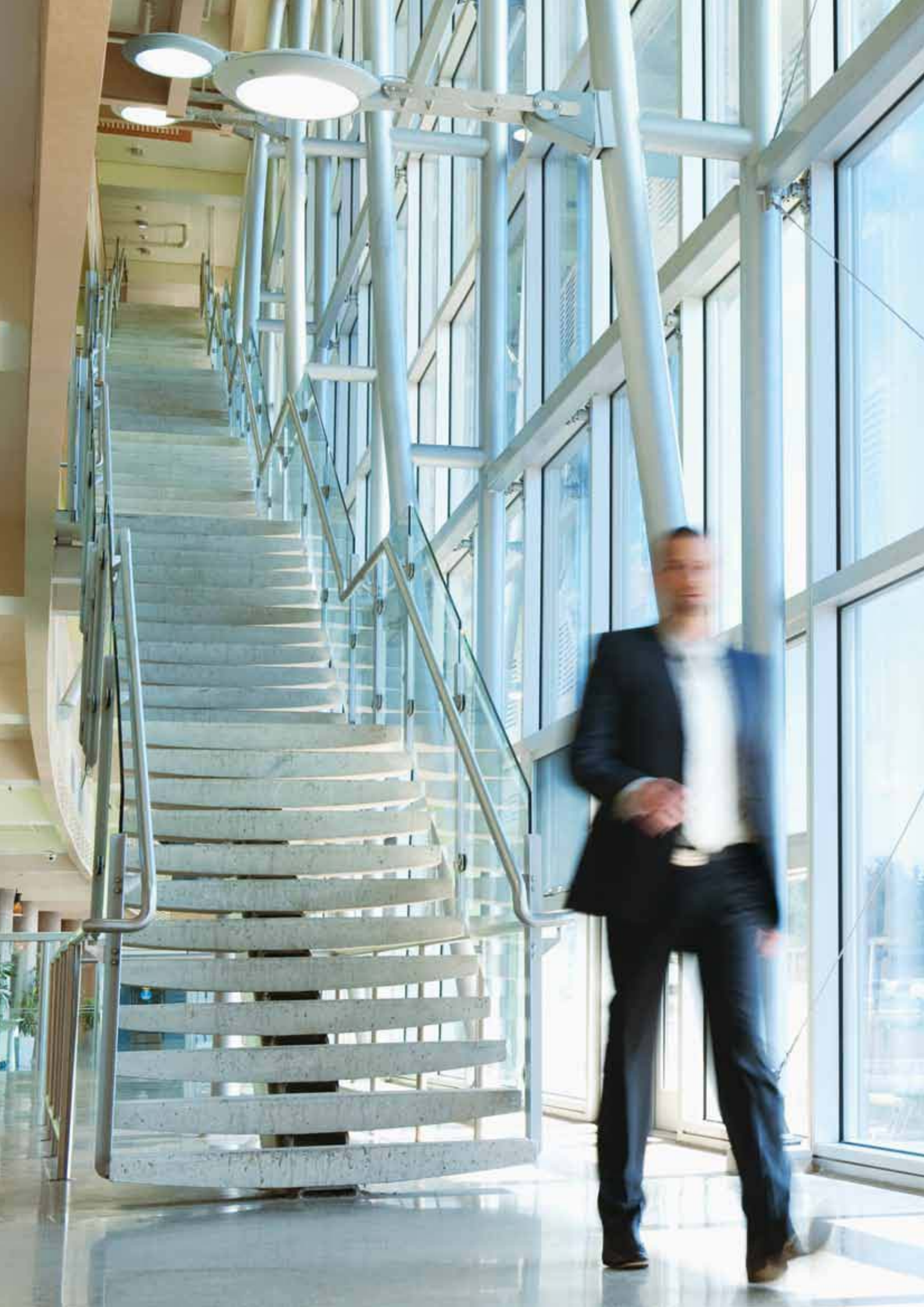


Progress in financial services risk management

A survey of major financial institutions

Co-sponsored by





Executive summary



Progress in financial services risk management is the third annual study on risk management conducted by the Institute of International Finance (IIF) and Ernst & Young since the 2008 crisis. This year's study took place against a backdrop of global issues – continuing economic pressures in the US and Europe, the European sovereign debt crisis and a fast-changing regulatory environment. Responses from the 69 banks and six insurance companies that participated in the study highlight the degree to which agendas in the industry have been influenced by this picture.

The scope, timing and potential impact of the still-evolving global and national regulatory reform was the top challenge cited by almost three-quarters of respondents (see Exhibit 1) and is driving a reshaping of the financial industry. The challenges from the regulatory environment are further complicated by the continued market, macroeconomic and geopolitical volatility.

