear and proper explanation by the CRO to prepare issues for discussion." The volume and complexity of paper was often cited in interviews as an issue. Executives interviewed said it is often a struggle to find the right balance between a high-level dashboard approach to reporting and one that is too detailed. One executive summed it up: "In order for a board to be effective, it requires that they have the right context in which to evaluate business decisions, risk and so forth. That requires that they have the right information, which is not more information but better targeted information."

Risk functions

One of the most significant structural improvements made by firms over the past several years has been to clarify and raise the profile of the risk management function through the establishment of group-wide CROs. The CRO and the risk management function have more stature, authority and independence than they did before the financial crisis, interviewees said. Almost all firms reported that they now have a CRO with firm-wide responsibility for risk management who operates independently.

There is no doubt that the role of the CRO has grown significantly since the crisis, when the CRO often did not have end-to-end involvement in risk decisions or the stature to have an impactful voice. Today, CROs are more often involved throughout the process of strategic decision-making, and their teams are bigger and better qualified to work with regulators and the business units. Almost all firms we interviewed said they strive for independence for their CRO by separating the role from revenue-generating responsibility. The vast majority have restructured their risk management functions under group CROs, with regional or business-line CROs reporting to the group CRO rather than to the regional or business-line leaders (Exhibit 22).

Exhibit 22: Business unit risk officers reporting to group CRO

[5] *Thematic Review on Risk Governance*, Financial Stability Board, February 2013.

This general agreement on roles and responsibilities, while not perfectly uniform, was markedly more aligned than in the previous survey.

The CRO's greater stature is made clear by, among other things, reporting lines. According to the survey, 82% of CROs report to their CEOs (Exhibit 23) — about the same as last year — with some of these also reporting to their board risk committees. There has been an increase in the percentage who are dual reporting: 31% in 2013, up from 24% a year ago. In addition, 93% reported that their CRO meets regularly with the board's risk committee, up from 89% last year (Exhibit 24).

When asked to discuss their most critical and time-consuming issues, the vast majority of CROs cited regulatory compliance. And although less than half of survey respondents (44%) named regulatory compliance as among their top five issues this year, it rose to third on this year's list, up from fifth a year earlier (Exhibit 25). "The number one, two and three top issues are regulatory issues," said one CRO interviewed.

It is also noteworthy that while credit risk (66%) and risk appetite (49%) are still deemed core areas of focus, survey respondents have less of a focus on liquidity this year than last year (down to 38% in 2013, from 55% in 2012) and more of a focus on operational risk (up to 41% in 2013, from 22% in 2012) (Exhibit 25). This reduced focus on liquidity may reflect easing liquidity pressures and improved liquidity positions as banks work toward compliance with the Basel Committee's new liquidity requirements. Reputational risk has jumped from 6% last year to 21% this year, and new to the list is cybersecurity risk (10%). The increased focus on reputation and operational risk are the result of recent high-profile breaches.

Several CROs interviewed said they spend significant time on issues related to IT, which lines up with a continued firm-wide emphasis on systems and data.

Exhibit 23: CRO reporting lines

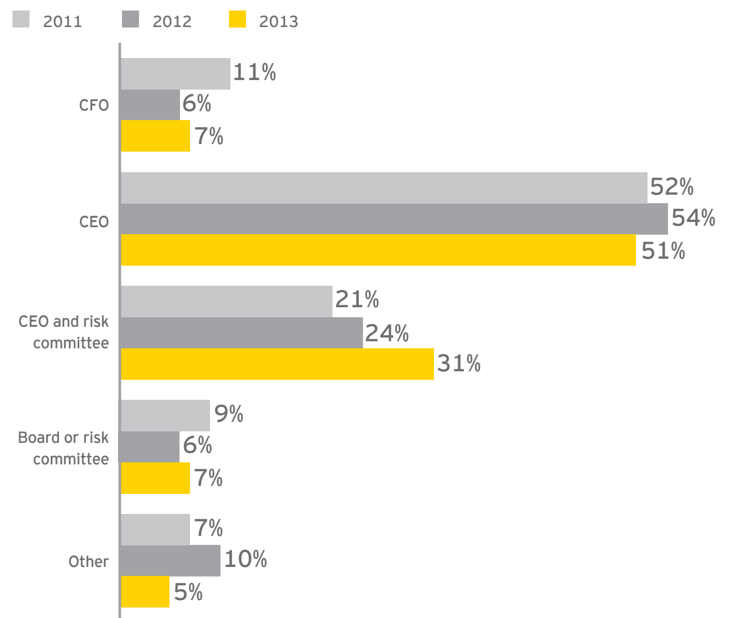


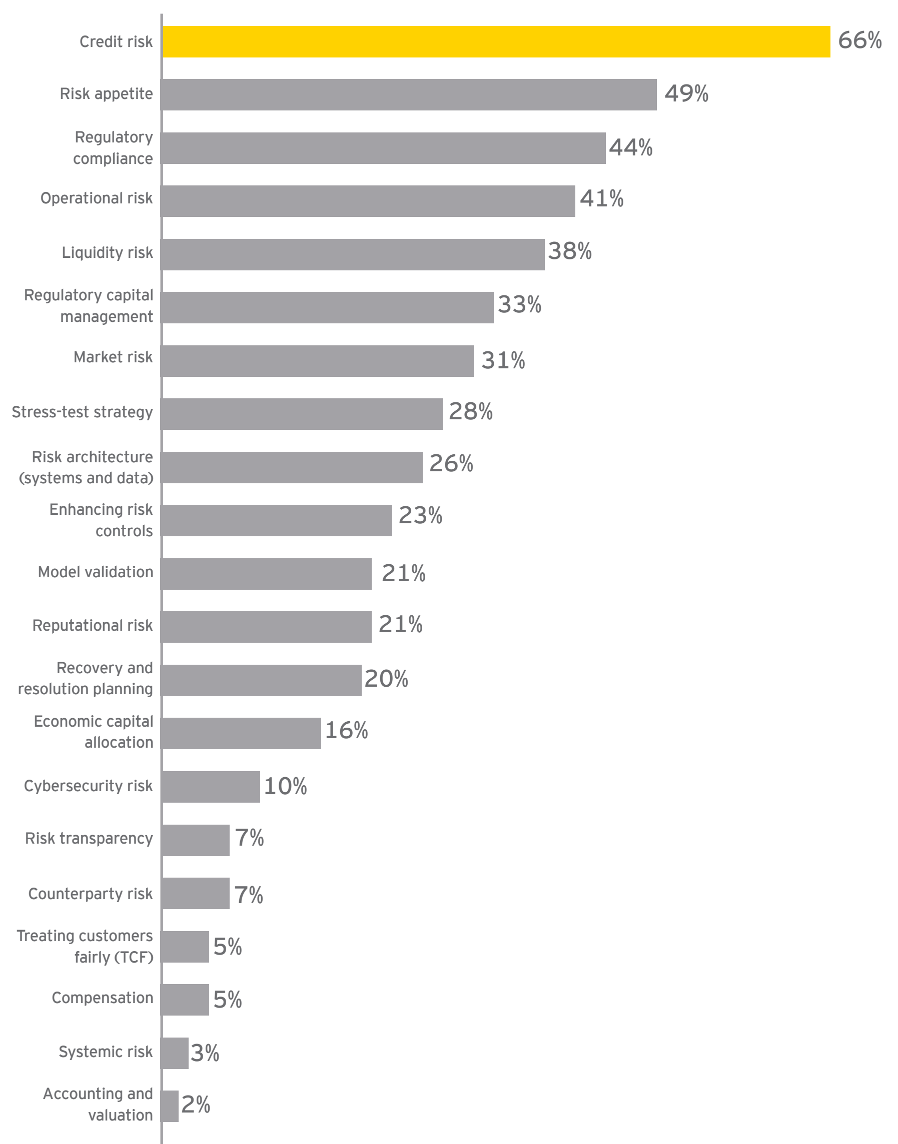
Exhibit 24: CRO access to board/risk committee

The range of issues and macroeconomic conditions that CROs have to deal with can be overwhelming, executives said. "I think a classic CRO 10 years ago was very different from today because of all these different types of risk," one executive said. "Typically, 10 years ago, there was market risk and credit risk. Now there is product risk, suitability risk, operational risk, reputational risk. You name it — it is now within the remit of the CRO."

This year's survey has seen a fall in the proportion of banks that have increased the size of the group risk function (44%, against 57% in 2012 and 71% in 2011), and an increase, to 24%, in the percentage that are reducing the size of the function (Exhibit 26). The reduction in staff in some group risk functions reflects the search for efficiency, in particular through de-layering. Nonetheless, compared with last year, substantially more banks expect to increase the size of the function in the next 12 months (Exhibit 27). This presents a mixed picture: a pullback on achieved increases along with the perception of more need over the next 12 months.

When discussing what makes a strong risk function, interviewees largely noted that the push to expand their teams was behind them. Rather, they are now working on gaining efficiencies and managing costs. They cited a number of keys to a strong risk function, including: an organizational commitment that risk is everyone's responsibility; having clearly defined the risk organization's authority; and having the ability to attract risk talent that understands the business and is respected by those on the front lines, as well as having the compensation structures to retain. As one executive said, "We need both the authority to act and the willingness to act."

Exhibit 25: Top issues requiring most CRO attention over the past 12 months



Each respondent could select five areas.

Liaison with the business units

Many CROs interviewed said they are now well positioned to influence the board and appropriate committees but are still finding the right way to partner effectively with the business units, particularly as they sort through evolving and geographically disparate regulatory requirements. Balancing the needs of all constituencies requires a rare combination of technical and business expertise. As one executive said, "A challenge for us is trying to bring what is decided at the board level to the business lines, to the traders, to the lending officers. If you don't impact them, then everything is just a theoretical exercise."

Executives stressed the need for CROs to partner with their boards, business units and regulators while still maintaining their independence from all three. "We don't own risk. We help [the business units] manage it," one CRO said of his relationship with the business units.

Toward this end, structural progress is being made. Eighty-five percent of survey respondents indicated that business unit risk officers report to group risk officers, up from 82% in 2012 (Exhibit 22).

Exhibit 26: Change in size of group risk function in past year

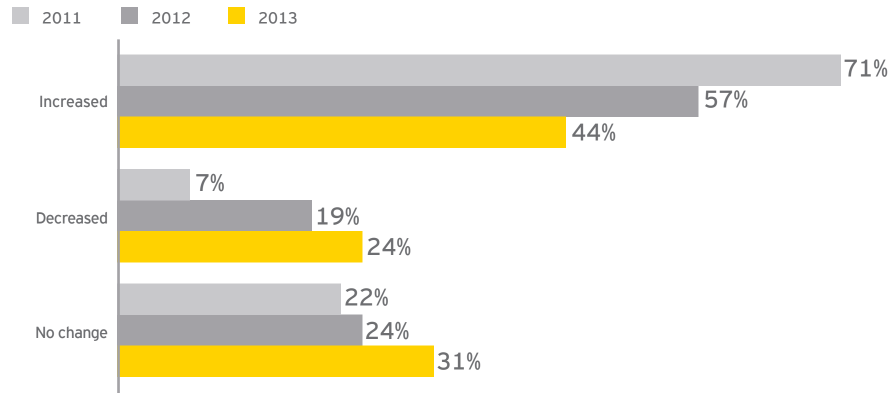
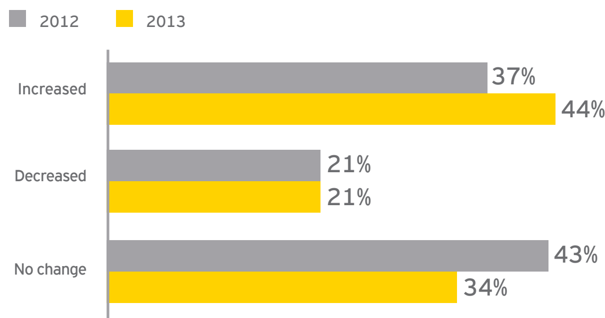


Exhibit 27: Anticipated change in size of group risk function over next year



"It's important that the CRO plays a leadership role in advocating risk within the organization, because business leaders will have a conflict between creating profit revenues and balancing that with risk."

Internal stress testing

Stress testing takes center stage but needs further automation

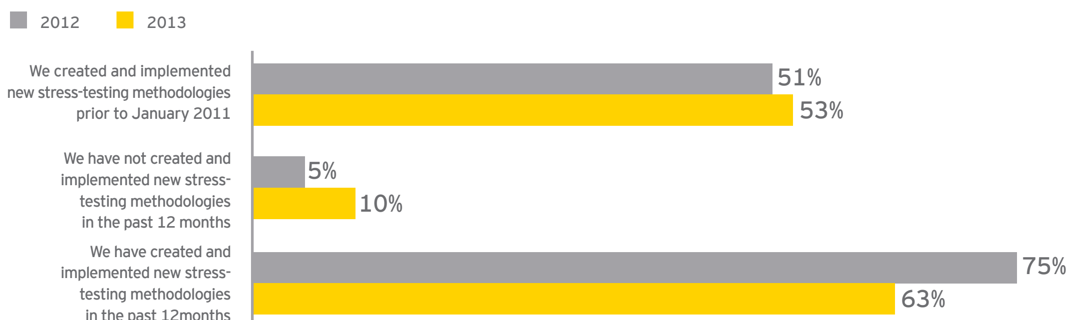
As boards and bank management work to integrate risk appetite into their business planning, stress testing is becoming an increasingly important planning tool. Our survey results and interviews paint a picture of banks still working to improve the stress-testing methodologies and frameworks and to link stress-testing results into business planning and limit setting. Sixty-three percent of respondents have created and implemented new stress-testing methodologies in the past 12 months (Exhibit 28). This is slightly lower than last year, reflecting changes already made. However, making stress testing fully a management tool remains a significant area of focus across the industry.

Executives said they have put increasing emphasis on stress testing, an emphasis that they do not see abating. As one interviewee said, "It's a journey. We are constantly improving our stress testing in order to be able to have a direct link between a potential macroeconomic scenario and the outcome on our balance sheet capital and P&L. This is something we have been working on for the last two years and will probably work to improve for the next two years. Once I've got my stress testing down to an art, I can retire." Traditionally, much scenario analysis was focused on potential losses on lending books and in trading assets rather than on overall P&L and balance sheet impact. Today, the industry is making a big investment in linking stress testing to financial planning. This represents a major shift. Firms are working to improve their balance sheet and income statement forecasting and doing financial planning under stress scenarios in addition to baseline economic conditions.

This journey is reflected in our survey results: 67% of respondents have increased the variety of scenarios to reflect risk types and geographies, 67% have increased the severity of the scenarios they are testing, and 62% have increased the number of scenarios they are testing (Exhibit 29). "Stress testing has become much more comprehensive, looking at the entire P&L of the bank, not just the risk plan," one executive said, echoing the sentiment of many.

One banker referred to the importance of using stress testing as an early warning mechanism "so that we are able to react to market events much faster as opposed to reacting after the event." To achieve this requires considerable investment in IT infrastructure and data systems. That's no small task, particularly as banks are struggling to meet regulatory demands for different types of stress tests. But the investment in overall approaches and infrastructure will help support regulatory

Exhibit 28: Creation of new internal stress-testing methodologies



Does not sum to 100% because some banks selected more than one option.

stress testing, as well as internal. As one executive said, “It’s about driving stress testing as a useful risk management tool.”

Driving toward integration

A core theme is the need to integrate stress testing across the group and across risk classes. Several executives said they have made an effort to develop a more integrated approach to stress testing, one that encompasses risk classes consistently as opposed to treating classes individually and then trying to aggregate the results. As one executive said, “Previously pieces were done stand-alone. We’ve got them integrated now with the same assumptions and inputs and outputs.” The goal is to make stress testing into both a strategic input and a tool for management at the business unit level, executives said.

“Emerging from the financial crises,” one interviewee said, “we made quite an investment in building our stress models across each of our portfolios and building a framework that more effectively brings together an enterprise-wide view.”

Executives paint a picture of an industry moving toward an integrated approach to stress testing, one that uses a common balance sheet and strategy to underpin the stress tests for different risk types. Interviewees said they are developing better ways of driving consistent methodologies across a group and quickly aggregating the results at a group level. Alternatively, central hubs are being built to generate group-wide stress tests.

While credit risk is the top area of focus for stress testing, liquidity risk and market risk continued to be areas of increased importance over the past 12 months, followed by operational risk and counterparty risk (Exhibit 30). Liquidity risk as a focus was a consistent theme in discussion with executives. “The biggest addition,” one CRO said, “was the liquidity stress testing. That’s taken on a whole new dimension.” Liquidity risk is often viewed in terms of separate stress tests conducted in treasury, but banks are starting to move toward incorporating liquidity in the main macro three-to-five-year stresses. This increases the focus on the overall balance sheet.

Interviewees also cited greater attention to overall P&L and the evolution of income during the stress horizon. This marks a shift away from a sole focus on credit losses to include the implications of interest rate shifts or changes in margin on NII and changes in fee income.

Exhibit 29: Changes to scenario planning

Exhibit 30: Risk areas where focus on internal stress testing has increased in the past year

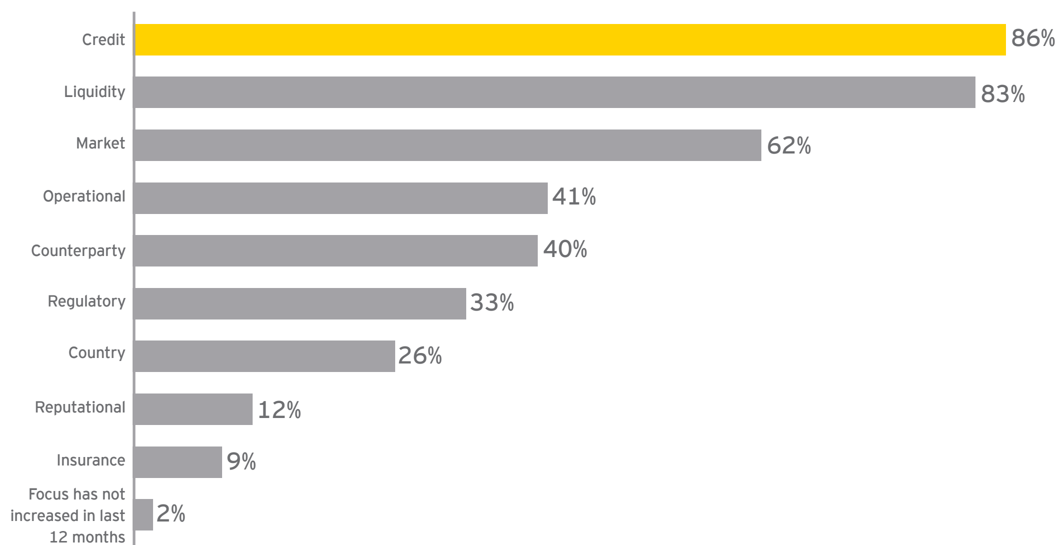
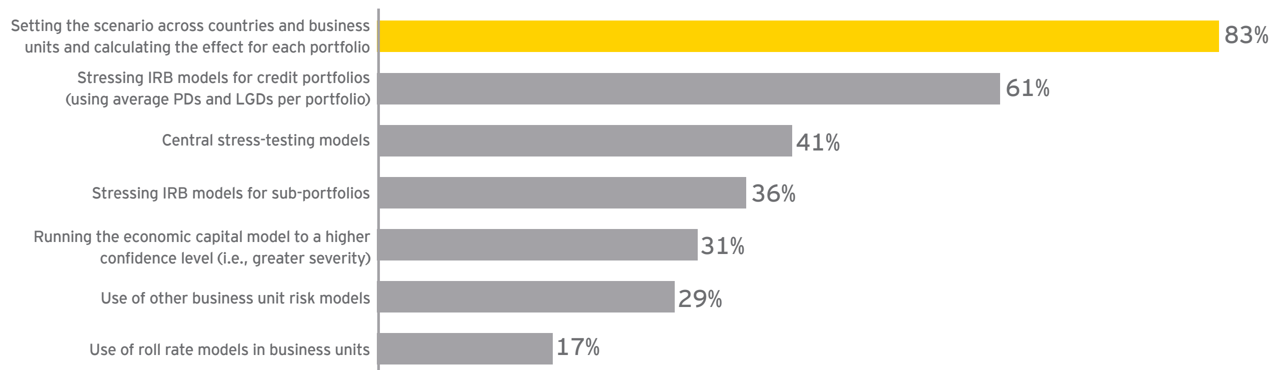


Exhibit 31: Method for running internal stress testing and calculating the outcome



Executives cited a number of methods for running internal stress testing and calculating outcomes, but the vast majority (83%) reported they are setting the scenarios across countries and business units and calculating the effect (Exhibit 31). Sixty-one percent reported stressing probability of default (PD) from internal ratings-based (IRB) models for credit portfolios, but only 36% reported doing so at the sub-portfolio level. New this year is a shift to using central stress-testing models (41%). For many banks, this is an attempt to speed up production of aggregate stress tests. Thirty-one percent of respondents reported they are running the economic capital model at a higher confidence level, but this approach raises questions from some regulators because the economic capital models do not contain all risks or can underestimate risk. Stress testing is seen as an important cross-check on the risk assessments from economic capital and other models. Some banks referred to the need for more detailed and deliberate governance around the way that the models used are tested and validated. A quarter of respondents reported that they take three months or longer to complete a group-wide stress test.