Despite these challenges, firms in this year's survey reported continued progress on risk management improvements. When the IIF and Ernst & Young's annual study of risk management practices was first launched in mid-2009, the financial services industry was still recovering from the brunt of the 2008 crisis. The inherent weaknesses in risk management exposed by the crisis were very apparent. Study participants at that time were in the process of conducting firmwide assessments to identify gaps against risk management recommendations from the IIF and the Basel Committee on Banking Supervision, and plans were being developed and resources deployed to address areas targeted for improvement. Last year's study found organizations in various stages of progress against these plans, and this year's study shows continued effort and achievement.

Overall, the results of the three surveys demonstrate that the structure of risk management has undergone a significant change since before the crisis. However, there is still much to be done to change and fully embed new methodologies and processes. Risk appetite, which post-crisis emerged as a critical foundation of the risk management process, remains a key challenge for many firms. While most have established an enterprise-wide risk appetite, many have not yet been able to embed it into their businesses, with only 37% of this year's survey participants indicating they have linked it to day-to-day business decisions. The methodologies and approaches to monitor compliance and enforce risk appetite are still evolving and must be further addressed. Data and systems are persistent impediments to risk management. And while many are investing substantial time and resources to improvement initiatives (77% reported an increase in IT spend post-crisis and 63% predict it will continue for at least the next several years), it will be many years before all these upgrades are fully operational. Changing the culture to make risk "everyone's business" is an ongoing effort.

"During the crisis, we probably learned more about risk in our company than we had in the previous 10 years. I'm sure everyone felt the same way."



Key areas of change in risk management include:

- ▶ **Role of boards.** One area of criticism post-crisis was that boards were not sufficiently engaged in challenging the risk profile. Since 2008, the involvement of the board on risk has increased substantially, with board risk committees now almost universal. The amount of time devoted to risk has increased, as has the range of risk reports provided to the board. The composition of the board has been changed in a number of firms to upgrade the skill level and experience in banking and risk. Respondents to this year’s survey reported that boards are playing an influential role in several key areas of risk management, including: risk appetite, liquidity, culture and compensation. However, there are still challenges to overcome. Board members complain of too much undigested material, high expectations from regulators and difficulties challenging business models.
- ▶ **Role of CROs.** There has been a similar shift in terms of the role and seniority of the CRO. One finding post-crisis was that many CROs had only partial coverage of risk decisions and did not always have the stature to challenge business heads. Today, over 80% of CROs report either directly to CEOs or jointly to CEOs and board risk committees. The breadth and scope of responsibilities has expanded well beyond the traditional focus areas of credit and market risk, with CROs now involved throughout the chain of decisions from new products through to strategy.
- ▶ **Size and skill level of risk team.** Post-crisis, the industry has invested substantially to expand the size and level of sophistication of the risk function at both the group and business unit levels. This is particularly apparent in this year’s study results. While many firms are reducing headcount to adjust to both economic and regulatory pressure on profitability, 57% of respondents reported an increase in group risk headcount, and 48% reported an increase in business unit risk headcount over the past 12 months.
- ▶ **Models.** Another area of focus has been to upgrade the methodologies to identify risks, particularly concentrations of risk. Many agree that the economic capital models in place before the crisis often underestimated the size and risk of some exposures, particularly across business units. Correlations were far too optimistic and many models ignored risk types that proved to be at the center of some of the pressures during the crisis. Almost all firms have changed economic capital models since the crisis, with 70% of

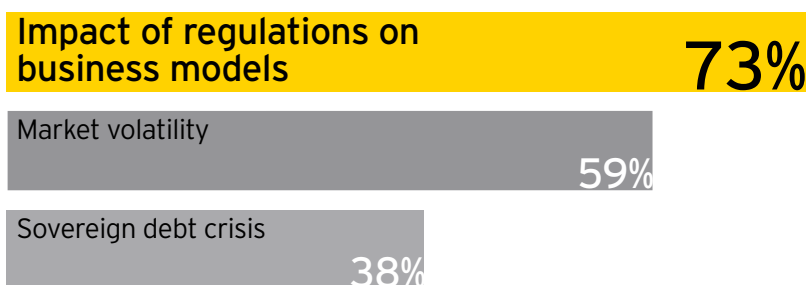


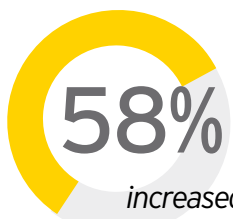
Exhibit 1
Top challenges

Overview of 2012 results

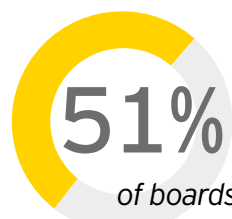


Risk culture. Survey responses confirmed that strengthening risk culture is a critical area of management focus, particularly for firms most severely impacted by the 2008 crisis. Strengthening risk roles and responsibilities, enhancing communication and training, and reinforcing accountability were the key initiatives reported to strengthen risk culture. Making risk “everyone’s business” throughout the organization is an ongoing effort.

Roles and responsibilities. The involvement of boards in risk management and oversight has increased dramatically since the 2008 crisis and continues to grow. Liquidity risk, risk appetite, capital allocation and stress testing are the top areas of focus. The responsibilities and influence of the CRO continued to expand significantly post-crisis, and most are playing an active role in all key strategy and planning decisions.