Multiple methods in play

Executives said they have undertaken significant re-evaluation of their stress-testing methods, a major undertaking from both a cultural and a systems point of view. "We've changed the looked-at period," said one executive. "We've changed the holding period assumptions, just a complete revamping of how we do it. It took two years and is ongoing." Said another, "We've made a fundamental change to our methodology, with a much longer looked-at period and a much more comprehensive view of the market. Since 2008, we've had a fundamental rebuilding."

Scenario planning continues to be an important tool as boards and management consider an increasingly large range of market factors and macroeconomic events that could influence revenue and stability. Most respondents have increased the variety, severity and number of scenarios with which they work. Executives say scenario planning has become more comprehensive over the past several years, particularly as organizations integrate across more risk types. According to one interviewee, "There is a real challenge in terms of making sure that you've got the ability to do it in a comprehensive, thorough and complete fashion." And that means extending models across portfolios, markets and geographies to build a holistic view, the executives said.

Several interviewees pointed to reverse stress testing — assessing what combination of events would cause losses large enough to lead a bank to fail — as a valuable addition to their methodology. "What does it take to break," one executive said, "is a more interesting thing than just taking a random scenario and seeing what happens."

Banks are beginning to question the approaches they are taking to stress testing, with the aim of speeding up the process. Thirty-eight percent of survey respondents indicated it takes a month to complete a group-wide test, 22% said it takes two months, and for 25%, it takes three months or more. While some executives said they can complete a test in a week or even days, many said slow results are a barrier to using the tests as an effective management tool. "We can only do 12 stress tests a year," one executive said. "I think we need more." And some executives said quick-turnaround results were not comprehensive. "A stress test that we can run in a week captures 80% of predicted outcomes," one executive said. "The ones that are 100%, they take months. Our goal is to reduce that time through automation."

Executives said they need to balance the need for quicker results against budgetary concerns. Most agreed, however, that people and systems focused on stress test automation would make results quicker and cheaper, and would allow the tests to be more easily embedded throughout the organization. "We need to invest in making this process much less manual," said one executive. Another cited resources as his number one concern: "Getting the organizational structure and process in place where we have good ability to run enterprise-wide, business-, or portfolio-, or geographic-focused stress tests, that is probably the most important piece of being able to do it, and do it quickly enough that you get good impact."

Stress testing and decision-making

There has been much work over the past two years to move toward centralized departments focused on stress testing, particularly as stress testing becomes a more important input to strategic planning. Several executives say stress testing is a key metric in developing risk appetite, elevating it to a strategic board concern. But the process has further to go to make stress testing into a real management tool in many banks. Fifty-five percent of respondents said stress-testing results are "somewhat" incorporated into strategic management decision-making, and only 39% said they are "significantly" incorporated (Exhibit 32). For the banks that have achieved this, it has changed thinking. As one executive said, "This is an integral part of the business planning process, where the business planning is done both on a base case and a stressed case, and then we even stress around it to get the sensitivity of the business plan. And that is taken very seriously in the conversation both at the

Exhibit 32: Incorporation of stress-testing results into strategic management decision-making

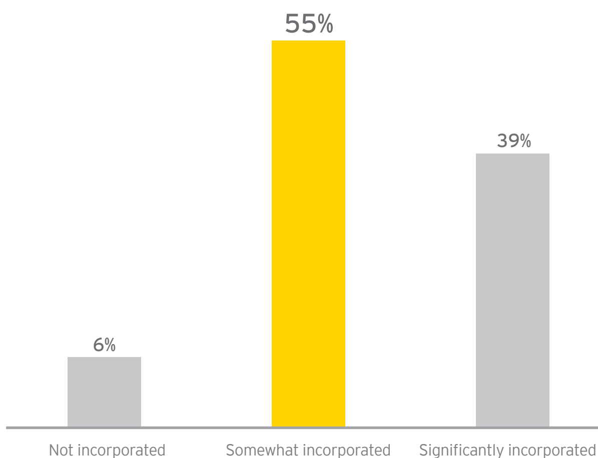
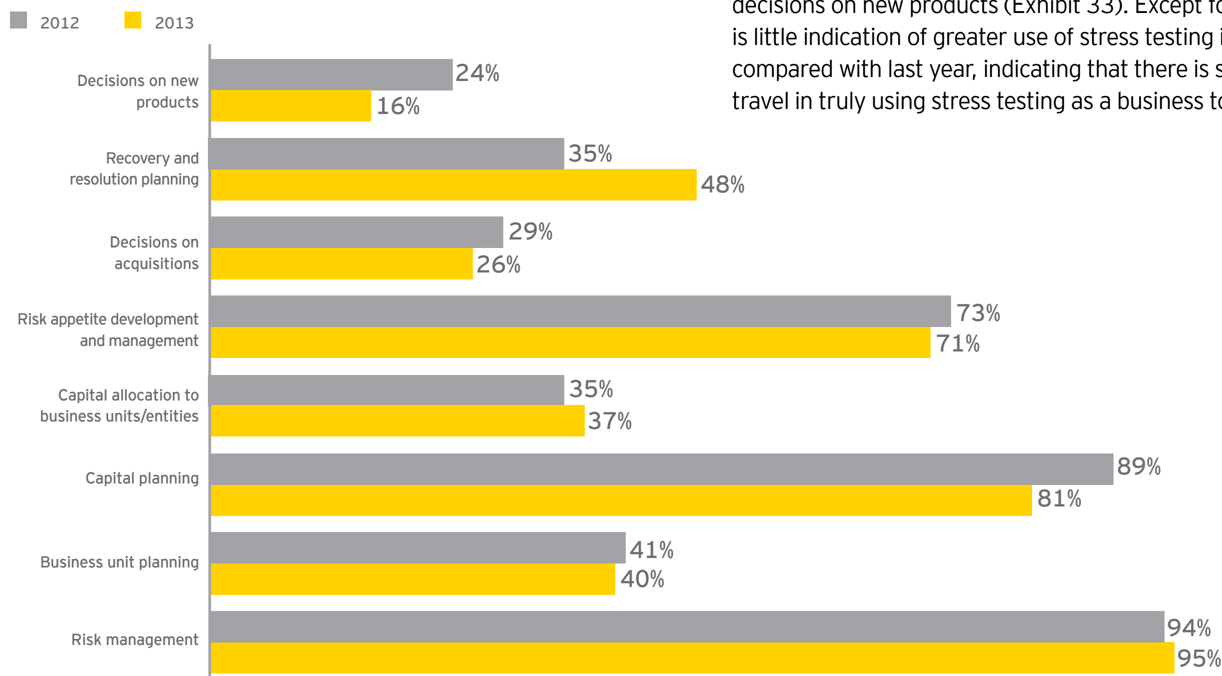


Exhibit 33: Areas where stress testing is incorporated



management level and the support level." This is foreshadowing an industry-wide movement toward a more holistic view of the evolution of balance sheet and P&L.

Toward this end, 95% of survey respondents indicated that stress testing is incorporated in risk management, 81% in capital planning and 71% in developing and managing risk appetite (Exhibit 33). "It's part of literally every dimension that we have, from business line dimension to overall strategy," one interviewee said. Several executives said it was used more to test adherence to risk appetite than as a planning tool. "It's used as one of the mechanisms to validate whether or not we are on side with risk appetite," one executive said. However, others use it in its more traditional role, for capital planning. "It's predominantly a capital management tool, not an integrated part of risk appetite or strategic business planning," one interviewee said. Executives also extolled the value of stress testing both as an early warning system and as an integral part of recovery planning. Some banks, particularly in the US, highlight the huge effect that supervisory-driven stress tests are having on capital required by regulators, overriding internal assessments. Since last year, there has been a shift toward use of stress testing in recovery and resolution planning (RRP), risk management and capital allocation to business units.

Still, survey results indicate that stress testing is undervalued as a guide to significant business decisions: 40% of executives link it to business unit planning, 26% to decisions on acquisitions and 16% to decisions on new products (Exhibit 33). Except for use in RRP, there is little indication of greater use of stress testing in business decisions compared with last year, indicating that there is still distance to travel in truly using stress testing as a business tool rather than as a

high-level assessment mechanism. Several executives said they have convened internal forums to discuss how stress testing can be better used.

Risk teams are working to develop better management reporting of stress outcomes; executives and boards are challenging both the overall outcomes and the choices of scenarios in the stress testing (Exhibit 34). "Integrating the stress testing across the group created additional and more obvious management reports," one executive said. Reporting to the board risk committee is seen as central. One executive said he brought the stress tests to the committee four or five times a year.

Top challenges to improving stress testing

Extracting and aggregating data and sufficient resources are listed as the top challenges to effective stress testing, both in survey results and in discussion with executives. Many said that the demands of a manual process of conducting tests and reporting on the results both slows the process and stands as a barrier to better integration. "We've invested a lot of time in the methodology," one executive said. "But we need to now improve the processes."

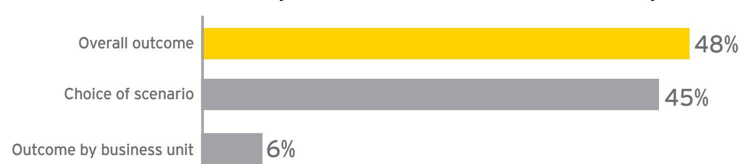
Difficulty in extracting and aggregating data is the top challenge in all regions, except Africa and the Middle East, where shortage of resources leads the list, with data extracting ranking second. Regions less affected by the crisis also rank difficulty in designing plausible but realistic scenarios as a key challenge.

In the face of budgetary restrictions and long queues for systems projects, several executives foresee a long transition to more automated systems. Nevertheless, firms are considering how to ensure sufficient, ongoing priority to investment in risk IT. Those that have made the transition find that it unlocks the ability to turn stress testing into a dynamic and flexible management tool. Still, many banks highlight the conflict between, on the one hand, the demands created by the supervisory-driven stress tests — e.g., the US's Comprehensive Capital Analysis and Review (CCAR) requirement — to provide granular data for the authorities to run their own stress-testing models and, on the other hand, the need for internally driven stress tests. The regulatory stress tests can monopolize resources, particularly at big banks that must meet a number of different stress-testing requirements from different authorities, interviewees said.

And while interviewees cited significant progress in strengthening stress-testing methods and procedures, they acknowledged it is a long-term project. "In the absence of a stress-testing machine, it requires an awful lot of people to apply judgment," one executive said. "That judgment may be inconsistent between people. There are people who are not strong believers that you can actually predict your bank's P&L and balance sheet out of a macroeconomic picture that you paint. So the question is, 'What are you going to use it for? How realistic is this scenario that you paint?' I think the topic of improved stress testing is going to be with us for years to come."

"We are constantly improving stress testing in order to be able to have a direct link between a potential macroeconomic scenario and the outcome on our balance sheet. It's the Holy Grail of risk management."

Exhibit 34: Main challenges from the board to stress testing



Liquidity

Liquidity continues to hold center stage as regulations and complexity grow

Liquidity remains at the top of senior management and board agendas this year, in light of the lessons learned and business pressures since the financial crisis and as the regulation of liquidity is changing globally under Basel III. As noted earlier in this report, liquidity is a core area of board focus and is among CROs' most important issues. The executives we interviewed said that while they've made good progress since the crisis, they are now striving to relate liquidity to their other risk management programs and to create the systems to manage and report on them holistically. "We learned a lot of lessons back in 2007, 2008," one executive said. "There was a huge amount of effort put in to create liquidity buffers, to make sure we price across the organization correctly, that we had the right liquid assets available. We've achieved an awful lot, and the results of that effort are being put in place."

Still, executives have concerns about the complexity that comes with differing requirements in different regions driven by Basel III. "The fact that the regulators need you to manage your risk more and more on a national basis, more and more on a currency basis with less and less capability to flow liquidity resources throughout the world is making the job harder," one interviewee said. Another worried about "unintended consequences" when local regulations or local interpretations of global regulations vary.

There was nearly a consensus among interviewees that data availability and quality and systems that can be easily adapted to meet regulations are the biggest challenges. (Exhibit 35). "These new rules require intra-day monitoring with different scenarios," one executive said. "This requires heavy investment in data systems." The numerous calculations required, different data definitions, and different assumptions about liquidity of assets and firms' inflows and outflows across jurisdictions complicate an already complex IT challenge.

Governance

Against this backdrop, survey respondents indicated a shift in how liquidity is governed. While the majority (81%) reported that their asset and liability committees are responsible for management and monitoring of liquidity risk (down slightly from last year), executives see a shift to more involvement of risk and finance committees in responsibility for liquidity: "For the last five years, we have been exceptionally focused on liquidity. It's actually a risk that we discuss at every [meeting of the] Risk Committee of the Board as well." And the survey shows some banks are beginning to create balance sheet committees to look at the evolution of the balance sheet given the strategic and liquidity implications (Exhibit 36). This means a more firm-wide involvement, as one interviewee said. "It starts with discipline across each of your businesses, a continuing active balance sheet and funding program."

Many executives confirm that they are driving for a more holistic view of liquidity and other risks. To achieve a broader view across a range of risks and strategies, one executive said, "We're quite keen – and the regulators are quite keen – to make sure liquidity risk is managed and monitored a bit separately from the treasury." But there is a mixed approach; while some banks are connecting liquidity to different risks through balance sheet or wider risk management groups, others have set up dedicated liquidity risk functions. A number stressed the importance of a clear liquidity risk appetite.

A related issue is how banks strike the balance between managing funding at a group or legal entity level. With continuing funding and regulatory pressures, there is an ongoing shift away from managing liquidity at a group level to satisfy new regulations. There are two drivers here. One is the need to create more funding sources across a wider range of markets and currencies to reduce dependence on home currency financing, which points to more funding at a local entity level. The other driver is that local regulation of entities has in some jurisdictions encouraged more stand-alone liquidity focus. One manifestation of this shift to local funding is that a number of banks are seeking longer-term finance by issuing paper in different markets. However, this move to local funding does create some inefficiency for centrally managed firms. In the survey, 62% of respondents said they are using a layered approach (compared with 44% last year), and 73% expect to in the future (Exhibit 37).

Exhibit 35: Key challenges in implementing Basel III

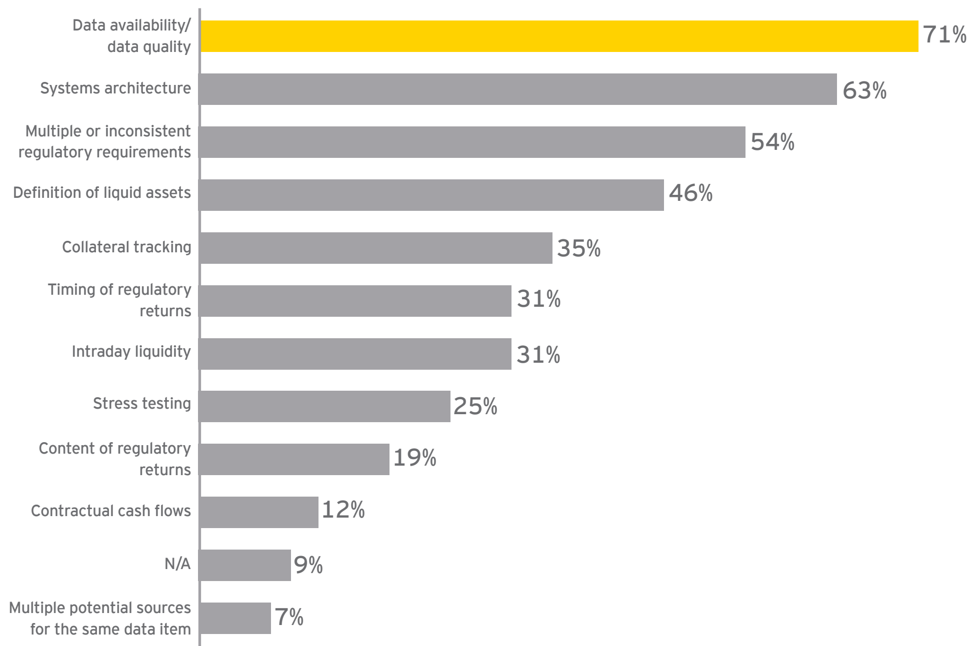
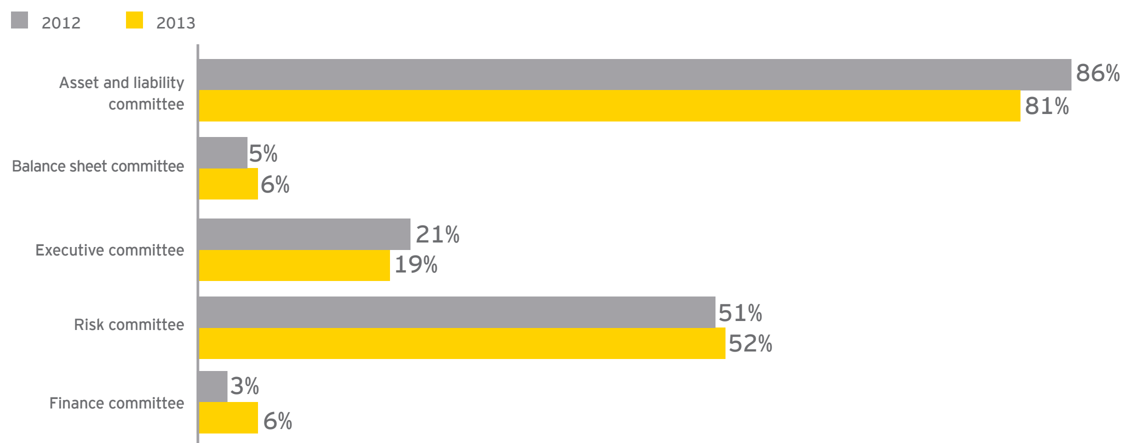


Exhibit 36: Committees responsible for liquidity risk



Pricing

Many firms continue to institute a more stringent liquidity-charging structure, both externally with counterparties and customers and internally with businesses. Nearly half of survey respondents have made changes to charges to counterparties and customers in the past 12 months; 43% made changes prior to 2011 (Exhibit 38). One executive spoke of starting to place more emphasis on the value of the liability franchise. Executives interviewed warned that they expect to see more changes in the upcoming year as they have been waiting to see the Basel III requirements finalized and the rules implemented before making further changes. The changes that have been made are overwhelmingly to increase charges for lines of credit (47%) and for drawn lines (42%), which will have higher costs because of the Basel liquidity framework (Exhibit 38). And firms are re-evaluating portfolios, lines of business and geographies in response to the liquidity and capital requirements of Basel III. Interviewees say they are cautious about raising prices if their competitors don't raise theirs. "It very much depends on competitor responses," one executive said.

Interviewees pointed to an increasing focus on internal funds transfer pricing (FTP) — the amount business units pay for funding to cover costs — as a mechanism to manage incentives internally. Executives acknowledged that their pre-crisis practices, where businesses were charged either the average or historic cost of funds, did not accurately reflect the liquidity risk specific to each business unit. Fifty-six percent of respondents indicated they are now including the cost of liquidity buffers in their internal pricing, up from 48% a year ago (Exhibit 39). In addition, 82% of banks reported using the marginal cost of funding, while only 23% are using historic costs. About a third of respondents use contingent liquidity costs, up from 0%, and one-quarter use stress funding costs, up from 16%.

In 2012, almost half of firms introduced more rigorous internal FTP approaches to better allocate liquidity costs to products and business units. This year, according to executives surveyed, that number is significantly up in Europe (81%) and in Africa and the Middle East (67%). Additionally, 67% of banks in North America are improving their prior approaches (Exhibit 40). As one executive said, "There is always a need to change the behavior of the business

Exhibit 37: Level at which liquidity is managed

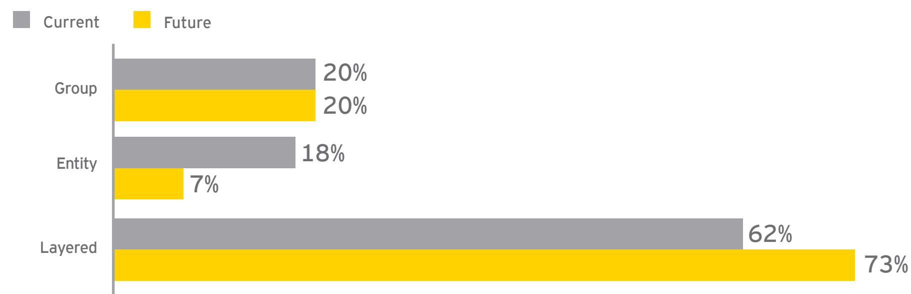


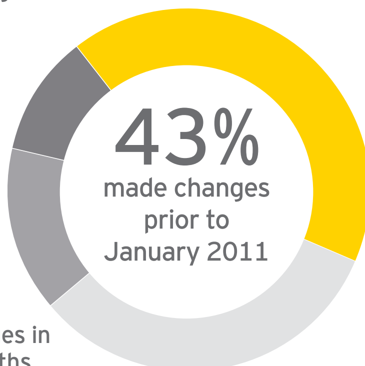
Exhibit 38: Changes to charging of counterparties/customers for liquidity

When were changes made?

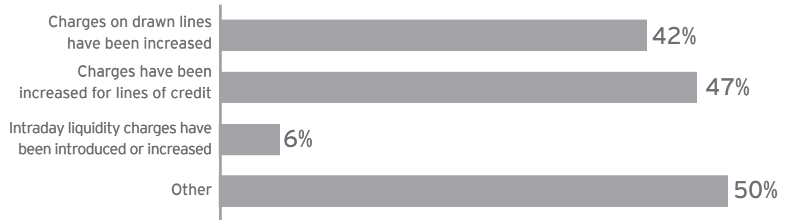
11% never made changes

15% made changes in the past 12 months and prior to January 2011

33% made changes in the past 12 months



What changes have been made?



by changing pricing, and we are actually starting to place a lot more emphasis on the value of the liability franchise."

For most banks, FTP exerts an influence on business unit pricing (82%) and business unit strategy (79%) (Exhibit 41). For a smaller but still sizable proportion, it is integrated in performance management (66%) and firm-wide strategy (61%). For more than half, it influences product design. Still, FTP is not without challenges: only half of respondents said there is a clear articulation of the FTP approach to the business units, and only 36% said that businesses trust that FTP costs are appropriately allocated.

Nonetheless, most executives agree that repricing has had a positive outcome on the units by raising awareness of liquidity issues, clarifying roles and responsibilities, enhancing accountability and improving control of liquidity risk. "Each business has to properly define itself to properly take account of LCR constraints," one interviewee said.

Exhibit 39: Basis of FTP approach

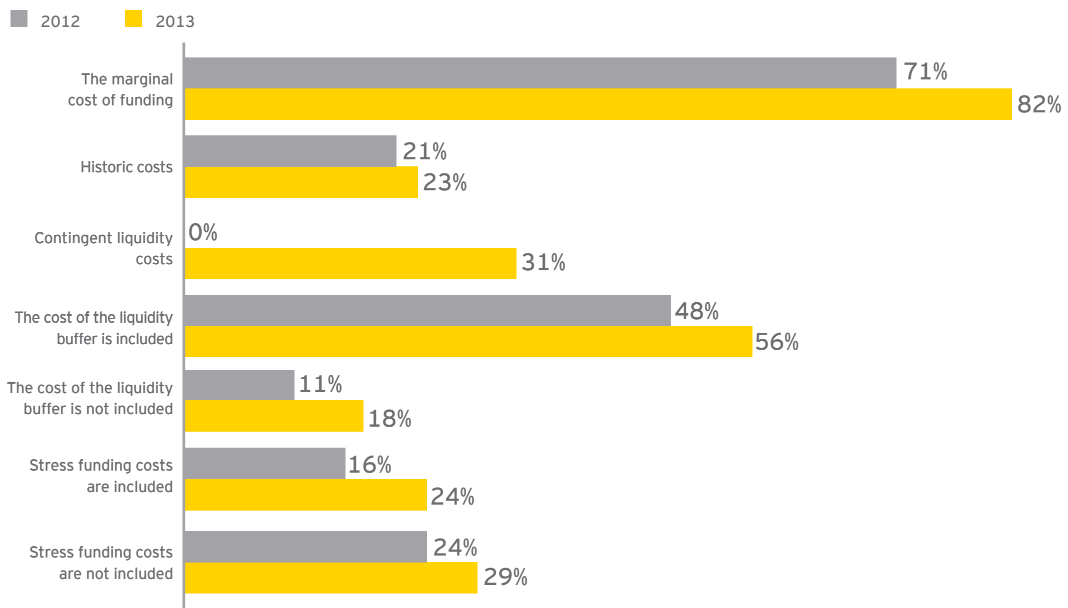
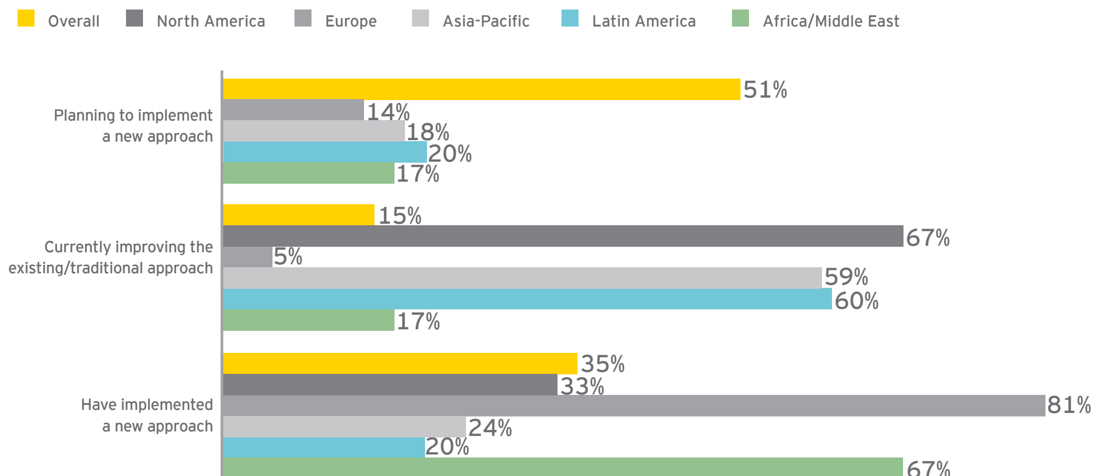


Exhibit 40: Introduction of a new approach to FTP since the 2008 crisis



Growing complexity

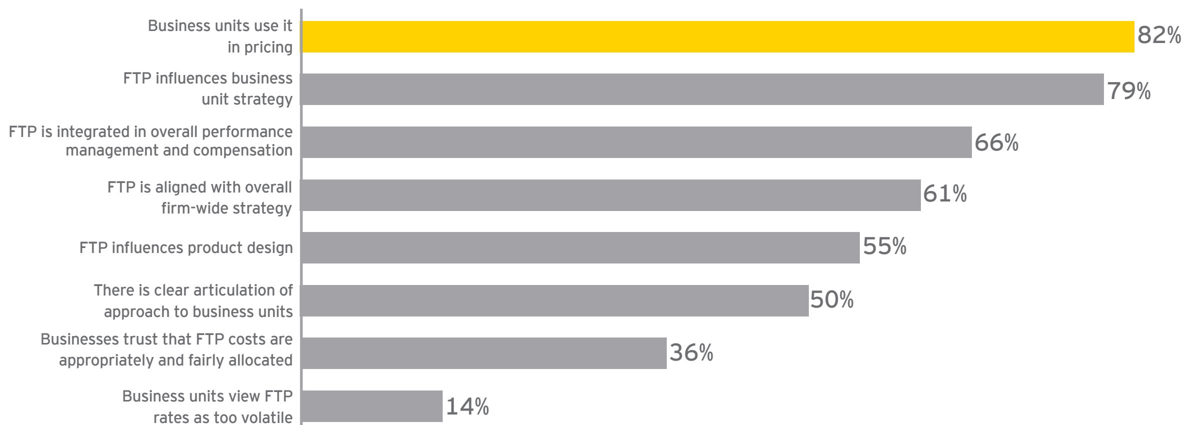
As global banks prepare for Basel III, the complexity of managing liquidity and meeting regulatory reporting requirements is growing significantly, executives said. Many executives described ongoing investment in people, technology and processes to provide more transparent, frequent and comprehensive reporting on liquidity positions for risk management teams and the board. Many are investing in stress testing as an important tool in managing liquidity. Others pointed up to the need to change the tools more broadly. "A number of our risk management and liquidity forecasting tools have been changed or refreshed, so we increasingly have a more timely view," one executive said. Some changes are in response to regulatory pressure — Basel III is undoubtedly leading to continued changes in toolkits. Executives referred to the need for much more granular analysis of the behavior of the depositors in order to have reliable data to support assumptions about deposit "stickiness." And several pointed to the increased management time involved.

While many firms are still waiting for Basel III liquidity rules to be finalized, the implications present new challenges to managing liquidity, particularly given different pressures from the authorities to improve lending for growth. Even those banks that are already meeting the Basel liquidity coverage ratio (LCR) worry about the implications. Our survey was carried out before the recent revision of the LCR, but discussions with banks continued after the change. It is clear that banks remain of the view that the LCR changes costs and will need to be reflected in pricing.

Another issue is a perceived conflict between the LCR and governmental programs to stimulate lending, especially to smaller borrowers. "Clearly regulators wish firms to be self-sufficient from a funding point of view, but also expect firms to partake in special liquidity regimes to be able to use those regimes as a mechanism for passing cheap funding out to the local market," one executive said. "We don't need the money, but the regulator wants banks to take it, because it supports their monetary objectives. Balancing and supporting monetary objectives against independently maintaining your own standards of liquidity, aligned with your risk appetite, is definitely where the friction is."

Still, the vast majority of executives interviewed think their banks are ready to meet the LCR, particularly after January's revised requirements were released. Some, however, worry about its impact on the cost of doing business. "Basically, it's a cost impact," one interviewee said. "We have to hold more liquidity. We've always diversified our liquidity holdings globally, but we've got to bring more of it back home. We have to invest more of it in our state government securities. We'll have to have a line of credit with our central bank. All of that adds up to high liquidity costs."

Exhibit 41: Use of FTP approach



Continuing challenges

Overwhelmingly, respondents in every region agree that data availability and quality (85%) is the top challenge to liquidity risk management, a large jump from last year. The core issue highlighted is the need for more granular data, particularly on liabilities. An additional 42% cited systems architecture as an important challenge. Interviewees said that current systems are not designed to meet Basel III, and they anticipate tremendous investment in systems upgrades over the next several years. "The requirements for Basel III are very data intensive," one executive said, noting that upgrading the bank's legacy systems to be able to support the needed analytics would be "a major investment of both money and talent." Others point to the need for infrastructure to conduct the new regulatory reporting.

Not surprisingly, more than half reported regulatory uncertainty as a top challenge, an increase from last year. Regulatory uncertainty is the number two challenge in North America, Western Europe and Asia-Pacific. Interviewees pointed out that the challenge of regulatory uncertainty is compounded by volatile and, in some cases, politicized markets. "We have had periods of time where the financial market has not been working well," one executive said. "So we're basically establishing what is the new normal and to what degree we can rely on different parts of the liquidity markets."

Only 18% of respondents cited the definition of liquid assets as one of their top challenges, down from 37% a year ago. This may reflect expected adjustment to the coming requirements as well as the amendments made by the Basel Committee to the definition of liquid assets. Still, uncertainty about the regulations and their impact on competition, the complexity of managing across regions, and the organizational stresses of embarking on transformational initiatives loom large over bank executives. Said one CRO: "I think the regulators, the industry and the markets do not fully recognize how significant liquidity constraints are likely to be, particularly in the stress periods."

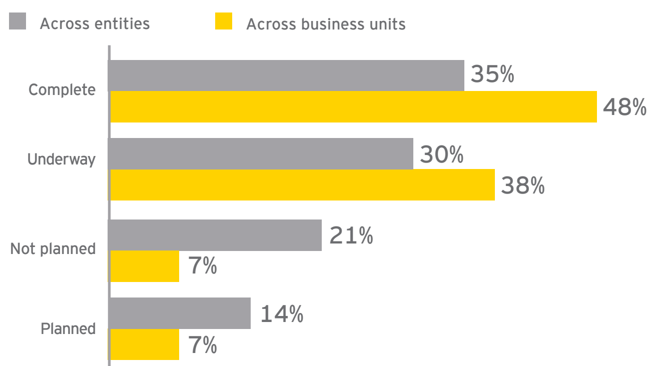
"The better integration that we aspire to have between liquidity risk and the other risk is certainly something that we're focusing on — in terms of a better stress test modeling, but also in terms of allocation of the cost of liquidity across different products."

Capital management

The rise of regulatory capital

The majority of banks are rethinking their capital management priorities across geographies, political boundaries, legal entities and business lines. Regulatory capital requirements have been tightened to the point that they now exceed economic capital at most banks, and senior leadership of banks are putting an increased emphasis on such policies and tools as risk appetite, stress testing and liquidity management. As a result, 86% of survey respondents have either completed or are underway with in-depth reviews to assess capital allocation across business units, and 65% have done the same across entities (Exhibit 42).

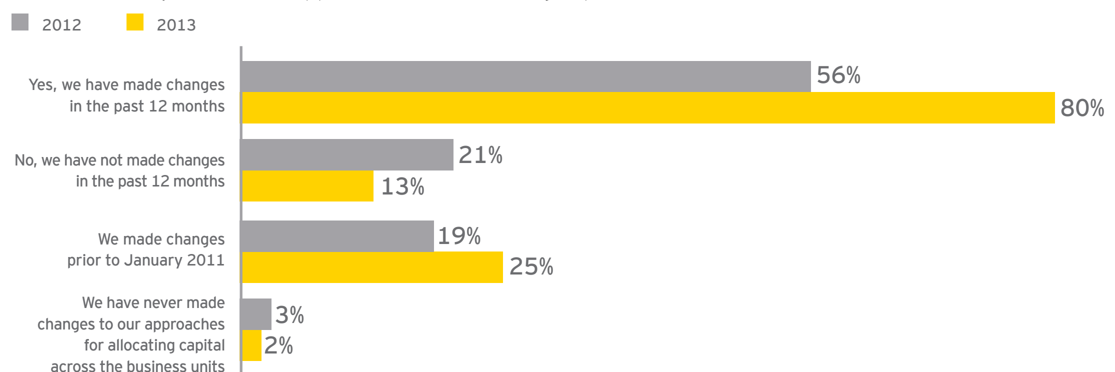
Exhibit 42: Review of capital allocation across business units



Much of this work is in anticipation of the final version of Basel III. As one executive said, "It's first of all to update our capital allocation model so it reflects the new regulations. A key uncertainty is, of course, what is required in terms of capitalization and what is required from the capital instruments that we issue." This regulatory uncertainty arises because regulations implementing Basel III have not yet been finalized in some jurisdictions, particularly in the US, where more regulations are still being developed for large, internationally active banks. The Capital Requirements Regulation and Directive (CRR/CRDIV) is now final in Europe, but banks were still taking actions in anticipation of it early this year.

Uncertainty aside, 80% of survey respondents have made changes to their approaches to allocating capital across business units in the past 12 months, up from 56% a year ago (Exhibit 43). One executive summarized the change of approach over the past several years: "We actively manage our capital, we actively look at how we allocate our capital, we actively look at the returns that we get from the capital that we have allocated to different businesses, and we go down to entity levels, to business units, even to product levels."

Exhibit 43: Adjustment of approaches to allocating capital across business units

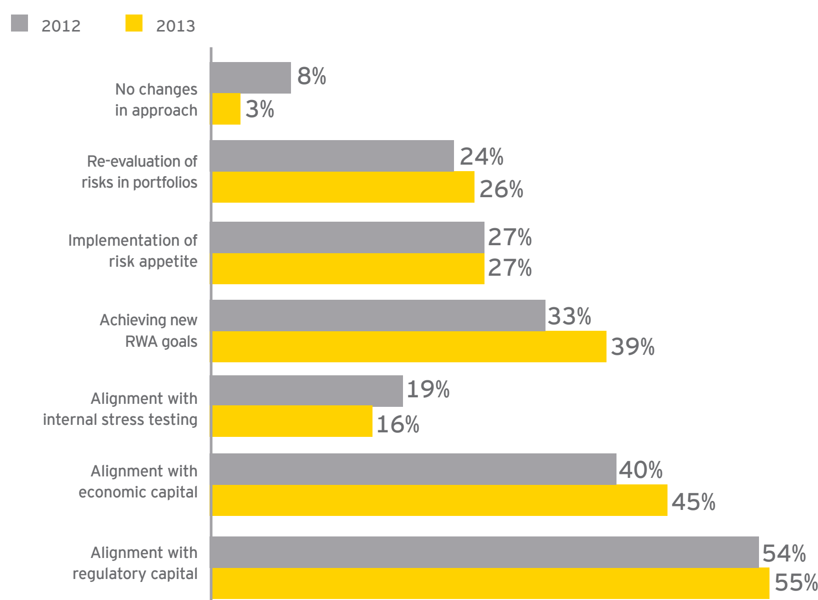


Balancing regulatory and economic capital

Survey results point to several key drivers of decisions to reallocate capital. More than half of respondents listed aligning internal capital allocation with regulatory capital requirements as the primary driver for changing their approach to capital management across business units, although this is slightly down from last year (Exhibit 44). This trend is driven by necessity, not inclination, several executives said. "The regulatory requirements are not terribly helpful in terms of understanding your risks," one executive said. "But they overpower the economic capital view." Just under half of the survey participants reported that they are aligning capital allocation with economic capital. But it is not clear that this will remain the case when the regulatory capital requirements are fully implemented. Nor are regulatory requirements likely to be the only metric used: several CROs warned that managing just to Basel III is too narrow a lens through which to view capital management. "We look at capital management at least two ways," one executive said. "We still have a strong discipline based on economic capital, but with the higher regulatory requirements, we have to be able to look at each of our businesses not just on an economic basis, but a regulatory one."

Respondents in every region except for Asia showed a preference for allocating regulatory capital over economic capital. Reallocation to achieve risk-weighted assets (RWA) goals was cited by 39% of respondents, up from 33% a year ago (Exhibit 44). On the other hand, only about a quarter listed the implementation of risk appetite or re-evaluation of risk portfolios as important factors in making a change, and only 16% cited stress testing.