58% increased attention on risk culture in the past 12 months, and 41% (vs. 23% in 2011) say they are pleased with progress to achieve a strong risk culture.



51% of boards have increased focus on risk management in the past 12 months, and 87% now have separate risk and audit committees. 58% of CROs report to the CEO, and 90% have direct access to the board or risk committee.

Risk appetite. Developing, implementing and embedding risk appetite ranked in the top three areas of focus for board members and CROs. All firms are under way to some degree with the risk appetite process. While many have been successful establishing a risk appetite at the enterprise level, many are struggling to effectively cascade the risk appetite through the operational levels of the organization and embed it into decision-making. For those furthest along in the development process, risk appetite is increasingly viewed as an important strategic management tool.

Liquidity management. Liquidity and capital management are at the top of senior management agendas for most participants. Complying with the new costly and complex liquidity coverage ratio (LCR) requirements proposed under Basel III, together with multiple local liquidity requirements, are driving a host of initiatives to review and adjust business models and upgrade liquidity management systems and processes. The majority have made changes to both internal and external charging for liquidity and most are shifting the level at which liquidity is managed across group and local entities.



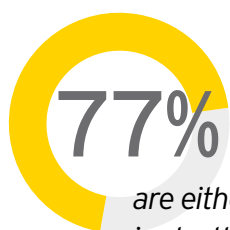
51% report progress in setting risk appetite at the enterprise level, but only 26% believe they have embedded it into the businesses and only 37% report a link to day-to-day decision-making.



65% are evaluating portfolios to understand how new LCR requirements will impact each segment and product, and 54% predict the proposed LCR requirements will significantly impact the cost of doing business.

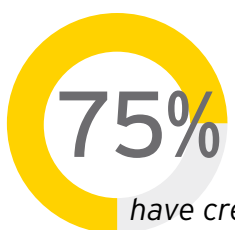


Capital management. The impact of the proposed Basel III regime on capital management will be substantial for most firms. Senior management teams are strategically reviewing their capital management priorities across geographic and political boundaries, legal entities and business lines, and the majority have changed their approaches to allocating capital across business units to more accurately reflect the risks taken throughout the enterprise. Aligning economic capital with regulatory requirements and reallocating capital with new risk-weighted asset goals are the key drivers for changes to capital allocation.



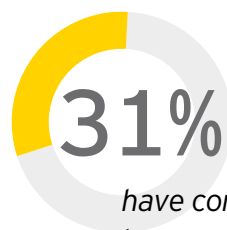
77% are either under way or finished with in-depth reviews to identify and assess risks taken across businesses. And 57% have made changes to capital allocation across businesses in the past 12 months.

Stress testing. The evolving regulatory and business environment has heightened managements' attention to strengthening stress-testing strategies, systems and procedures. Scenario planning in particular has become an increasingly important tool to help boards and senior management consider and assess the full range of market factors and macroeconomic events that could potentially influence revenue streams and stability.



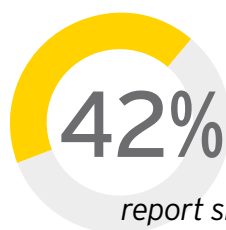
75% have created and implemented new stress testing in the past 12 months, while 49% say that stress-testing results are incorporated into strategic decision-making.

Recovery and resolution planning (RRP). RRP, often called living wills, is a work in progress for most of this year's participants. Regulators have moved at different speeds in requiring implementation of recovery and resolution plans, which has resulted in widely varying industry actions across jurisdictions. While many believe that recovery plans are a beneficial management tool, the overall view of resolution planning was varied. Confusion over regulatory expectations and variances in cross-border requirements and timelines, particularly for geographically dispersed firms, were the top challenges cited.



31% have completed recovery plans and 10% have completed resolution plans in line with local deadlines.

Internal transparency, data and systems. Improving internal transparency of information is an important initiative for study participants. Many firms face challenges extracting and aggregating appropriate data from multiple siloed systems, which translates into fragmented management information on the degree of risk facing the organization. The new regulatory regime is driving an increased investment in data and IT systems to support risk management. These projects, however, require multiyear investments of management time, people and resources.



42% report significant enhancement to risk transparency, vs. 26% last year, while 63% predict IT spend will increase over the next two years.



Insurance firms

This year's study includes six insurance firms that are among the main players in the global insurance industry. While it is impossible to draw robust conclusions on the overall industry, these responses provide valuable insights regarding challenges and developments within the sector. Insurance firms are facing some challenges similar to the banking industry: evolving and more stringent regulatory demands, economic volatility and the continuing complexities of the European sovereign debt crisis. However, the low interest rate environment as a consequence of loose monetary policy coupled with poor equity market performance presents a particular challenge to the insurance sector. While respondents believe that, in general, their firms showed high resilience during the 2008 crisis, they are nonetheless implementing initiatives to further strengthen risk management.