Exhibit 44: Drivers of change in approach to allocating capital across business units



An ongoing challenge

Bank executives reported a continued focus on legal entities and geographies as they work to streamline complexities and identify trapped capital across geographies. Eighty-three percent of survey respondents indicated an increased focus on management of capital with regard to entities or geographies in the past 12 months. This reflects the change in approach by many authorities to focus more on the level of capital and liquidity held in the particular jurisdiction over and above regulatory minimums, in many cases because of an increased emphasis on stress testing as a tool for setting capital required. Also, the trend highlights a push toward more ring-fencing of capital in local entities. Interviewees referred to the need to optimize legal entity structures to deal with the trapped capital issue.

Several executives said reviews of their approach to capital management will be the focus of attention for some time to come. "The perverse thing," one executive said, "is that everything in the marketplace is on hold until Basel III. It's kind of hard to manage yourself on that basis when you're generating new business." Some interviewees said the transition to Basel III is more challenging as regulatory requirements and internal assessments of how much capital is needed further diverge. This is a step back from the progress made under Basel II in more closely aligning internal and regulatory assessments of capital. One CRO summed up the issue: "You end up with regulatory capital as the driver of how we run the institution, and while capital practices and theories still have strong substance, they become less relevant to running the institution."

Despite the energy surrounding this issue, many executives interviewed said they are prepared for Basel III from a capital management point of view, having focused on it for the past several years. This is a significant change of sentiment from discussions a year ago. "We've got all kinds of initiatives going on all over the place. Every firm is going to have initiatives to ensure they have controls with respect to positions, that their models have been validated, that the analytics have been reviewed," one interviewee said.

Methodology matters

There is still uncertainty for banks — particularly those in jurisdictions that have not finalized their Basel III regulations — regarding the buffers they would be expected to hold above the new minimum requirements, for example. One said in the light of the regulatory challenges and lack of clarity, "the biggest challenge is understanding how much capital you need, making sure it is clearly understood and allocated to the businesses." The methodology — CCAR, Basel III capital or an internal measure — fundamentally affects the return on capital for the individual businesses.

Stress testing and scenario planning are increasingly important tools in managing liquidity and capital. "The fundamental question is, how much capital does the firm need? How much capital is enough? How much capital is too much?" one CRO said. "Relevant to the risk profile, the stress-testing diagnostic is the main tool that we use to understand what our capital requirements are. The next level is how we use capital for performance management and for allocation to businesses."

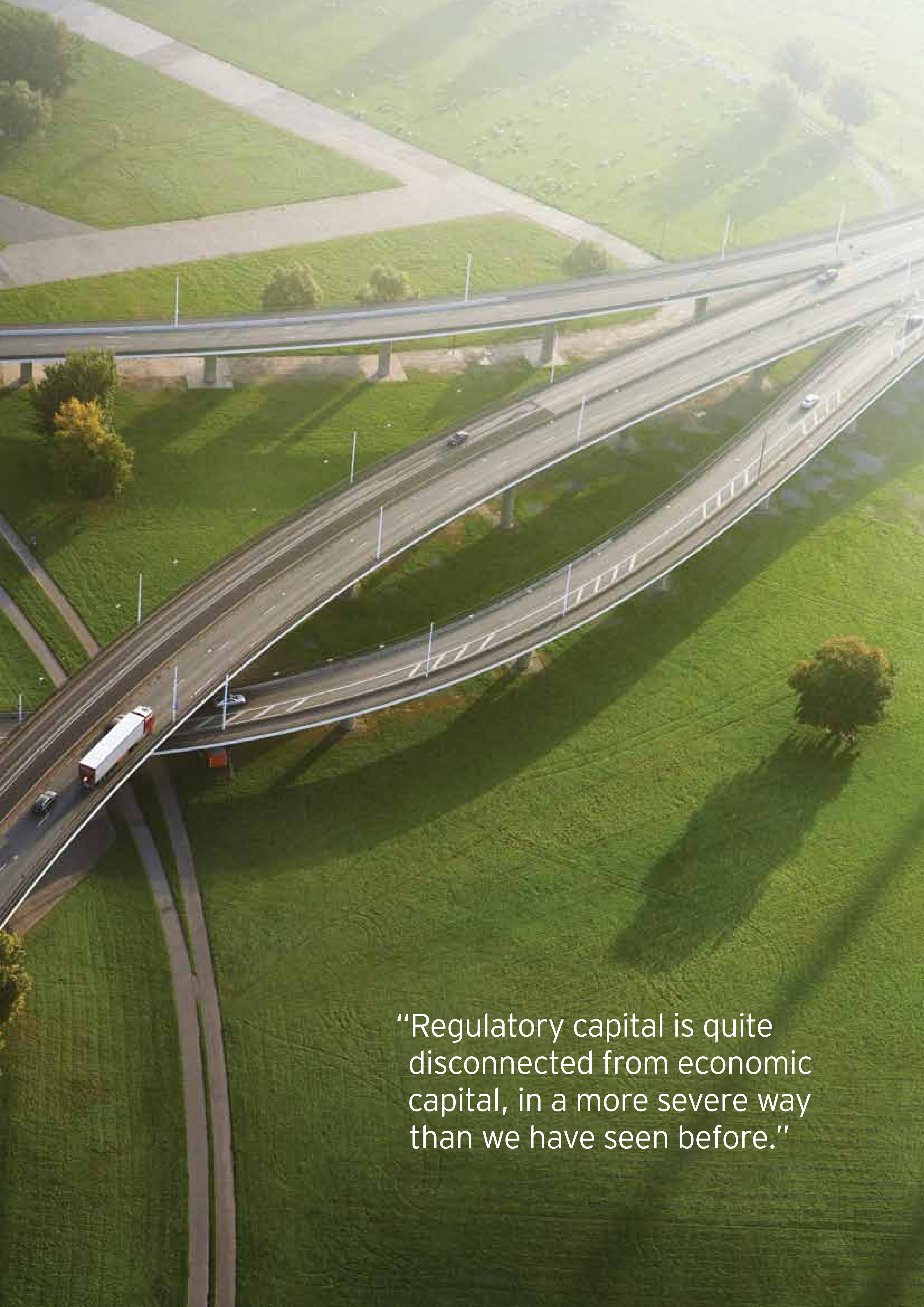
Other executives echoed the drive to look at capital management as part of a broader risk picture. One CRO said, "A lot of work is done around how we aggregate our risk measures and actually look at things in much more holistic way. We have a function that looks at the whole firm portfolio and all the different risk types and thinks about how all of that interplays. A lot of work has been done around aggregation, exposure capture, analysis, and then to twine all of that back into our capital plan and our business plan."

Return on capital

Executives stressed the need to focus on the returns on capital employed by different business units. "We actively manage our capital, we actively look at how to allocate our capital and we actively look at the returns that we get from the capital we have allocated to different businesses," one executive said. This requires improved information systems to manage capital and new processes in the organization to prioritize the use of capital. Setting forward strategy in this environment raises issues. As one interviewee put it, "It's a bit hard to do because your return rates are very uncertain." Another executive said, "We are in a budget-constrained world and a profitability-constrained world, so optimizing with respect to the budget is the challenge."

In the face of all this uncertainty, several executives expressed concern about how the market will react to uneven regulations in different parts of the world and how pricing will reflect the emerging capital requirements.

"We have to be able to understand and measure and figure out which business lines are going to be attractive from a return perspective and which aren't," one executive said. "There will be significantly less surplus capital around in the industry, and therefore it has to be deployed more thoughtfully. I think it's mind-bogglingly complex."


"Regulatory capital is quite disconnected from economic capital, in a more severe way than we have seen before."

Basel III

Capital and liquidity requirements remake the industry

At many banks, the emerging regulatory requirements of Basel III are forcing a fundamental re-evaluation of strategy. However, uncertainty regarding the final regulatory package, coupled with uneasy market conditions, poses significant challenges as senior management reviews businesses, geographic coverage and organizational models to adapt in the most appropriate way for each bank. The changes being implemented under Basel are profound. As one senior banker said, "Basel III drives what is sometimes referred to around here as 'the bank of tomorrow.'" For many banks, the combination of recovering from the financial crisis and Basel III is encouraging a return to a more traditional focus on client relationships on both the asset and the liability sides. It is also creating a focus on fee-earning businesses, such as wealth management, and is driving a retreat to core geographies, activities and portfolios.

The magnitude of regulatory capital now required has led to a shift toward assessment of return on equity (ROE) and, in addition for some banks, return on assets, by business line. Activities with too low a return are being exited. Basel III is leading to a focus on return on regulatory capital. As one CRO said, previously "people managed their businesses on an economic capital basis. Now, because of Basel III, regulatory capital has become so high that that's the real constraint. Suddenly you see a shift of managing along regulated capital." (For a full discussion on this shift, see the "Capital management" chapter, above.) This is forcing banks to look at how to economize on regulatory capital by selling high-capital businesses, or positions, and streamlining legal entity structures to release trapped capital. One executive said, "We're getting rid of things that make no sense as far as the returns that would be required from the capital that would be required from Basel III. In other cases, we're remodeling some businesses."

Toward this end, 81% of survey respondents are evaluating portfolios, up from 62% a year ago (Exhibit 45). In addition, 44% are exiting lines of business, up from 29% last year, and 44% are shifting out of complex, less liquid instruments, similar to what was reported a year ago. In North America, 75% of respondents are exiting lines of business and shifting out of complex, less liquid instruments (Exhibit 46), up from 50% and 67%, respectively, from 2012. In Europe, 64% are exiting businesses, and 50% are shifting away from less liquid instruments, compared with 44% and 52%, respectively, in 2012. Almost a quarter of respondents reported they are streamlining legal entity structures, and 23% of European banks are exiting geographies. "We have to be pretty thoughtful and ruthless about adjusting accordingly," said one CRO. "There will be significantly less surplus capital around in the industry, and therefore it has to be deployed more thoughtfully. This will potentially have material impact on liquidity in some markets and on certain products – some of which will be intentional and even beneficial, and some which will be unintended adverse consequences."

Interviewees reported that they have undertaken a host of initiatives to review and adjust business models, and they acknowledged that the process has forced them to understand the links, interdependencies and trade-offs among segments, as well as the relative costs, profitability and strategic importance of each.

Exhibit 45: Effect of combined liquidity and capital changes under Basel III on business models

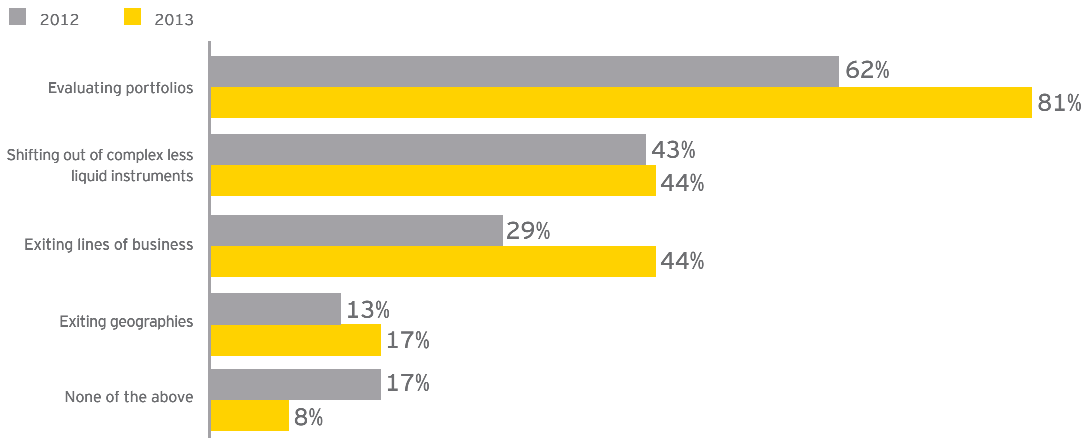
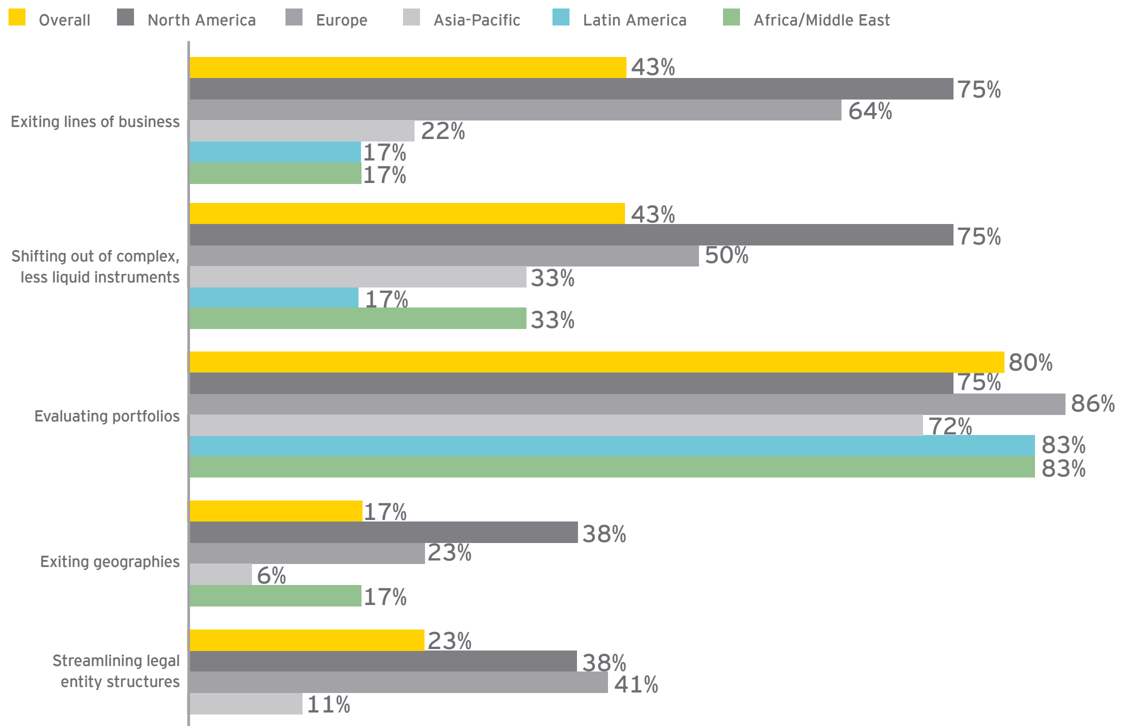


Exhibit 46: Changes to business models as a result of the combined liquidity and capital changes under Basel III



Pricing

There is universal agreement among interviewees that these factors are forcing banks to rethink pricing. One CRO said, "We are definitely looking in a very granular way at how we are going to make the returns that are acceptable to us for the capital costs going forward. Most businesses have had to cut their costs. There are tipping points." Some executives noted that compensation is being cut. The uncertainties around future regulatory developments are also making pricing decisions difficult. Sixty-two percent of survey respondents are uncertain about the effect Basel III's liquidity and capital requirements would have on margins on unsecured corporate loans (Exhibit 47). In Europe, some banks were reluctant to change pricing before the capital requirements directive (CRDIV) implementing Basel III was finalized.

Several executives expressed concern about raising prices while regulation was being enforced unevenly around the globe, citing worry over competing on an "uneven playing field." Most acknowledged the need to pass the higher costs on to customers. "We are looking for every opportunity to increase pricing to make up for the downward pressure in profitability from the increased capital, liquidity and regulatory burden," one executive said. Still, only a third of survey respondents reported increased prices among the most important changes to result from Basel III (Exhibit 48).

Liquidity and the balance sheet

Banks are also facing a substantial change in the composition of their balance sheets because of the introduction of the Basel III LCR. Banks are required to hold designated "high-quality liquid assets," which will be low-yield to cover assumed stress outflows of funds. Almost 30% of the banks responding to our survey expect that more than 20% of the balance sheet will be composed of such liquid assets, with another 47% expecting between 10% and 20% (Exhibit 49). This represents a substantial increase in holdings of liquid assets compared with pre-crisis. Fifty-two percent are looking at increases of up to 100% (Exhibit 50). This can help insulate

Exhibit 47: Effect of higher costs from capital and liquidity under Basel III on margins on unsecured corporate loans

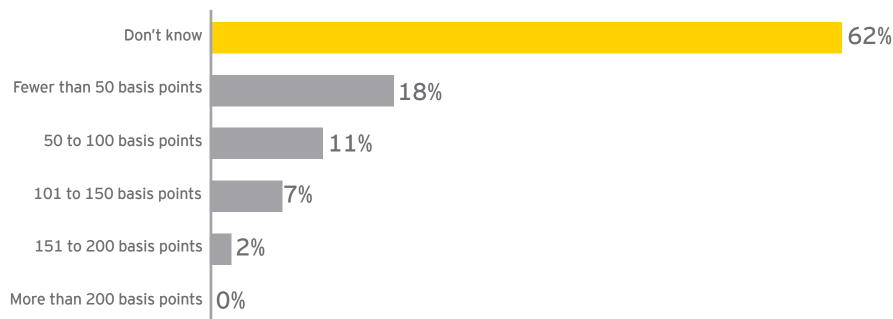
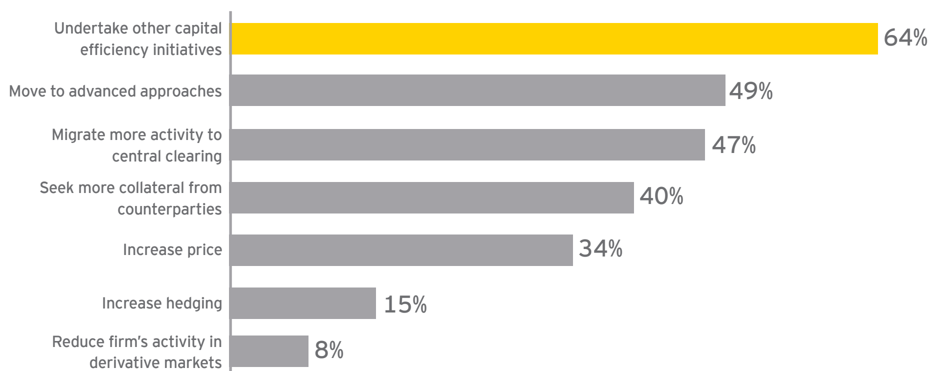


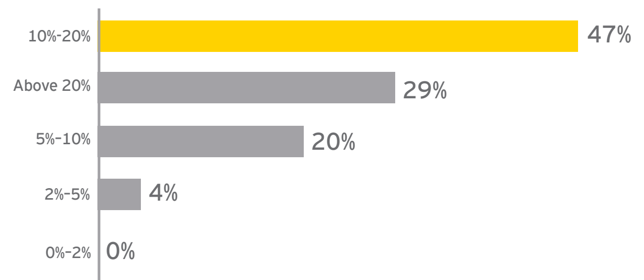
Exhibit 48: Most important changes as a result of Basel III



the industry from liquidity pressures going forward, but it will also reduce the proportion of balance sheets available for lending.[6] Thirty-nine percent of banks expect the LCR to have a significant effect on the costs of doing business, down from 52% a year ago (Exhibit 51). There is broad consistency in this result across all regions. The result is a shifting emphasis toward products that are sensitive to the liquidity coverage ratio or are more capital friendly. "There is intensified focus on deposit gathering," one executive said, "on products that are LCR effective, and on the size of the liquidity buffer. At the end of the day, that is going to be pushed back to the customer, of course."

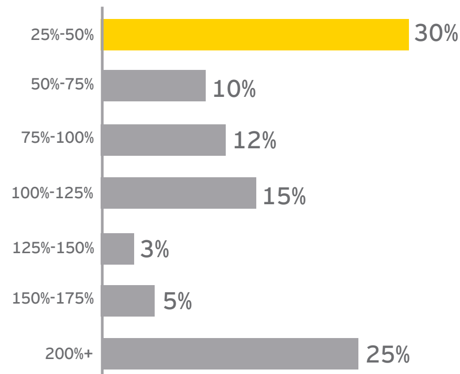
In addition, banks will have to increase stable funding to meet the other Basel ratio, the net stable funding ratio (NSFR) (although Basel may revise the approach, which could change the impact). Nonetheless, 35% of the executives surveyed said it will not be possible to achieve a significant increase in stable funding. As banks bid for a short supply of stable funding recognized for NSFR purposes, costs will increase.