Effective risk management combines integrated risk modeling and governance frameworks with the judgment of risk managers as trusted partners. Creating a risk culture that enables an open dialogue and disciplined risk-taking has therefore been a key element for many years in the sector. While the insurers in the survey believe they have already achieved a strong risk culture, they further increased their efforts in this area over the

past year. Their focus to strengthen the risk culture has been on enhancing communication and training regarding risk values and expectations; strengthening risk roles and responsibilities; and aligning compensation with risk-adjusted performance metrics.

Over a decade ago, the insurance sector advanced the role of the CRO to the top ranks of the organization to reflect risk management in key decisions. The role of the CRO – who most often 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.

The board oversight on risk issues has been high throughout the past years in the insurance sector. This past year, the boards' top focus areas have been risk appetite, stress testing and capital allocation. All insurance companies involved in the survey have stand-alone risk-related board committees that have some overlap with the audit committee. Risk expertise has always been a necessary criterion for insurance board members. In the past year reporting on risk has become more in depth and transparent and board time on risk matters has increased.



In comparison to banks, insurance companies are inherently less exposed to liquidity risk, as liabilities are in general long-term and assets are matched to their maturities. Furthermore, insurers are funded by up-front premiums and are not subject to surrender runs. Nevertheless, liquidity issues may arise when engaging in non-insurance activities (e.g., short-term funding). Therefore, insurers conduct liquidity stress tests and, like the banking executives interviewed, identified data quality and modeling risks as key challenges to liquidity management. Some companies integrate liquidity risk into their asset and liability committee, while others have this on the agenda of their risk committee.

As part of their capital management, most companies have recently reviewed and adjusted their capital allocation approach across entities. The uncertain economic environment and developing accounting and regulatory regimes are seen as top challenges to capital planning.

As with banks, the role of stress tests also increased in insurers, in particular with a focus on groupwide risks. In conducting stress tests, risk management works closely with business units, with a focus on market risks and increasingly on operational risks, with less focus – compared to banks – on liquidity stress tests. The results of stress tests are fully integrated into strategic decision-

making and are incorporated into capital planning and risk appetite development.

The development and implementation of risk appetite across all businesses is a management priority for the insurance industry. The risk appetite is determined by the board, based on the strategic goals of the company and taking into account investors, rating agencies and regulatory considerations. The development, implementation and especially the monitoring of risk appetite is driven by the CROs. The main challenge is to effectively cascade the risk appetite statement through the operational levels of the organization and embed it into operational decision-making processes.

While there is controversy about the scope, impact and unintended consequences of the regulatory requirements facing the industry, some believe they will, in the long run, benefit the industry through a risk-based capital management approach. As one executive summed up, “Solvency II, Solvency Modernization Initiative, etc. do, in most ways, align with stakeholder interests and are just some of the ways the industry has been strengthened since the financial crisis.” Regulators must, however, carefully consider the specific business model and risk profile of the sector when developing sector-specific regulations.



Research
methodology
and demographics





From December 2011 through March 2012, Ernst & Young surveyed IIF member firms using two methods. An online quantitative questionnaire was distributed to the top member firms selected by asset size. In addition, the team conducted telephone interviews with CROs and other senior risk executives of the largest global firms. A total of 75 firms across 38 countries participated in the study either online, by telephone or both, which resulted in 32 interviews with CROs, 12 interviews with other senior risk executives and 68 online survey responses.

Africa/Middle East

ABSA Group
 Ahli United Bank
 Arab Bank
 Arab Banking Corporation
 BankMuscat
 BLOM Bank
 FirstRand Bank
 National Bank of Abu Dhabi
 National Bank of Kuwait
 National Commercial Bank
 Qatar National Bank

Asia-Pacific

ANZ Banking Group
 Bank Mandiri
 China Guangfa Bank
 China International Capital Corporation
 CIMB Group
 Commonwealth Bank of Australia
 DBS Bank
 ICICI Bank
 Maybank
 Mitsubishi UFJ Financial Group
 Mizuho Corporate Bank
 National Australia Bank
 State Bank of India
 Sumitomo Mitsui Banking Corporation
 Suncorp Group
 The Norinchukin Bank
 Westpac Banking Group

Europe

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

Latin America

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

North America

Bank of America
 Bank of Montreal
 BNY Mellon
 CIBC
 Citi
 Manulife Financial
 MetLife
 Royal Bank of Canada
 Scotiabank
 State Street Corporation
 Wells Fargo

Risk culture



Firms are working to build consistent and unified risk cultures

Survey responses confirm that risk culture is a critical area of focus for senior management teams. While the pattern varies across firms, 58% acknowledge that management attention to building an effective risk culture has increased, in some cases significantly, in the past 12 months (see Exhibit 2).