Exhibit 49: Percentage of the balance sheet (under the LCR regime) that will be accounted for by the liquid assets



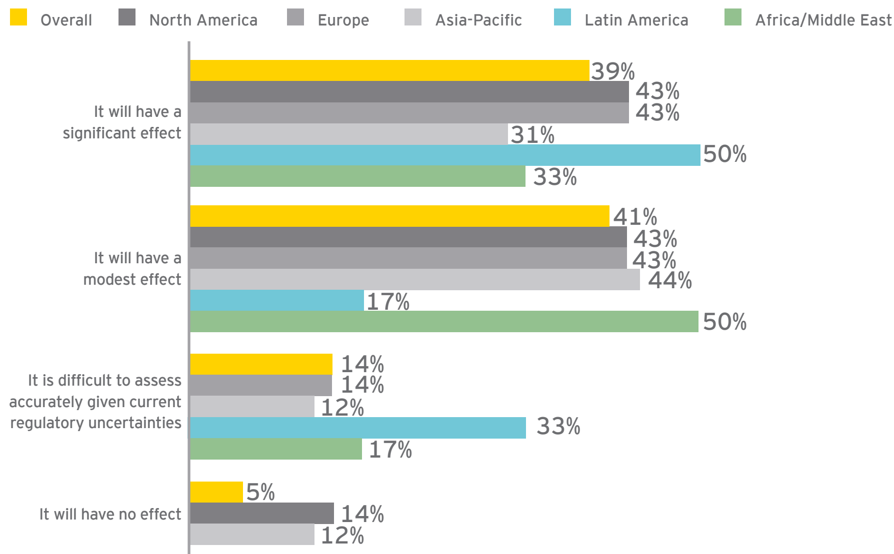
Each respondent could select three challenges.

Exhibit 50: Percentage increase in eligible higher-quality liquid assets under Basel III relative to pre-crisis



Each respondent could select three challenges.

Exhibit 51: Effect of the LCR under Basel III on the costs of doing business



[6]The survey predates the changes the Basel Committee made to the LCR calculation, which will have the effect of reducing the size of buffers held.

Higher capital required

The expected increase in capital required under Basel III and additional national local requirements is substantial. In terms of the amount of common equity Tier 1, 60% of banks see increases of more than 30% in the required amount, with 20% of banks expecting CET1 to be more than 100% higher (Exhibit 52). This reflects a combination of the buffers for global systemically important banks (G-SIBs) and Basel III. In light of the changes, banks are currently targeting CET1 ratios ranging between 8% and 13% and expect a further shift toward higher levels by 2015. Fifty-five percent of respondents target a CET1 ratio of 10% or more by 2015, compared with only 40% with ratios that high now. Half of North American and European banks with more than US$1 trillion in assets predict a fully loaded Basel III CET1 ratio of 10% by 2015.

The combined effect of higher capital required and other pressures on profitability will drive down return on capital. This is leading to a large downward shift in targeted ROE. Pre-crisis, more than 70% of banks were targeting ROEs of 15% or more, and 30% were targeting 20% or more (Exhibit 53). Now, only 12% are targeting 20% or more. Banks are concerned about the effect this will have on investor perceptions. Seventy-five percent of survey respondents reported that investors are not accepting lower ROEs but are instead pushing for increases in ROE. Investors are demanding cost cutting, including compensation.

Banks are also concerned about the effect on growth. Despite some potential room to raise more capital, as is being seen by a few new issues, a common view is that there are significant obstacles to doing so. Fifty-two percent reported low book-to-equity price as an impediment to raising capital, and some said this reflects continuing regulatory uncertainties exacerbated by economic uncertainties (Exhibit 54). "Banks will not actually go out and raise capital to comply with Basel III," one executive said. "They will do it by reducing risk-weighted assets or by retaining capital."

Exhibit 52: Impact of Basel III plus G-SIB requirements on the amount of common equity Tier 1 capital

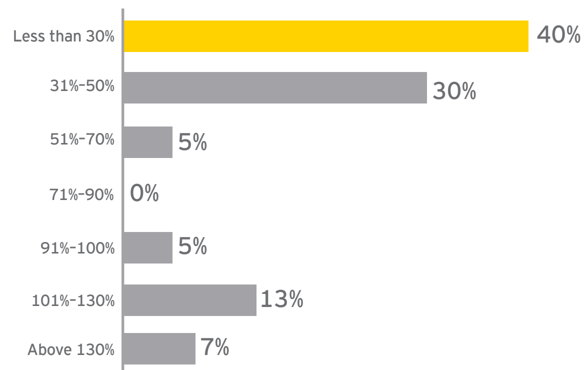
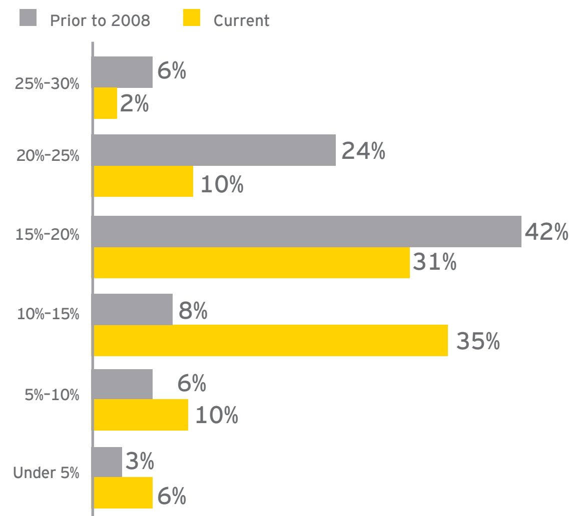
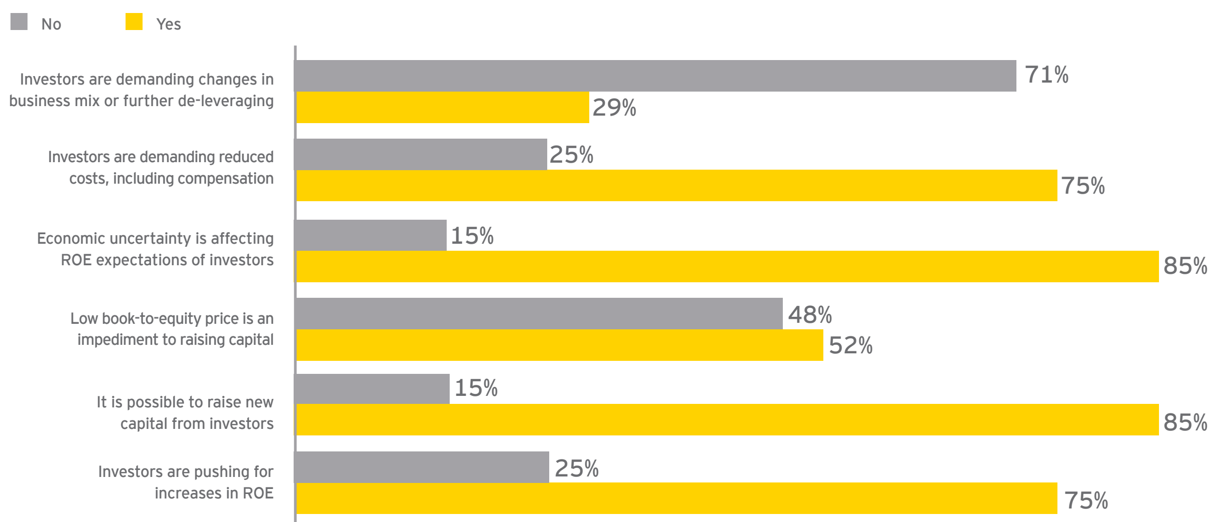


Exhibit 53: Targeted ROE, pre-2008 crisis relative to current



One way for banks to respond to investor concerns about return is to increase risk disclosure to demonstrate that the industry is safer, i.e., risk-adjusted returns may not be lower. Seventy-five percent of banks surveyed indicated they have increased risk disclosure, and 81% are considering further increases in 2013. One executive highlighted the issue for both banks and investors: "Businesses which at one point had quite a large return on risk-weighted assets are now a bit more mediocre," he said. "The question of either exiting or right-sizing certain types of business has continued in the new regime."

Exhibit 54: Investor acceptance of lower ROE



Trading books

Trading books are more affected by higher capital charges than other parts of banks' activities because they reflect substantial changes in the risk weights and are impacted by the overall capital buffers. This is the result of changes to modeling approaches under Basel 2.5 and the much higher counterparty charges under Basel III. Our survey highlights the magnitude of these effects, with more than 30% of respondents reporting capital on trading books rising by more than 200% (Exhibit 55). Half of banks using internal models reported capital on trading books rising by more than 100%, compared with 16% for those using standardized methods, 39% for those using the current exposure method and 25% for those using another method. For more than half of the banks surveyed, capital charges on derivatives are rising more than 100% because of the counterparty risk charges alone (Exhibit 56).

Banks are undertaking a variety of initiatives to deal with the increases in capital required for trading books. Sixty-four percent of survey respondents are carrying out capital efficiency actions, including selling exposures and reducing some types of activity; 49% are moving to advanced approaches to calculate capital requirements; 47% are migrating more activity to central clearing; and 40% are seeking more collateral from counterparties (Exhibit 48). A third are changing pricing. Only 8% are reducing derivatives activity, reflecting the core role that derivatives play in the system. Over the longer term, with the increasing cost of derivative transactions with a central counterparty and bilateral margining, we may see some banks exiting their market-maker roles.

Exhibit 55: Percentage increase in capital requirements for trading book from Basel II to the combined Basel 2.5 and Basel III

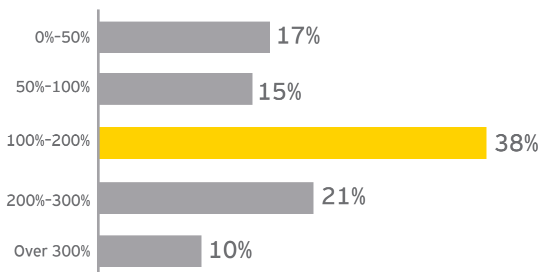
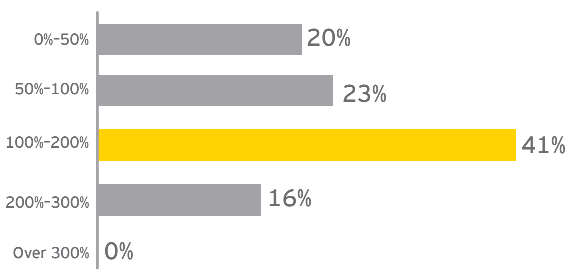


Exhibit 56: Percentage increase in capital charges on OTC derivatives for CCR alone (i.e., Basel III CCR charges, including CVA charge relative to CCR charges under Basel 2.5)



The trading book risk changes have also been driven by a need to enhance the use of metrics other than VaR for position risk. Exhibit 57 shows the range of changes underway for risks not in VaR, and Exhibit 58 shows that 48% of banks now have limit structures that cover VaR and risks not in VaR, and 28% include tail VaR.

In terms of the challenges to introducing the new counterparty risk charges, the overwhelming majority of banks are struggling with IT infrastructure. Data for the credit valuation adjustment (CVA) charge is a main challenge for 40%, as is data for central counterparties. Banks are also trying to change their approaches under the regulatory rules to make the most use of capital (Exhibit 59).

Many banks remain on the non-modeled counterparty risk charges, with 58% of survey respondents on standardized CVA, although banks are moving further toward modeling to enable improved hedging and reduce the effect of the requirements. Twenty-seven percent of respondents are using the Internal Model Method (IMM) for securities financing transactions, but there is a trend toward increasing coverage of IMM for capital efficiency because it recognizes the netting effects across large books with individual counterparties. The Basel Committee will be revisiting the standardized approaches to counterparty risk, which may change the relative advantages of different approaches. Only 15% of firms are currently using repo VaR, but in some markets, the regulatory hurdles are high.

Banks are facing a range of challenges in terms of counterparty risk measurement. Exhibit 59 shows the challenges for counterparty credit risk (CCR) stress testing that cover a full spectrum, and Exhibit 60 shows the range of planned enhancements to CCR management.

Exhibit 57: Current efforts for improvement for risks not in VaR

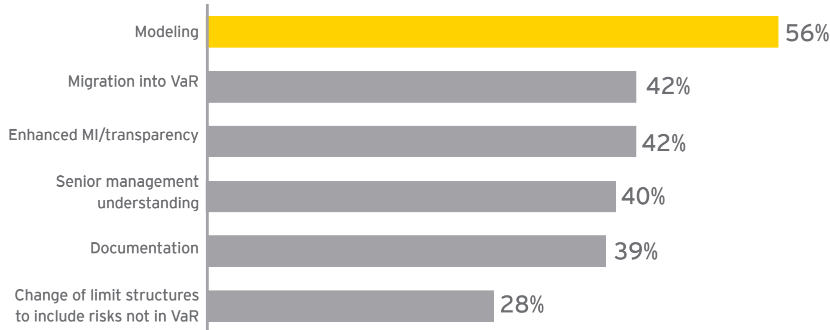


Exhibit 58: Market risk limit structure coverage

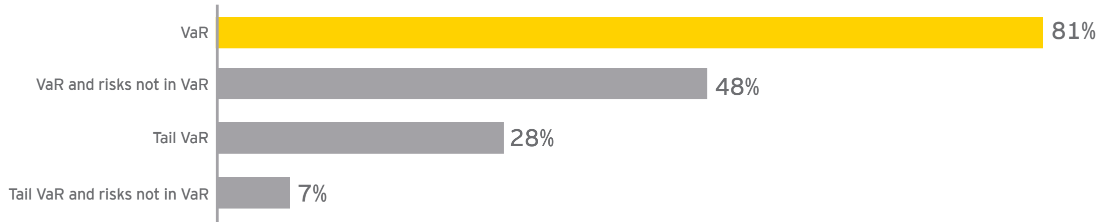
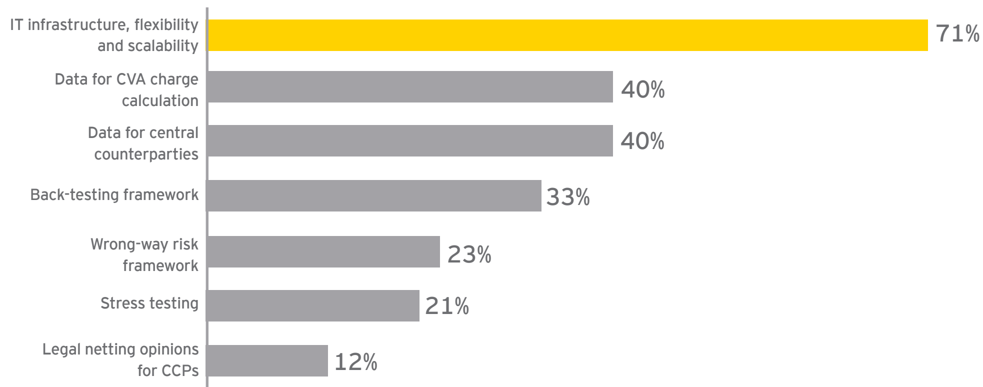


Exhibit 59: Main challenges in implementing Basel III for CCR

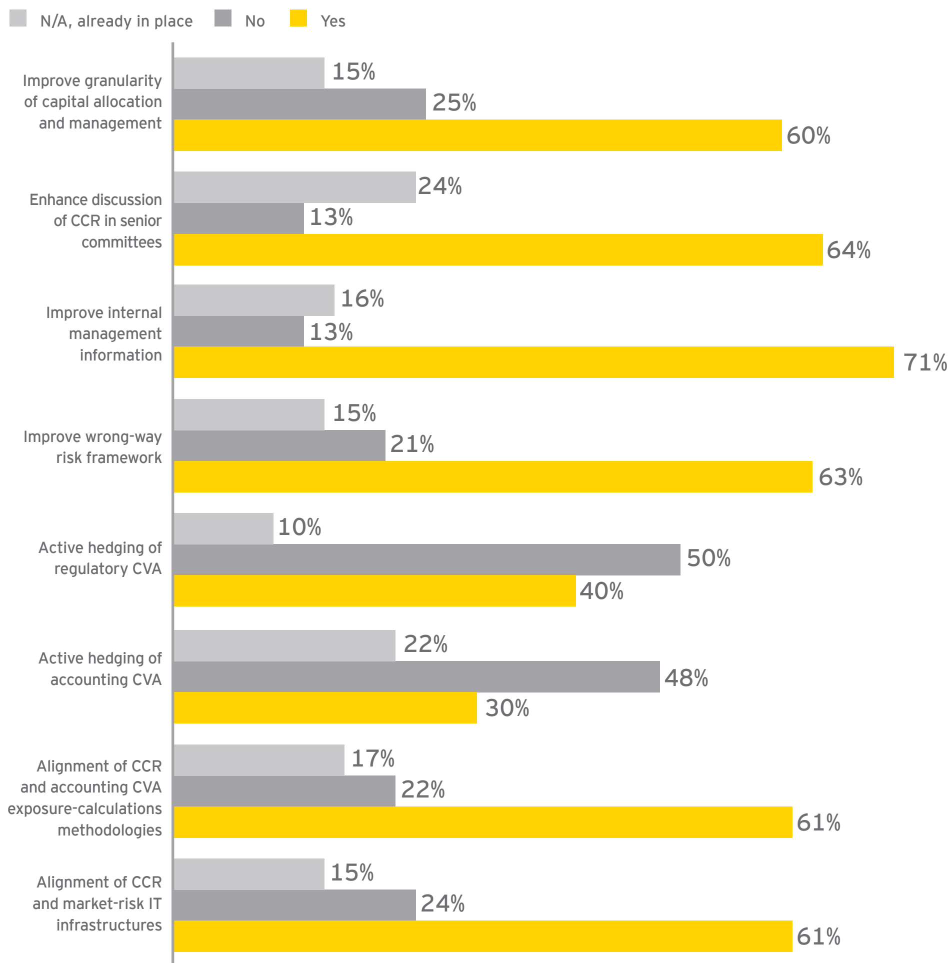


'Not life threatening'

More broadly, 57% of survey respondents said the combined effect of capital and liquidity requirements will have a significant impact on the cost of doing business – this figure was 75% for North America and 64% for Europe (Exhibit 61). But fewer banks see a significant effect relative to last year. Forty-four percent of banks expect the incremental costs of the new requirements to be above US$100 million (Exhibit 62). Interviewees all cited large IT investments, and many worried about the opportunity cost associated with those projects. "We would like to think it was a good investment," one executive said. "We prioritize all our regulatory projects. To the extent that deflects resources away from other projects which actually might be better economic returns, that's unfortunate. We should be good information managers, good data managers. In fact, no bank that I'm aware of is any good at managing data." Several bank executives cited the shortage of IT talent, particularly in smaller markets, as a challenge, and systems and data issues are among the top two issues in each region.