Not surprisingly, the firms most severely affected by the 2008 financial crisis report the greatest increase in attention to risk culture. Sixty-five percent of severely impacted firms say culture has been an area of increased focus since the crisis, versus 31% of moderately impacted and 24% of least impacted firms.¹ Attention has remained high for those firms most impacted by the crisis, with 53% reporting a significant

increase in attention over the past year versus only 10% of moderately impacted firms and 18% of firms least impacted. As one CRO, whose firm was particularly hard hit, explained, “Those of us who were the most seriously threatened by the 2008 meltdown have, of course, been highly motivated to rethink and improve our risk governance philosophy, processes and methodologies. As a consequence, we might be further along the curve with improvements than banks that were not impacted.” Firms in a number of countries, which were significantly affected by previous periods of stress in the early 1990s and 2002, have been working steadily on strengthening their cultures and risk governance practices, and some firms believe their cultures have historically always been strong.

There are a host of initiatives under way to institutionalize comprehensive, consistent and collaborative approaches to risk. But change, particularly cultural change, is an arduous, long-term process, and as one executive noted, “I don’t think any type of cultural journey in a company is ever finished.”

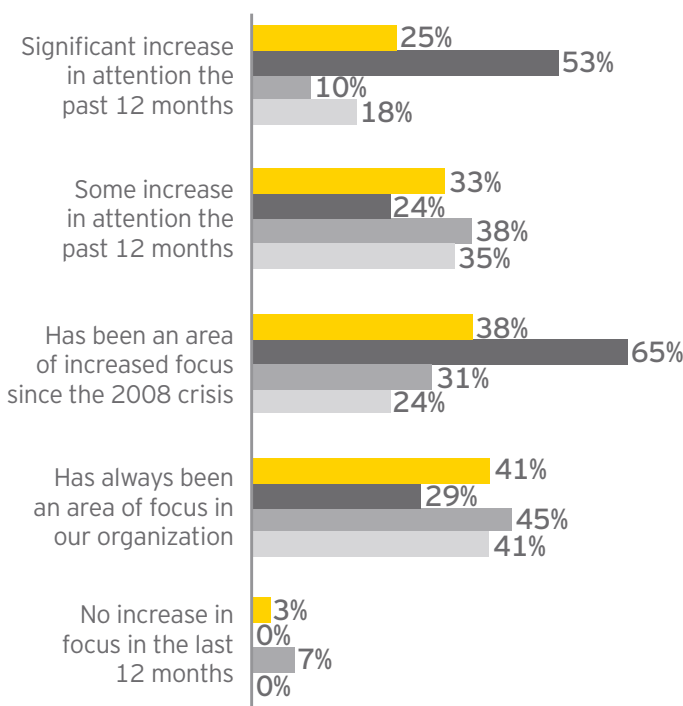


Exhibit 2

Those firms most severely impacted by the 2008 crisis report a heightened attention to risk culture

Legend: Overall (yellow), Severe impact (dark grey), Moderate impact (medium grey), Low impact (light grey)

¹ Degree of impact as reported by survey participants.



While methods to embed a risk culture vary, opinions on sound practices coalesce around several critical activities:

- ▶ **Start at the top.** Executives agree that commitment to cultural change must start at the top. As one interviewee observed, “If you set the right tone from the top, you are halfway there to building the right culture.” Boards and senior management, particularly the CEO, must visibly and consistently demonstrate disciplined attention to risk, and compliance is, as another executive commented, “non-negotiable in whatever we do.” Several firms (19%), particularly those severely impacted by the crisis, report changes to the composition of the board and senior management team to bring more risk and banking expertise to the organization (see Exhibit 4).

Defining, embedding and enforcing the risk appetite across the organization is in many ways the cornerstone of a successful risk culture.² The risk appetite reflects the firm’s vision and strategy and sets the rules of the road for the entire organization, clarifying the board and senior management’s overarching views on what constitutes acceptable risk at all levels of the organization. While risk appetite is still very much a work in progress for many firms (see page 20 for further discussion), many executives increasingly view it as an important management process. As one interviewee stated, “We view the risk appetite as the tool to unify the risk culture throughout the organization.”

- ▶ **Strengthen risk roles and responsibilities.** Executives agree that well-defined and clearly articulated risk ownership roles and responsibilities are a critical component of effective risk governance. Sixty-nine percent of respondents indicated they are strengthening risk roles and responsibilities in their organizations (see Exhibit 4). In their post-2008-crisis assessments, many firms found confusion around risk oversight expectations and gaps in risk processes and assignments throughout their organizations. As a result, many made, and continue to make, adjustments to their operating models to strengthen and clarify responsibilities. As one CRO explained, “It is vital that everyone understand their accountability for managing and monitoring risks and escalating concerns, if necessary, in their daily activities.” Another executive shared that in his organization, “There is always a clear business owner for all risk positions taken and clarity around who should be informed and who should be consulted.” Executives concur that organizations must have a sound risk management infrastructure that clearly delineates both the ownership of risk and the control processes.
- ▶ **Constantly reinforce culture with communication and training.** Sixty-seven percent of respondents indicate they are enhancing communication and training on risk values and expectations (see Exhibit 4). Constant and varied communication through a variety of channels – from CEO communiqués, town hall meetings, written

Strengthening risk roles and responsibilities **69%**

Enhancing communication and training regarding risk values and expectations **67%**

Reinforcing accountability regarding risk management **61%**

19% Changing the composition of the board and senior management team

Exhibit 4

Respondents report several key initiatives to strengthen risk culture

² See also IIF reports on *Reform in the Financial Services Industry: Strengthening Practices for a More Stable System* (2009) and *Implementing Robust Risk Appetite Frameworks to Strengthen Financial Institutions* (2011).

“Risk is everyone’s responsibility. Whether you’re a teller, a relationship manager, in operations or in IT, risk is your responsibility. It’s not just the risk team.”

Several interviewees discussed the challenge of creating a balance between accountability and a culture of fear. As one interviewee explained, “It’s a delicate balancing act because you do want people to be accountable for their actions; but if you play that in a wrong way you’ll drive people underground, which creates the wrong culture.” Finding the “sweet spot” of accountability where people feel comfortable discussing concerns and potential issues when they arise, before they become serious problems, is challenging. As one executive observed, “We need to continue to strengthen and formalize escalation procedures and encourage and reward whistleblowing so that people can comfortably say, ‘I see something wrong, nothing is being done about it, and I want to report it.’”

- ▶ **Monitor adherence to risk principles.** There was much discussion about effective processes to monitor and manage adherence to risk parameters and measure the results of risk culture initiatives. Several common practices were cited as key ingredients:
 - ▶ **Strong risk teams.** The executives interviewed unanimously agree the risk function must be strong and central to the business and have sufficient stature and clout inside the company with support from the CEO and the board. As further discussed starting on page 30, the risk team is unquestionably playing a strategic role in all key aspects of the business, positioned to have the final say on risk decisions with, as one CRO commented, “no CEO veto power” to override the process in the bank.
 - ▶ **Proper metrics.** Several interviewees discussed the challenges of establishing quantitative metrics to measure the level and maturity of the risk culture. As one executive admitted, “We have not yet established a method of monitoring the culture, or even, for that matter, determined what metrics we might want to follow.” The struggle for most is finding ways to evaluate whether actual day-to-day behavior on the ground is consistent with the strategic values and code of conduct set by the board and the senior management team. In a separate study conducted by Ernst & Young and Tapestry Networks on risk governance released

in January of 2012, the directors and executives interviewed offered an array of areas to consider when measuring the culture (see sidebar, *Suggested measurements to monitor culture*).³

- ▶ **Internal transparency of information.** To make sound decisions on risk and to effectively monitor adherence to values, management needs timely, accurate and holistic information across businesses and geographies. There are many initiatives under way to improve the quality and granularity of reporting on risk issues and limits to enable the board, senior management and business leaders to make more informed decisions and more accurately track and review performance on risk parameters. As one executive explained, “We need to have a transparent awareness of risk all the way through the bank.”

Top challenges

The challenges to truly embedding a risk culture across the organization are many. Inadequate systems and data is a key issue for many firms, with 73% reporting it as one of the most significant challenges. As discussed specifically on page 57, and mentioned repeatedly throughout this report, the lack of quality, timely data and adequate systems to capture, report and measure the right information across the organization is a fundamental challenge to implementing and sustaining all aspects of effective risk management (see Exhibit 6).⁴

Sixty-three percent of respondents cited the difficulties of aligning the sales-driven business unit mindset with a risk-focused culture where risk is everyone’s responsibility. Executives agree that risk must be owned by the whole organization, not just the risk function. Many are challenged with the task of training and motivating the business unit team to look beyond adherence to limits and consider the overarching risk implications of their activities. It’s not enough for the business unit simply to remain within the limits, for example. The business unit functions need to be responsible for the analysis of the risks embedded in their transactions. They must also be held accountable to raise issues as volumes or markets change and make certain that risk issues are referred up the chain.

³ The 2009 IIF report on *Reform in the Financial Services Industry: Strengthening Practices for a More Stable System* also lists the central elements of an effective risk culture.

⁴ The challenges firms face, as well as some recommendations on strengthening risk IT, are explored further in the 2011 IIF-McKinsey report on *Risk IT and Operations: Strengthening Capabilities*.

Suggested measurements to monitor culture

For those who are determined to measure culture, directors and executives offered an array of areas to consider as “the way you start”:

- ▶ Employee morale surveys (though these are only directional)
- ▶ Number of risk limits that are broken – especially without prior approval – and the causes
- ▶ Number of problems identified in internal audit reports, the manner in which they are addressed and pre-existing level of awareness of the problems (was management surprised by the findings, or were they already working on corrective action?)
- ▶ Percentage of self-reported control or risk problems
- ▶ The degree to which information is filtered as it is elevated up through the organization
- ▶ Degree to which people focus on information security
- ▶ Manner in which the company handles employees who have seriously violated company policies; equally important, the manner in which unintentional mistakes are reported and handled
- ▶ How risk and control issues – or adherence to ethical standards – are incorporated into the firm’s ongoing people performance, evaluation and compensation systems