Executives painted a complex picture, where regulatory requirements, difficult markets and overarching uncertainty are forcing banks to confront difficult trade-offs. Basel III is adding both to the

Exhibit 60: Planned enhancements for CCR management



"All the consequences of the new regulations are not totally known. So you may have consequences you do not totally quantify. The capacity of banks to adapt is a very important item. The fact that the future is really changing and largely unknown is one of the main difficulties."

ambiguity and accelerating some of those decisions. Multiple or inconsistent regulatory requirements ranks as the top challenge in North America and Eastern Europe, second highest in Western Europe and in the top five for all other regions. Many executives say that while they have been transitioning over the past several years, they are still waiting to see just when and where Basel III will be implemented. Still, most bank executives say the exercise, while challenging, is "not life threatening." As one CRO summed it up: "If you look at the capital implications of Basel III, they are painful but manageable. From an industry standpoint, if we use Basel III as a shorthand for all the regulatory stuff that's happening, if you look at all the various attempts at ring-fencing that make running a global wholesale bank more and more difficult, or at least less profitable, that is the long-term impact on the institution's strategies. If enough people accept it, it may be that actually it's not so bad, but that part is a little hard to read."[7]

Exhibit 61: Effect of combined liquidity and capital changes under Basel III on the costs of doing business

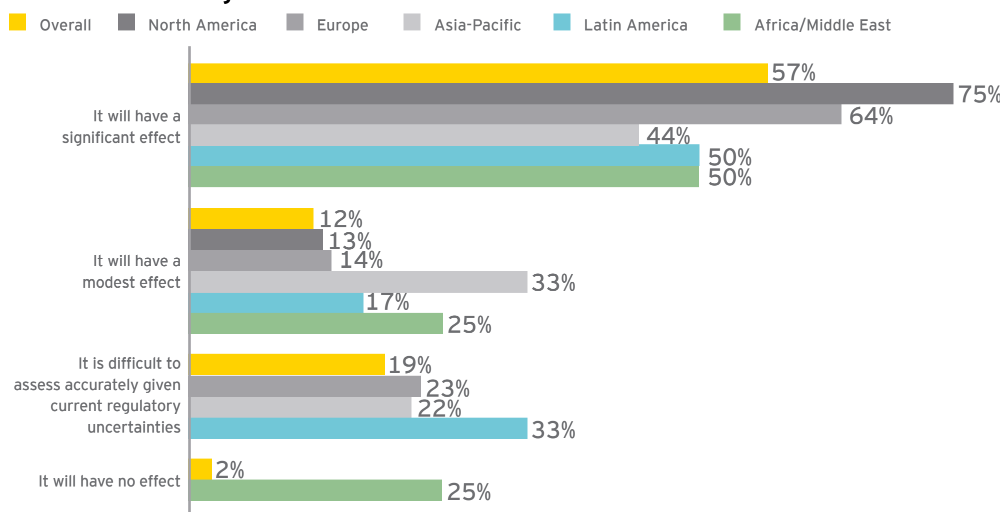
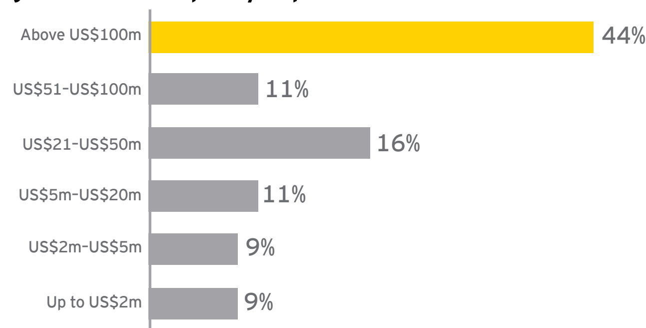


Exhibit 62: Expected incremental costs of complying with global Basel III liquidity requirements



[7]The survey was conducted before the US Federal Reserve issued its proposed new rules for foreign banking organizations, which the industry sees as threatening serious balkanization of the market, with increased cost and less opportunity. Therefore, the impacts of regulatory fragmentation along territorial lines are not included in the estimates summarized here.

Recovery and resolution planning

RRP remains challenging given uneven regulatory approaches around the world

Bank recovery and resolution planning (RRP) continues to be challenging given the different regulatory requirements around the world. This is a point that the FSB too has recognized, asking regulators to work more closely together. While regulators in dozens of countries have requested formal or informal plans, there are still many geographies where recovery and resolution has not yet been mandated, or where banks are still in preliminary discussions with regulators. The greatest focus has been in the G20, where countries required that their G-SIBs submit initial plans by the end of last year, with further enhancements due this year, or, for those without G-SIBs, to begin collecting the required information.

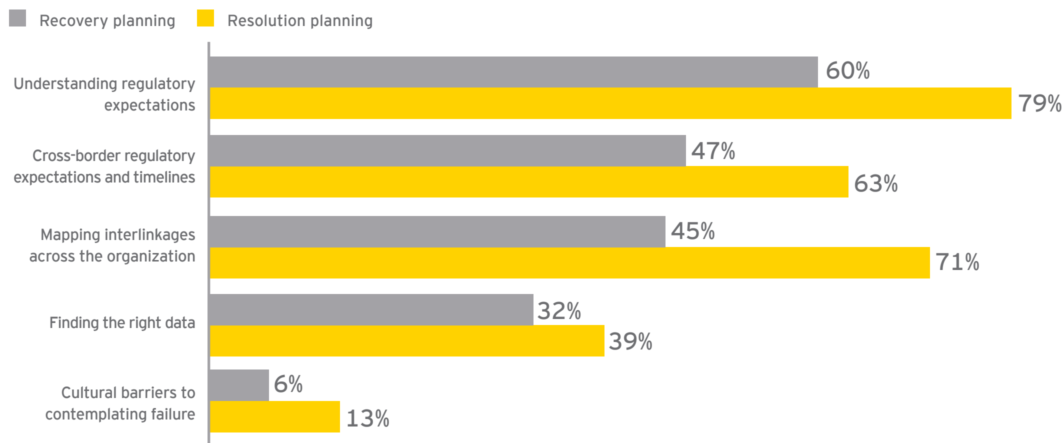
While executives who have been required to submit plans said they've made progress, they also expressed some skepticism. "I would classify the whole subject as really a work in process right now, and I'm not absolutely certain that the regulators knew what they wanted," one executive said. "I'm not sure the regulators are convinced it will work, particularly internationally, because it involves so much cooperation from governments and regulators that they have no control over." The general view of resolution planning is that, in the words of one executive, "it's a little bit of a hopeful exercise."

Many banks are, however, finding value in the exercise, particularly as it highlights how complex group structures have become. Banks are now looking for efficiency as well as RRP gains through restructuring. In fact, 71% of survey respondents cited mapping interlinkages across the organization as a top challenge to resolution planning, and 45% cited it as a top challenge to recovery planning (Exhibit 63). Several raised the issue of what needs to be done about the interlinkages, in terms of changing group structure. Still, many executives say there is value in assessing the actions their banks would take in extreme circumstances. One CRO likened it to risk appetite – much of the value is "in the exercise because, particularly on the recovery plan, it forces you to think about things."

Further progress with recovery plans

Recovery plans are much further along in development than resolution plans in most countries, which is in line with both the regulatory requirements and executive sentiment that there is more

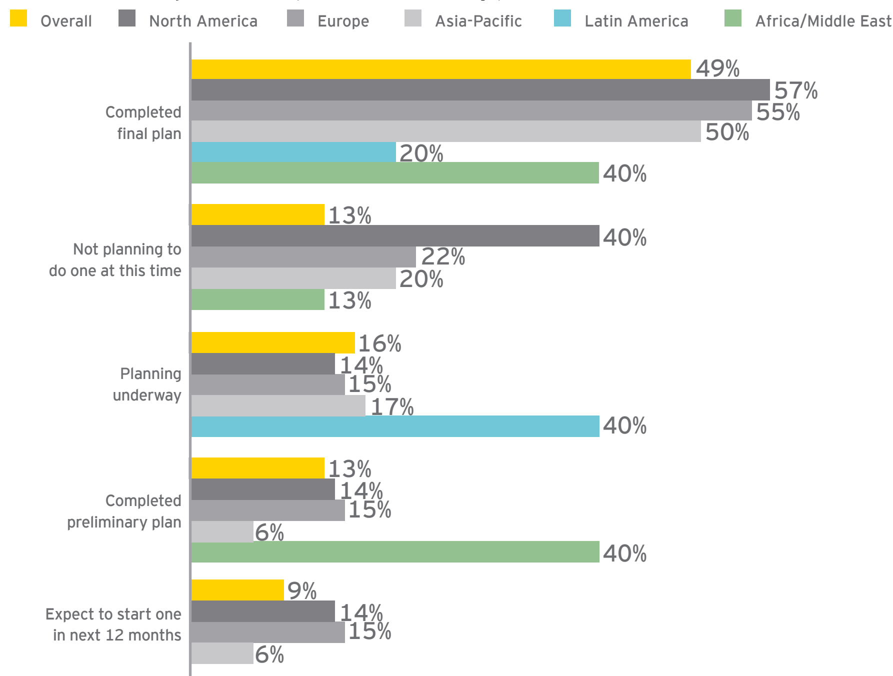
Exhibit 63: Top challenges of recovery/resolution planning



value in creating a recovery plan than a resolution plan. Forty-nine percent of all survey respondents reported they have completed final recovery plans, which outline how the firm will use a series of predetermined options to avoid failure (Exhibit 64). Fifty-seven percent in North America and 55% in Europe have completed recovery plans. While many executives said they have submitted plans, they generally believe their progress is dependent upon feedback from their regulators. One executive said, "What we have now is the first draft. We're still awaiting quite a lot of guidance from the regulators on how they want to deal with this. So it's just given us a high-level indication of the first stages they'd like to see. There's still considerable uncertainty and there seems to be inconsistency among the regulators, how they actually want to deal with this issue."

Resolution plans require firms to submit information and data to the authorities so they can determine how best to wind down a firm in the case of failure. Seven percent of respondents indicated they have completed a final resolution plan, while 16% have provided material to the authorities and 14% have completed a preliminary plan (Exhibit 65). More than a third are not planning to do a resolution plan at this time. This, in part, reflects the fact that in some jurisdictions banks are required to submit information but then authorities produce the plan. In general, G-SIFIs are much further along in developing resolution plans than smaller institutions, with many having submitted plans in multiple jurisdictions. Other geographic variables reflect the varying speeds at which regulators are moving to require that plans be submitted.

Exhibit 64: Stage of development of recovery plans



For banks operating in multiple jurisdictions, the exercise is particularly trying. "We went into that just looking for a passing grade, as opposed to an A-plus," one bank executive said. "It's very challenging because of the number of jurisdictions we operate in." This approach reflects the sheer difficulty of producing plans to meet the requirements of multiple regulators. Interviewees also referred to the number of authorities with which they have to engage. Several banks outside the US with US branches referred to the challenges of dealing with US requirements that differ from home country rules.

While the bulk of planning is taking place in Europe and North America, executives in other parts of the world said they expect to have similar requirements at some point. As one CRO in Asia said, "We are cognizant of the regulatory requirements in Europe and the US. We are trying to internalize them to see how we can better plan for our recovery, but we have not really started."

A major undertaking

Of the firms that have completed recovery plans, half took six months to a year to complete them, and almost a quarter took one to two years (Exhibit 66). For those that have completed resolution plans, 36% took six months to a year and another 36% took one to two years (Exhibit 67). However, far fewer firms have completed resolution plans at all. Bank officials said the most time-consuming part is coming to agreement with regulators about the level of detail needed in the plan, followed by the technical challenges of providing the data. "It's such a huge effort, and it feels never-ending," one executive said. Another referred to the daunting degree of granularity in the information required.

Just which part of the organization drives the planning has a significant impact on how it's completed, some executives said. The majority of survey respondents reported that the risk team is leading the planning, with about a third of respondents reporting that the finance department drives planning (Exhibit 68). Several executives said planning works best when it is a joint responsibility of the CRO and the CFO.

Exhibit 65: Stage of development of resolution plans

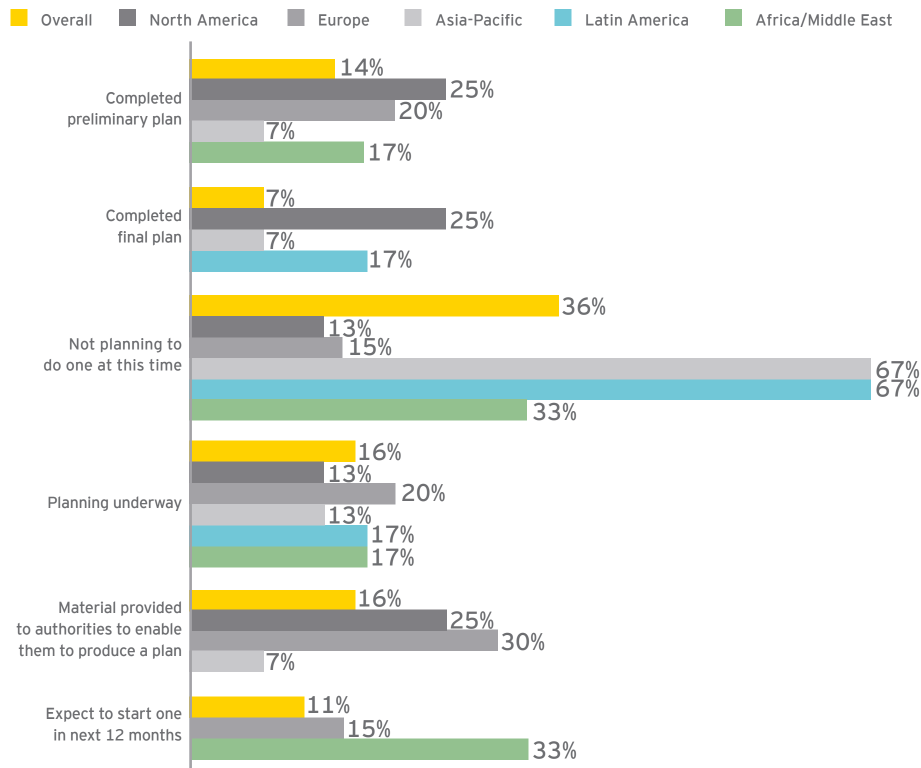


Exhibit 66: Time to complete the recovery plan

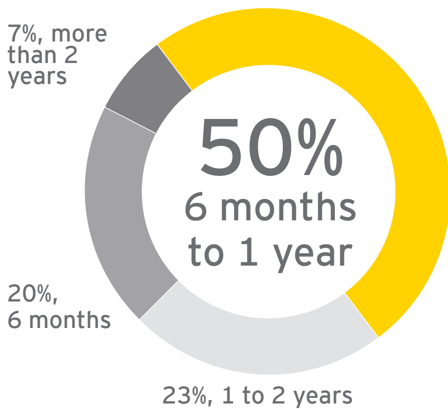
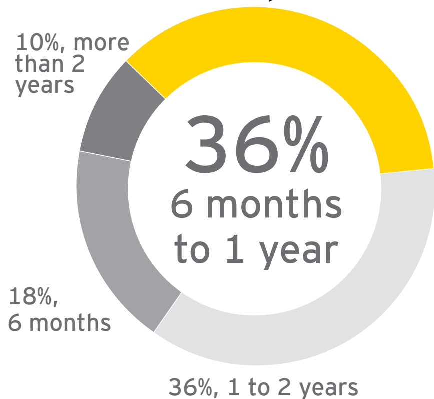


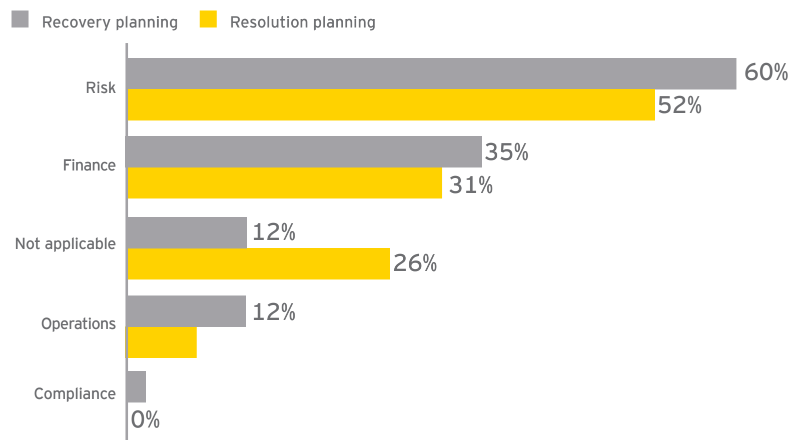
Exhibit 67: Time to complete the resolution plan



Bank executives described a variety of experiences in working on RRP, but there was uniform agreement that the process is arduous and, even for those who have completed the first iteration of a plan, ongoing. Executives described a range of responses, from the very detailed to more high-level approaches. Often the level of response is dictated by deadlines. One CRO said of his experience: "We submitted a full recovery plan, but high level. I would call it an 'outline recovery plan.' You give me three months, you get a three-month result. It's complete, but it's lacking in detail." One executive who has been working on RRP for three years said firms that have done only a top-level plan will have to go further. "Many firms think they're done on recovery and resolution planning. Our view is many firms have not even twigged what they need to be doing," he said. "They've ticked some boxes, they've sent some reports. Lots of people just don't understand what they need to do." The official sector has made clear that the RRP process will be ongoing, and plans in some jurisdictions are required to be reviewed annually.

Many executives pointed to the time and expense needed to comply, particularly around the systems needed to clean and extract data. Mapping interlinkages across a group is a particular challenge for some firms. Others noted that focusing on the worst-case scenario had a negative effect on the culture. "It's a challenge," one said, "because people think a disaster is going to happen." Still, most executives see the process as a healthy one, even if it's sometimes uncomfortable. "I think there is value in that exercise," one interviewee said. "It forces you to think about extreme events, to take time and think about things that you tend not to think about every day, because it's a multiple standard deviation event."

Exhibit 68: Business areas responsible for leading the recovery/resolution planning



Making RRP meaningful

A challenge, executives said, is to use the regulatory requirements to make RRP more meaningful to the organization, not just to comply with regulators. One issue with RRP is that banks are unclear how entities will be affected by different jurisdictions, including what impact the different ring-fencing proposals would have. Further, several CROs referred to the challenge of evaluating what assumptions to make about cooperation between global regulators.

Interviewees said their boards and senior leadership are pushing to connect RRP to other bank processes. "It's such a big investment," one said. "How do we leverage it? How do we link it to other processes, like stress testing? We want to make sure we're not just in a regulatory compliance mode but that we are looking for opportunities to integrate and capture benefits of that work elsewhere."

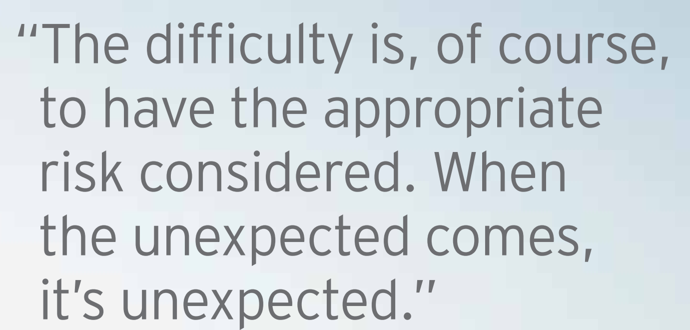
Challenges

Respondents said that understanding regulatory expectations is their biggest concern, for both recovery and resolution planning. One executive went so far as to say his firm's approach is dictated entirely by its regulators: "There is no firm approach. I mean, you have a set of requirements, and you have to submit a resolution plan, and it has to be approved by the regulators." Another executive said the regulatory uncertainty threatens to balloon. "This thing can easily become a monster," he said. "One is spending so much time with recovery and resolution planning that you're actually forgetting to manage risk. It's like planning for your funeral, but you neglect your own lifestyle and your diet and your exercise."

In addition, 63% of respondents cited cross-border regulator expectations and timelines as a top challenge to resolution planning, and 47% see it as a top challenge to recovery planning (Exhibit 63). Several interviewees spoke of the time and expense of creating the necessary data systems to comply. Thirty-nine percent of respondents consider finding the right data to be a top challenge to resolution planning, and 32% named it as a top challenge to recovery planning.

RRP continues to raise challenging questions for firms, including the degree to which they will have to change their business activities and their legal and operational structures, the timing and investments to adapt, and how to make the plan actually useable in a tight time frame. One bank official said the process brought to light just how new this perspective is for most banks: "It's a very new task for an organization to be thinking in terms of recovery and resolution. This is basically assuming, what do we do when everything has gone wrong? It's a challenge for an organization to work like that, so there are some discussions to be had around these things, especially with executive management and the board."

While RRPs are a challenge, the industry is coming to accept them as a necessary — and even valuable — part of life after the crisis. As one CRO said, "Meaningful RRP means making it very useful for top management to make speedy judgments in very tense conditions." However, there is a strong belief among a number of banks that resolution plans alone will not be enough to ensure that a large banking group can be resolved without government support.