** Progress on the Risk Governance Journey, but Key Challenges Remain, research study conducted by Ernst & Young and Tapestry Networks, January 2012.*

Executives cautioned that, as seen all too often before 2008, there is a tendency for a sales-driven culture to adopt a minimum compliance approach to risk, rather than embracing the broader risk culture now required. Several expressed concern that there is a danger of these cultures reappearing as business improves or as front desks are under pressure to increase revenues or volumes. As one CRO summed it up, “It’s not difficult now to get a conversation going on the importance of risk culture, because everybody looks outside the window and doesn’t see a very happy world. The challenge is, in good times, how do you convince people that a strong

culture and good risk management makes sense when every deal seems to be okay and performs okay, and all boats are rising.”

Almost half of respondents (43%) are struggling to enforce accountability, and 25% cited the complexity of aligning group risk parameters with parameters used at both the local and entity level. And of course, people are inherently resistant to change. Shifting the organizational mindset around risk represents a significant long-term change initiative that requires constant attention and vigilance.

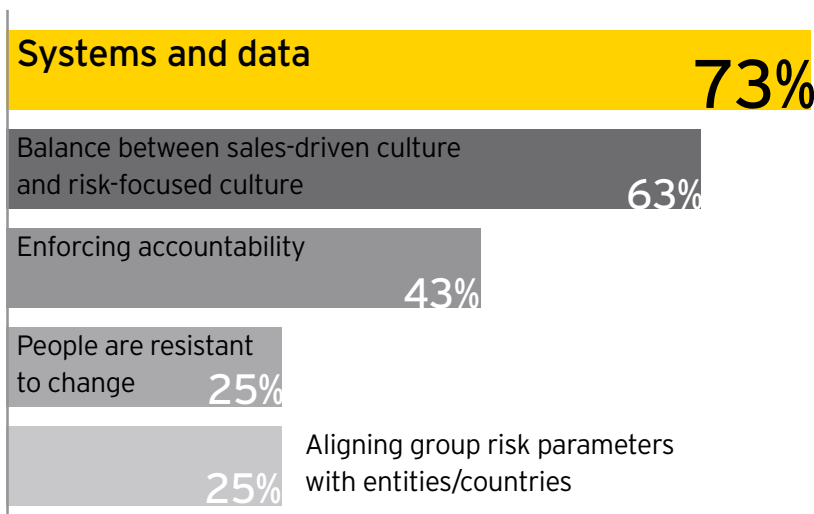


Exhibit 6

Top challenges to strengthening the risk culture

Risk appetite



Still a work in progress

Risk appetite – the amount and type of risk that a company is able and willing to accept in pursuit of its business objectives – has been an important area of focus for senior management teams over the past year. Risk appetite ranked in the top three areas of focus for boards and CROs. Post-crisis, there has been a good deal of work done to advance the industry thinking on approaches to and methodologies for risk appetite, and many firms reported they are working on the process within their organizations. However, while interest and commitment is high across the industry, risk appetite remains a work in progress for most of the 75 firms that participated in this year's study.

There remain differing views on the definition, implementation and use of risk appetite, and many are challenged as to how to embed the risk appetite throughout the business. For

some, risk appetite is a one-page high-level guidance system to measure what one executive called “inadvertent strategic drift.” Others have hundred-plus-page documents outlining in detail the limits for all types of risks across businesses and entities. But document size doesn't necessarily translate into strategic value and use. For the firms that are furthest along the path in the development process, risk appetite is increasingly viewed as a very powerful framework and foundation for strategic decision-making across the enterprise. As an executive from one such firm put it, “Risk appetite has become central to how we run the institution. It takes time for people to buy into, but once you have gone over that hump, it is a very powerful tool.”

All agree that developing and implementing risk appetite, as with culture, is a multiple-year project that is never really finished. Part of the challenge, according to some, is that there is still not a clear, generally accepted methodology for