"The difficulty is, of course,
to have the appropriate
risk considered. When
the unexpected comes,
it's unexpected."

Internal transparency, data and systems

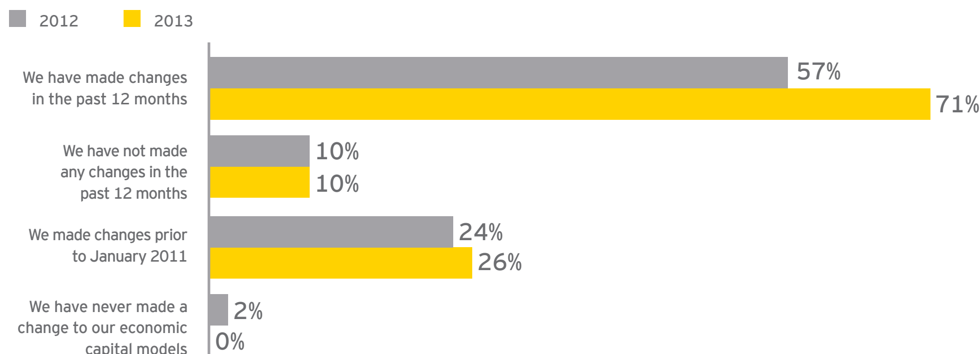
New principles from Basel significantly raise the bar on risk reporting

Throughout our discussions with CROs, internal transparency of information and the data and systems to enable that transparency in a timely manner have been raised as critical components to successful risk management. Whether establishing a strong culture, embedding a risk appetite or effectively managing liquidity and capital, senior management needs timely, accurate data and holistic reports, aggregated across businesses and geographies to make appropriate decisions and monitor results. Particularly in today's dynamic regulatory and economic environment, visibility and access to the right information across the organization has become a strategic imperative. This also requires improving the tools used to assess risk and methods used to identify risk concentrations.

Improving internal transparency continues to be an ongoing initiative for most study participants. And now that the Basel Committee has issued "Principles for effective risk data aggregation and risk reporting," the bar for banks is significantly higher. G-SIBs will have to implement the principles by January 2016 and are expected to demonstrate progress this year. In addition, the FSB and the Basel Committee have requested that national supervisors monitor progress over the implementation period, and the principles will likely be applied to a larger group of banks than just G-SIBs.

While many executives reported significant progress in improving transparency over the past several years, most interviewees acknowledged that systematically improving transparency is an enormous multiyear investment of management time and resources. As one executive described his firm's process, "Over the last four years, we've invested significant time and effort in improving transparency in the way that we report risk to senior management and the board. It's not a 10-slide PowerPoint. It's more like a 10-page narrative story about the current state of risk, what's happened to other banks that have gotten into trouble, an assessment of our own practices versus theirs, along with key credit metrics and stress metrics." The same executive acknowledged there is still work to be done: "The problem is that to be useful data, it's the 'what if' data, the go-forward data, the stress scenario data that regulators are looking to us to be able to pull together pretty readily. We still have two or three more years of investment to make in order to be in a good spot that would stand up to the emerging regulatory standards."

Exhibit 69: Changes to economic capital model



Economic capital and other metrics

As part of the move toward improved internal risk transparency, many banks are upgrading economic capital models to measure risk. Seventy-one percent of all banks surveyed reported they have made changes to their economic capital models in the past 12 months to increase risk sensitivity and transparency, up from 57% a year ago (Exhibit 69). Of the banks that were most severely impacted by the crisis, that percentage rises to 92% this year. Much of this reworking has been to try to address deficiencies in models seen during the crisis when most models severely underread risks. Exhibit 70 shows the wide spread of areas being developed — 15% of banks are changing correlations, 10% are adding risks not in VaR and 8% are taking illiquidity in trading positions into account.

The focus on capital was a consistent theme throughout our discussions. Eighty-six percent of survey respondents have either completed or are underway with in-depth reviews to assess capital allocation across business units, and 65% have done the same across entities. Sixty-seven percent of respondents listed aligning internal allocation capital with regulatory capital requirements as the primary driver for changing their approach to capital management. This reflects the fact that regulatory capital is now substantially higher than economic capital.

Many executives interviewed agreed that the models in place pre-crisis underestimated the size and risk of exposure, particularly across business units. Respondents reported that economic capital modeling is still important, but half indicated that it is being balanced by other metrics (Exhibit 71). Some of the most prominent changes to economic capital models are: adjusting correlations to reduce diversification benefits, adding in risk not in VaR and business risk, adding liquidity of trading positions, and consolidating risks across groups.

Exhibit 70: Redevelopment of economic capital models

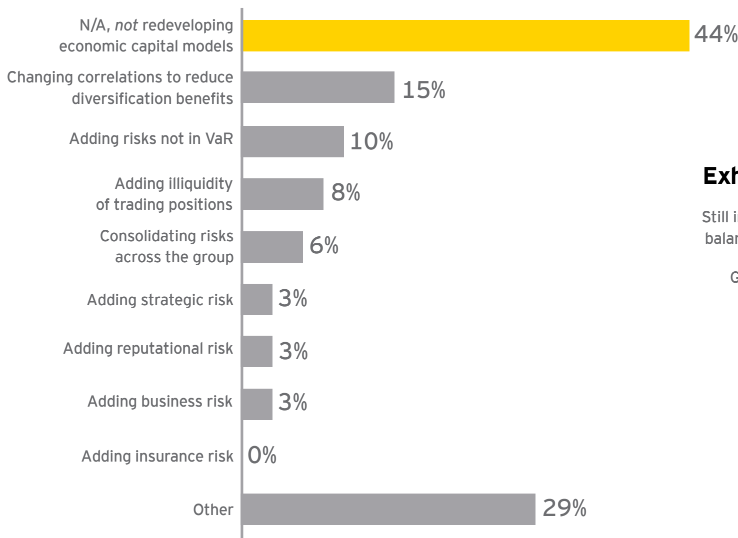
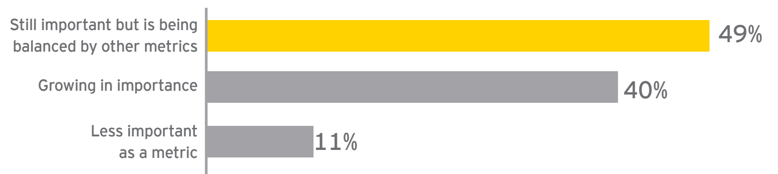


Exhibit 71: Importance of economic capital modeling



Respondents reported progress on transparency in several areas, most notably stress testing and stress VaR, followed by counterparty risk, risks not in VaR, illiquidity of positions, tail VaR and valuation uncertainty (Exhibit 72). This year's responses are similar to those from a year ago.

Data, data, data

Systems and data vied for the top spot on the challenges to internal transparency (Exhibit 73) and, indeed, have been raised as among the top challenges throughout this report. "There is a huge effort underway to redo all the plumbing, data aggregation, accuracy, quality of information," one executive said. "That's the framework in which a lot of our future-state risk systems will be addressed: aggregation, plumbing, controls, legal entity management. So there's a huge, multiyear, gazillion-dollar effort attached to improved aggregation, accuracy and quality of information." Interviewees cited many initiatives underway to improve data management and infrastructure, and many acknowledged the limitations of legacy systems. Most firms are constantly reviewing and revising the overall life cycle of risk information to improve underlying data quality, including its governance, data acquisition, analytics and reporting infrastructure. As one CRO said, "We are trying to make sure that we are not constrained by data."

In terms of risk data availability, less then 20% of banks believe they are fully able to produce comprehensive risk reports even in a crisis, an indicator that firms recognize that they have significant work to do in this area (Exhibit 74).

Data aggregation is particularly challenging for many institutions because of the decentralized nature of their systems. One executive underscored its importance: "It starts with data aggregation. It's a company-wide effort that started with risk and is expanding beyond risk, but being able to manage large data and produce good results, good models, data quality, is going to be more institutionalized." The key to good aggregation is breaking down data silos and developing a common taxonomy, interviewees

Exhibit 72: Areas used to enhance internal risk transparency

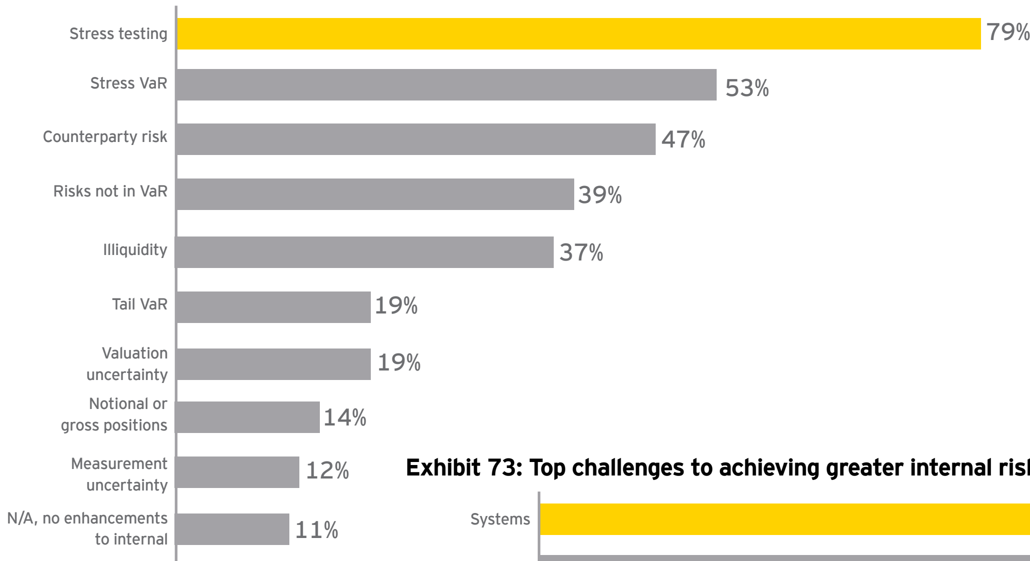
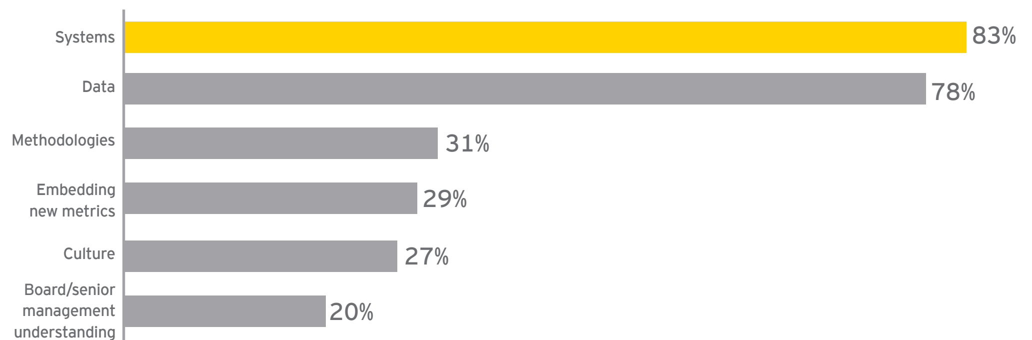
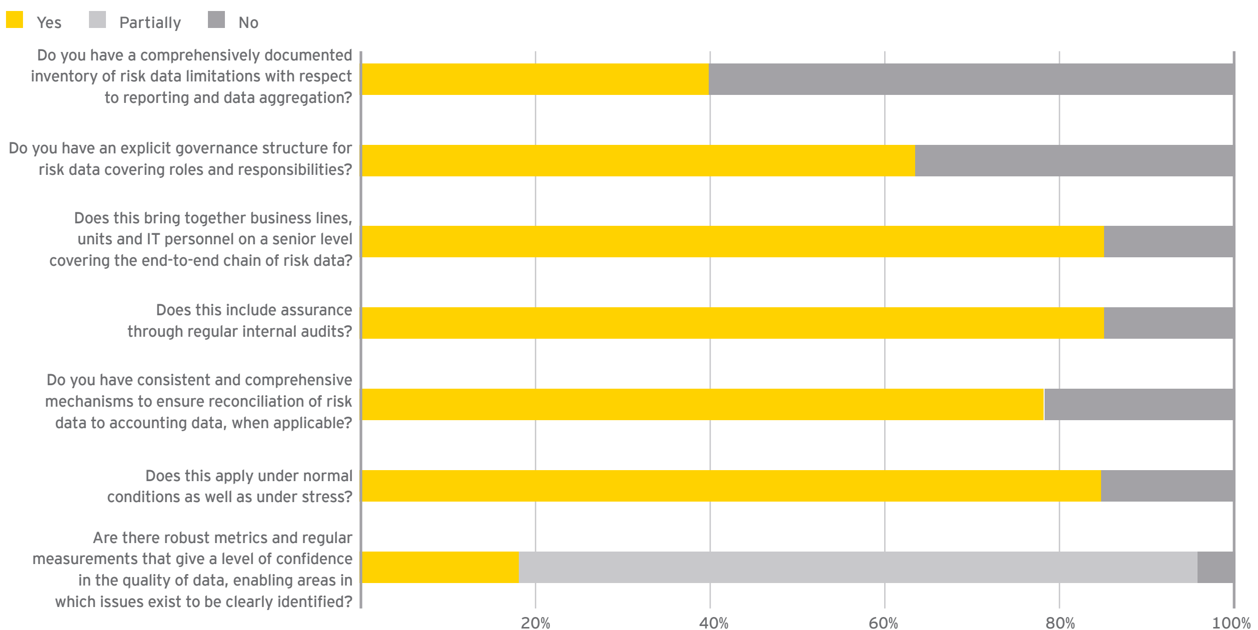


Exhibit 73: Top challenges to achieving greater internal risk transparency



Each respondent could select three challenges.

Exhibit 74: Risk data coverage

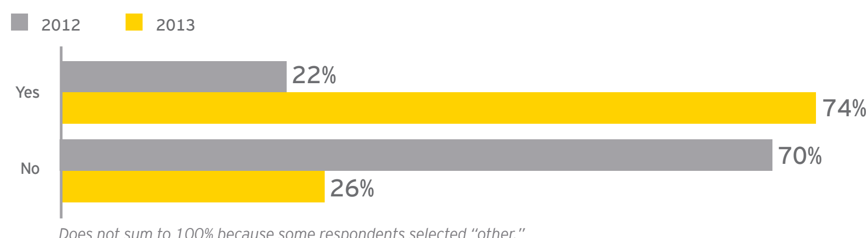


said. The sentiment is validated by survey results that show data and systems as the two top challenges to greater internal risk transparency in every region.

Many executives pointed to real progress over the past several years in centralizing data. One said that he could see the total exposure of a corporate client within five minutes and, per country, within three hours. Another said the fundamental work was done but there was still more to do: "We've already shifted our ability to pull everything together and then make it transparent in the organization. It's one of those never-ending tasks." Still, executives cited data integrity and the ability to make good correlations as ongoing concerns.

Many firms have been working toward end-of-day mark-to-market for trading portfolios for some time, but the ability to aggregate counterparty exposure across business lines continues to be an area of focus. Fifty-four percent of survey respondents said they can aggregate counterparty exposure across business lines by the end of day, roughly the same number as a year ago. Twenty-six percent said it takes two days, and 19% reported taking more than two days. Seventy-four percent of respondents have an automated process for counterparty risk aggregation, up significantly from a year ago when only a quarter of banks reported having automation (Exhibit 75).

Exhibit 75: Automated process for counterparty risk aggregation



Does not sum to 100% because some respondents selected "other."

Streamlining reporting

There are increasing demands, both from boards and from regulators, for reliable and timely reporting in a clear format. Many executives said they are experimenting with different formats of reporting in response to changing board needs. The theme of streamlining reports tailored for specific constituents ran through our discussions with executives. As one interviewee said, "There is an increased level of board accountability, so the initiative is underway to make sure there's been a complete change in the nature of the reports we send to the board: they are much shorter and much clearer, much more concise."

An enterprise-wide risk reporting process was identified as a clear gap in the first EY/IIF survey in 2008, with only 9% of respondents saying one was in place. While the reporting process is much improved in many organizations, problems persist, including data quality, gaps in connectivity from system to system, and data overload with little analysis. Executives looking beyond data aggregation said that reviewing, analyzing and interpreting the reports to make them relevant and to understand dependencies and correlations is a crucial next step. "We are trying to make clear for the board what the really big issues are," one CRO said. "We have a very deliberate format where the top of every page has three or four bullet points as to what the key things are, and the rest of the commentary builds that out."

Investment in systems

There has been significant investment in IT upgrades since the crisis, and there is no abatement in sight. Sixty-three percent of survey respondents reported an increase in IT investment in the past year, with 83% of banks in Africa and the Middle East and 78% of those in Asia reporting an increase (Exhibit 76). Almost half reported an increase of 10% or greater over the year (Exhibit 77). Seventy-eight percent expect to increase spending on IT over the next two years, with 100% of those in Latin America, Africa and the Middle East expecting an increase (Exhibit 78). Just under 40% anticipate an increase of 30% or more over the next two years (Exhibit 79). Banks selected higher-percentage bands for planned increases in IT spend to support the risk architecture over the next two year than they did last year.

Exhibit 76: Change in IT spend in the last year to support the risk architecture

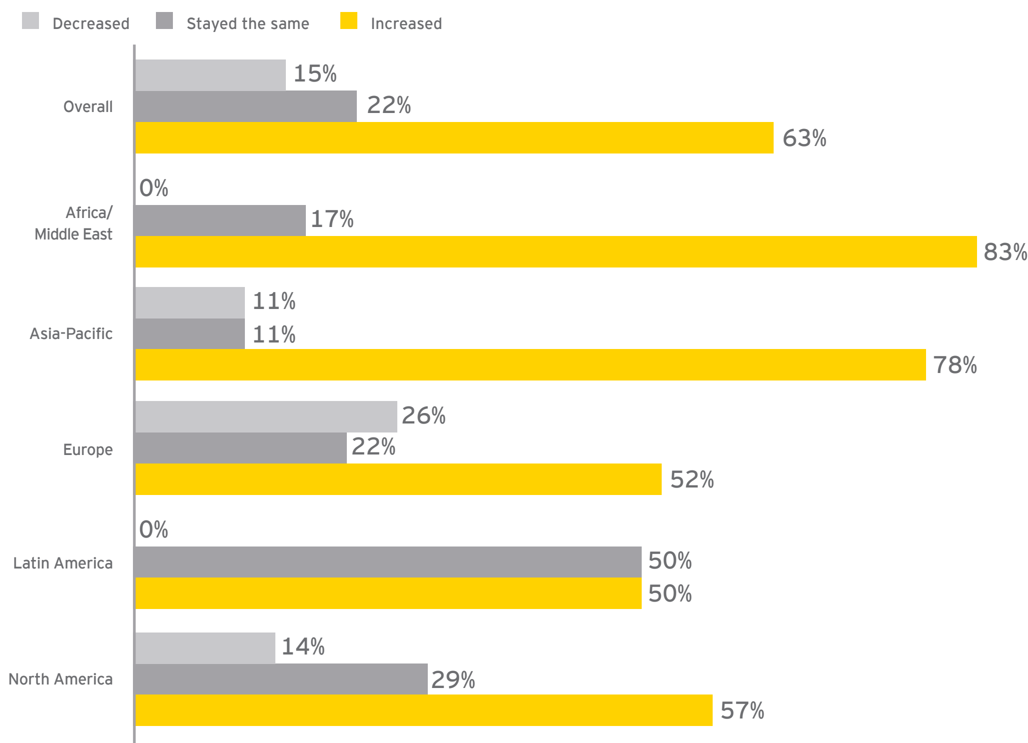


Exhibit 77: Change in IT spend to support risk architecture; percentage change over the past 12 months

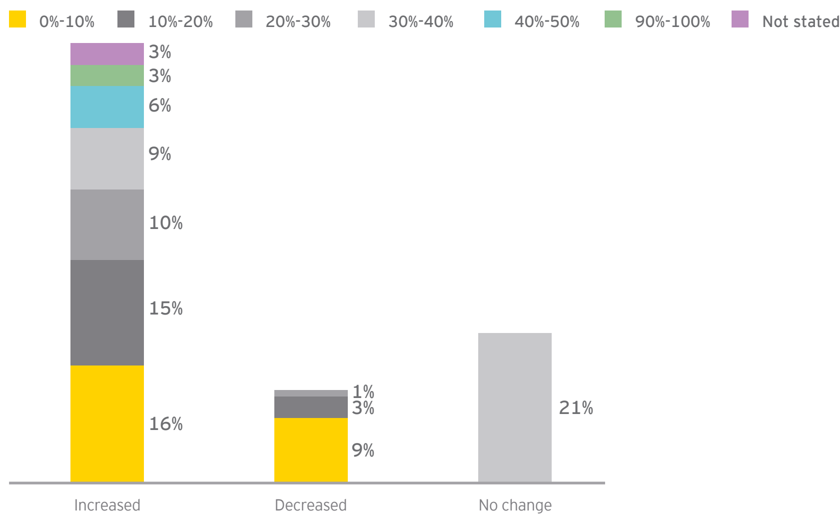
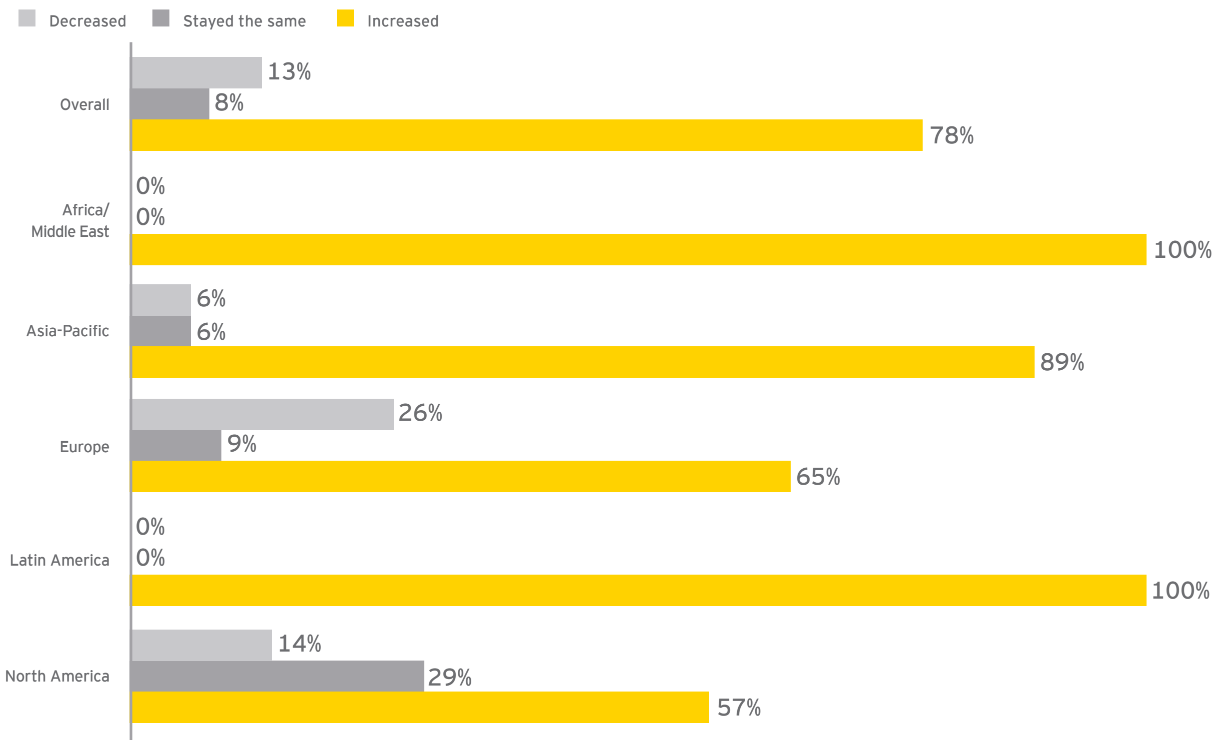


Exhibit 78: Planned change in IT spend to support risk architecture over the next two years



As demonstrated in Exhibit 80, most banks reported work across a wide range of initiatives. Among the top projects are work in support of liquidity and capital management and strengthening internal stress-testing processes. Aggregation of data and convergence of risk and financial data, two keys to improve reporting, are also underway in a majority of firms. These projects often take several years, hence this year's responses are similar to last year's.

As banks digest the implications of the new Basel principles, the emphasis on infrastructure and reporting will grow. Executives noted that these efforts take tremendous management time, money and resources, but they also acknowledged that getting past the limitations of legacy systems will allow their organizations to ultimately run more efficiently and will facilitate risk management across the enterprise. Risk is also working increasingly with finance and treasury, an important breaking down of barriers with the organizations. "Risk doesn't operate in isolation," one CRO said. "There is nothing I'm going to do with technology and risk where I'm not going to partner with finance and with other groups."

Exhibit 79: Percentage planned increase in IT spend to support the risk architecture over the next two years

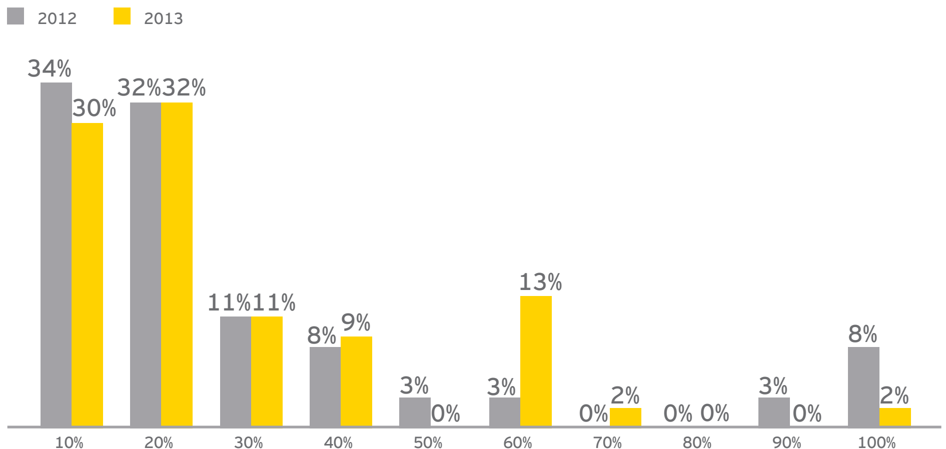
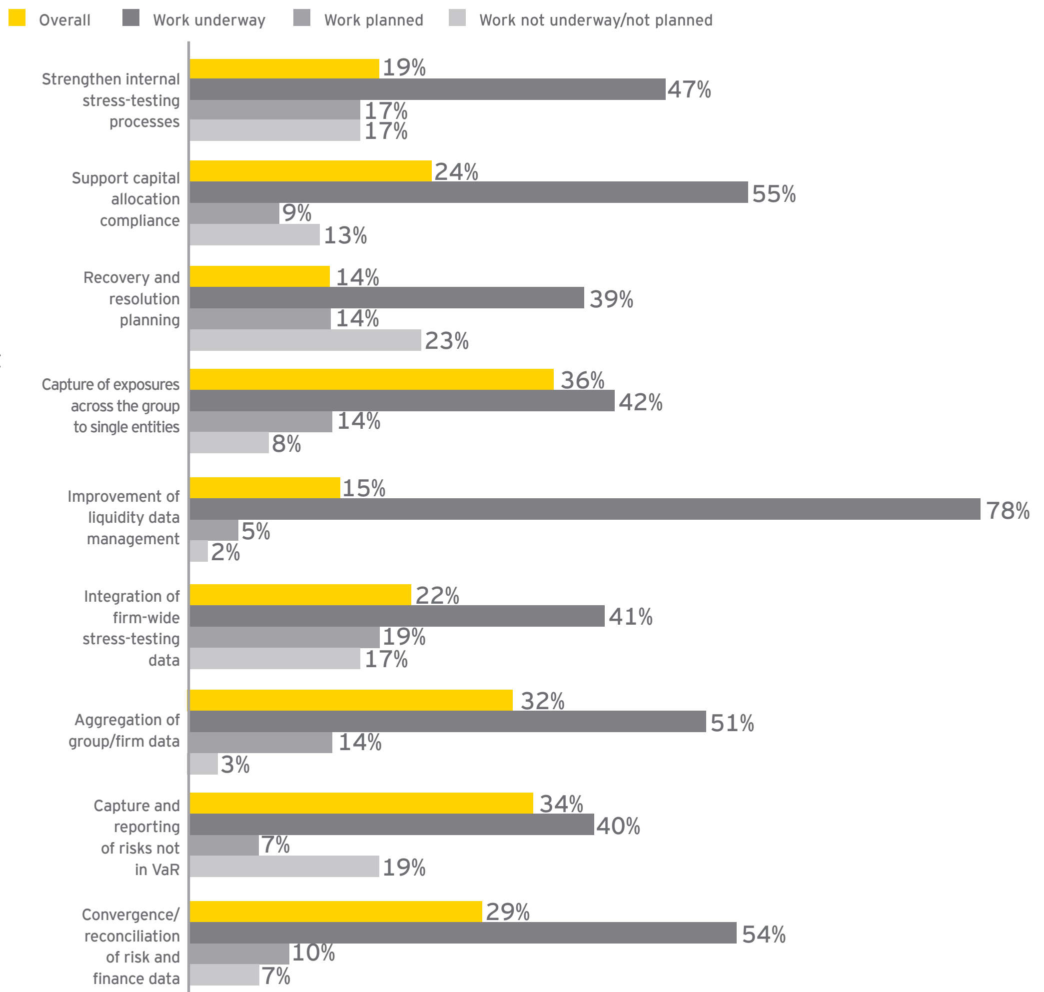
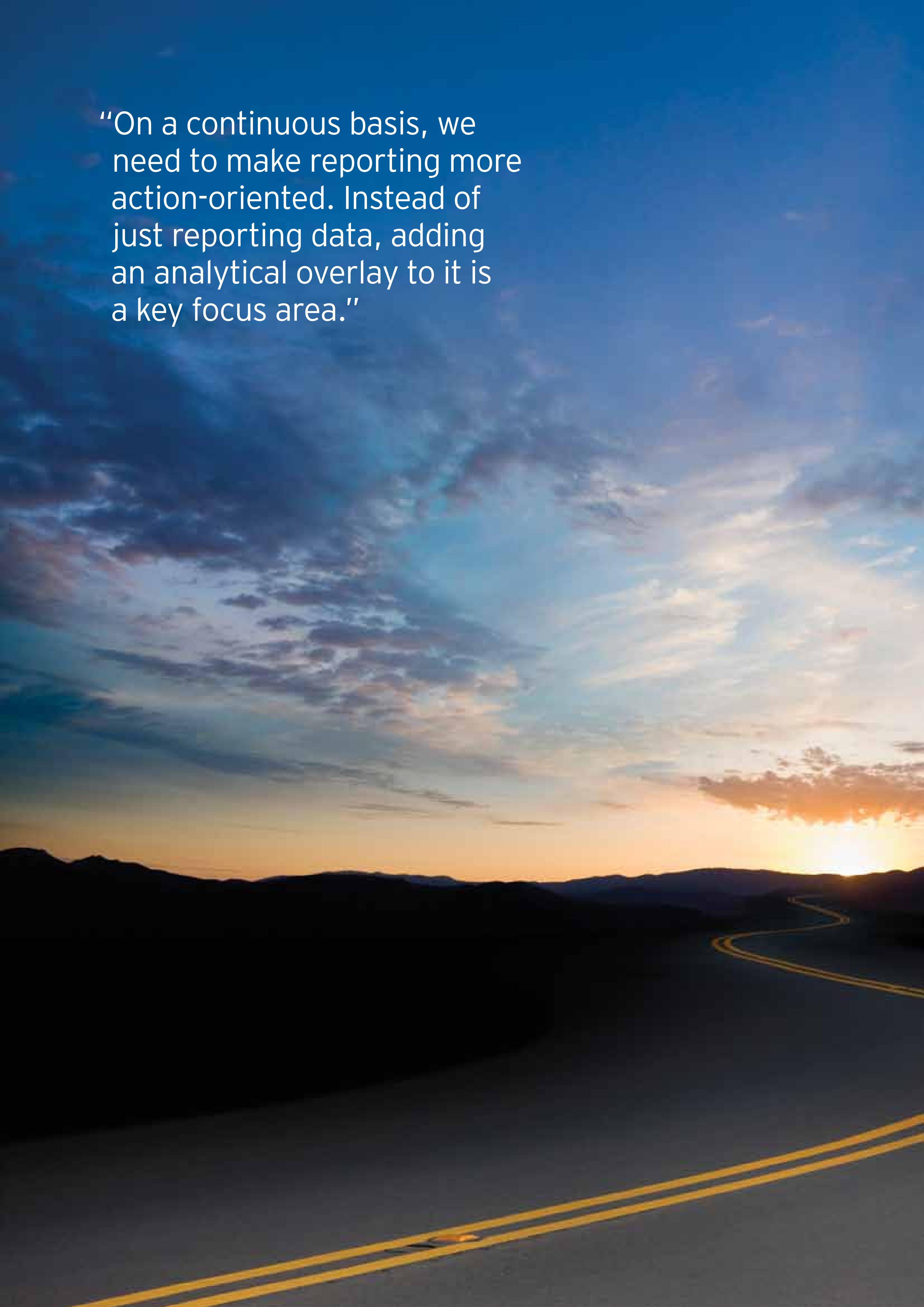


Exhibit 80: IT projects to support risk management





"On a continuous basis, we need to make reporting more action-oriented. Instead of just reporting data, adding an analytical overlay to it is a key focus area."

Insurance firms

This year's study includes eight insurance firms[8] that are among the leading players in the global insurance industry. While it is difficult to draw conclusions on the overall industry, these responses provide direction regarding challenges and developments within the sector.

Insurance firms are facing many challenges similar to the banking industry: evolving and more stringent regulatory demands, economic volatility and the continuing complexities of the European sovereign debt crisis. Some challenges are particularly acute for insurers, such as poor equity market performance and the low-interest-rate environment that has resulted from loose monetary policy. Especially of note this year is discussion of liquidity pressures, an issue that the industry has been largely shielded from until recently.

In the face of these challenges, executives cited risk culture as the compass that keeps their firms on course. "Maintaining the company at the right level of risk culture, so that everybody feels and acts as a risk manager, is one of the biggest challenges I see in my role," one executive said.

Trusted partners

Interviewees pointed out that comprehensive risk management combines integrated risk modeling with governance frameworks. To get the balance right, they said, it is important that risk managers act as trusted business partners rather than assume a control function, and that risk culture come from the very top of the organization. As one executive said, "Our board of directors promotes a transparent kind of risk culture in some ways, by being a very active participant in major decisions."

Directionally, our survey indicates that aligning compensation with risk-adjusted performance metrics is a key component of insurers' initiatives to strengthen the risk culture. Strengthening risk roles and responsibilities, a consistent tone from the top, as well as enhanced communication and training are all important factors.

Important challenges in improving the risk culture include having adequate systems and data in place, as well as ensuring that the business is taking ownership of risk. These themes echoed those in our discussions with bankers.

Roles and responsibilities in risk governance have been well established with board-level and management-level risk committees, executives told us. Since the crisis, the board oversight on risk issues has been intensified in the insurance sector. Respondents reported that the board's top priorities are risk appetite, liquidity, capital allocation and enterprise risk management.

All insurance companies surveyed have stand-alone board risk committees. Changes in the board composition and targeted training increased risk expertise across all firms over past years. One executive described some of the

"In the thick of the financial crisis, there's a pressure from the market for financial institutions to regain profitability. We need to perform these regulated tasks while making sure we improve our profit gains."

[8]The results for insurance companies are shown only in this section; other charts and text in the report cover the banks in the survey.

interconnections through the board: "The board clearly has an oversight about the entire risk management governance and risk management framework. They also sign off on the group risk tolerance; that's the risk appetite for the group. Our CRO has a link with the chairman of the risk committee of the board, so we have a dedicated committee at the board level looking at risk, or focusing on risk. It is important that the risk committee and the audit committee work hand in hand. There is also one meeting that the risk committee holds together with the remuneration committee."

The role of the CRO, who predominantly reports directly to the CEO, has become increasingly crucial in insurance companies. Most insurance CROs are integrated into business decisions and have good access to and interactions with board risk committees, executives said. Over the past 12 months, insurance CROs were primarily focused on market and systemic risks, economic and regulatory capital allocation, stress test strategy and enhancement of risk controls.

Regulatory challenges

Regulatory developments arising in the aftermath of the financial crisis continue to be a major challenge for the industry. Particular concerns include the designation process of global systemically important insurers (G-SIIs), the Common Framework (ComFrame) for the supervision of internationally active insurance groups, and implementation of Solvency II in Europe and the Solvency Modernization Initiative in the US.

In general, insurers expressed concern about the risk of increasing fragmentation of regulatory approaches across jurisdictions.

While insurance companies are inherently less exposed to liquidity risk than banks, pressure on marketability of assets in the crisis did lead to some liquidity pressures. Liquidity risk was raised as a topic by several insurers and highlighted the importance of liquidity stress tests. Executives cited regulatory uncertainty and data availability and quality as key liquidity challenges. "The challenges will emerge over time," one executive said. "I think it's more the implications in terms of profitability, and the margins."

Most companies recently have reviewed and adjusted their capital allocation approaches across entities. The uncertain economic environment and developing accounting and regulatory regimes are top challenges to capital planning. Executives cite increasing regulatory pressure to keep capital locally, which can reduce diversification benefits.

Insurers have implemented new internal stress-testing methodologies within the last year, including integrated stress testing across the group and across risk classes. The focus of such stress tests has increased, particularly regarding credit, market and liquidity risk. As with banking, stress testing is hampered by data and resource issues.

All firms have either implemented a comprehensive risk appetite framework or have made progress in this regard. The most frequent quantitative metrics used to set and monitor risk appetite at group level are capital adequacy, capital ratios, economic capital and limits. Most companies use qualitative factors in their risk appetite considerations, such as reputation, investors and rating agencies, strategic and business goals, and market conditions. As with banks, a major challenge remains to cascade the risk appetite statement through the operational level and embed it into decision-making processes. As one executive said, "We have at the moment a framework which is very well embedded with the plan, with strategic decision-making, but we have identified improvement potential in the risk culture awareness of the entire organization, so everybody in the company gets it."

Conclusion

In the years since the crisis, the financial services industry has made real progress toward structural change but is still working to embed policies and procedures down through the organizations. The industry itself recognized that boards needed to change focus from share price and profitability to the risks entailed in their strategies, and this change has happened. The industry also recognized that empowered CROs were needed with a broad remit and a reporting line direct to the board or CEO. They also needed sufficient stature to be able to stand up to business heads. This shift has occurred almost universally across the industry.

The experience across many banks and markets in the past 12 months shows, however, that more work is needed on culture. A key issue at the time of the crisis was balancing a sales-focused culture with a risk-control culture. This remains an issue, but this year the emphasis has been on assessing overall culture and moving reputation and operational risk higher up the agenda. The belief at board level that they knew what the culture was throughout the organization has been shaken, and the

majority of banks surveyed have moved, or are planning to move, to carry out reviews of culture.

In line with this, there is greater focus on embedding operational risk and reputational risk more firmly in risk appetite. Nonetheless, banks are still struggling to ensure that specific business decisions are consistent with risk appetite even for more traditional risk types, such as credit and market. Many banks have put in place programs to achieve this.

One lesson from the crisis was that many banks were not fully aware at the board or senior management level of the concentrated positions in their organizations. This had led to a focus on risk transparency, and work is still continuing with programs to enhance stress testing and make it a more usable management tool, as well as through redevelopment of models and management information. But all of this is putting ever-greater strain on IT and data platforms; enhancements, although continuing apace, will continue for some time to come.

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EYG No. EK0162
1303-1045437 BOS
ED 0714

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