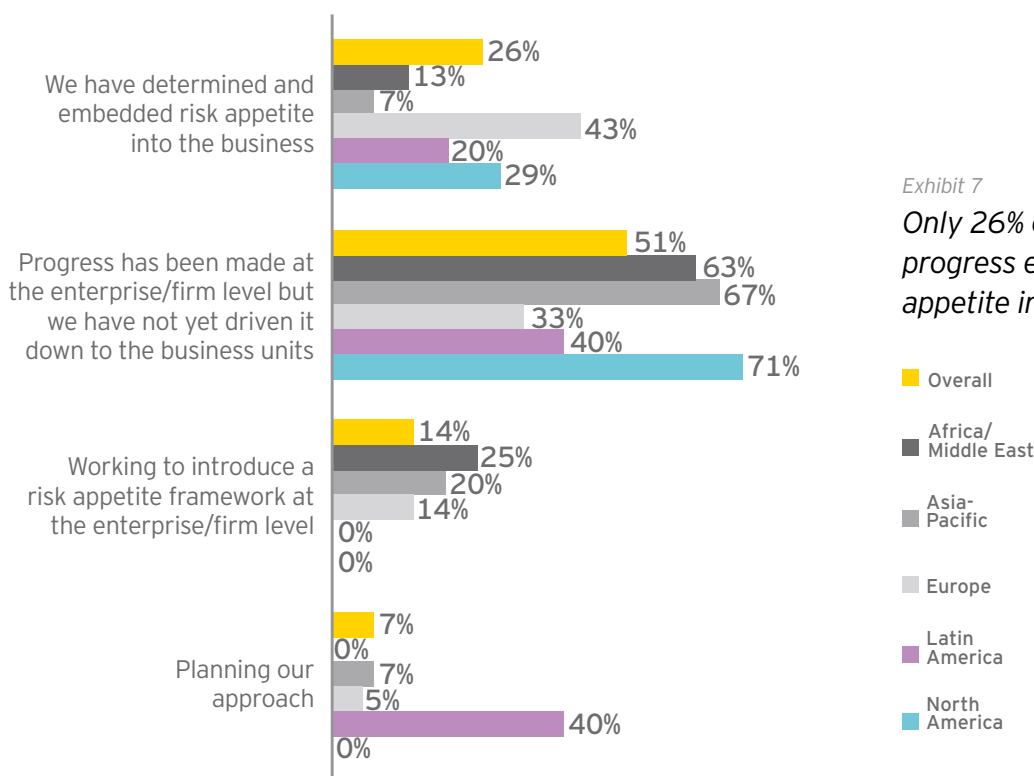
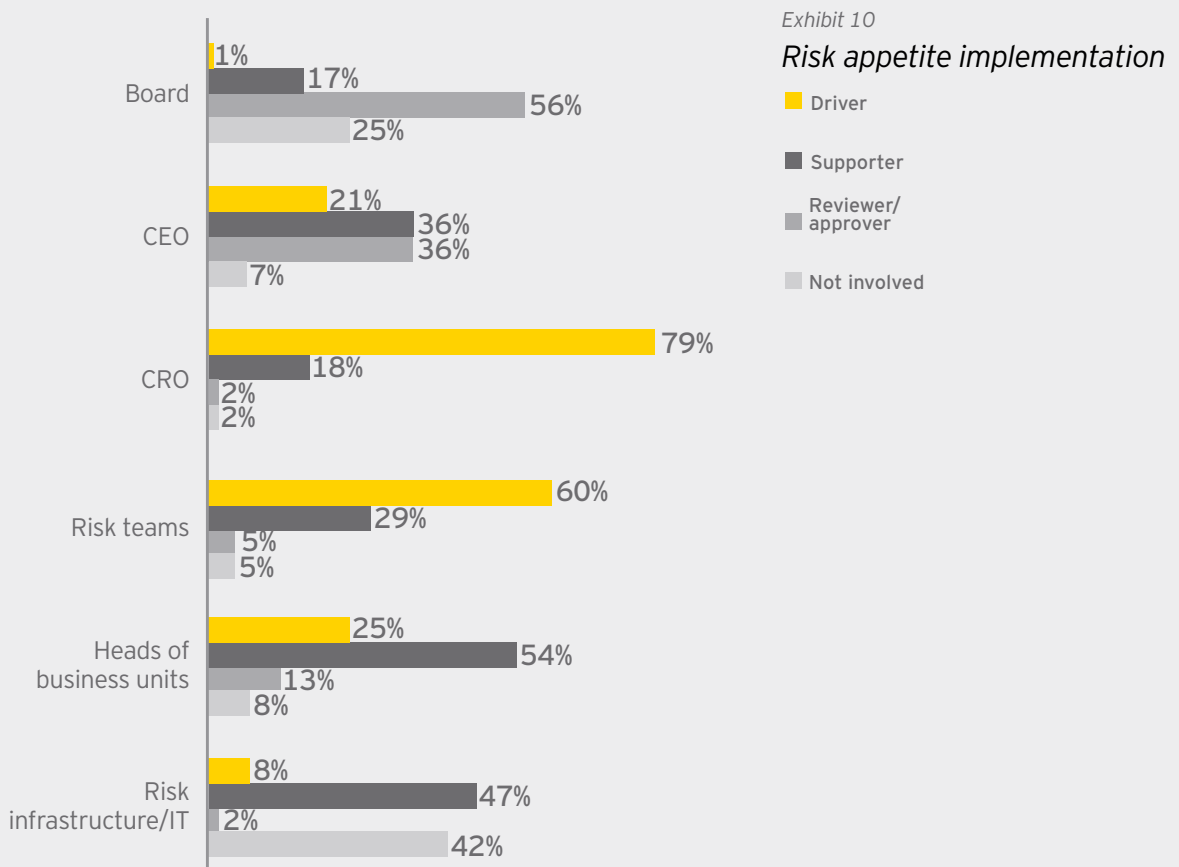
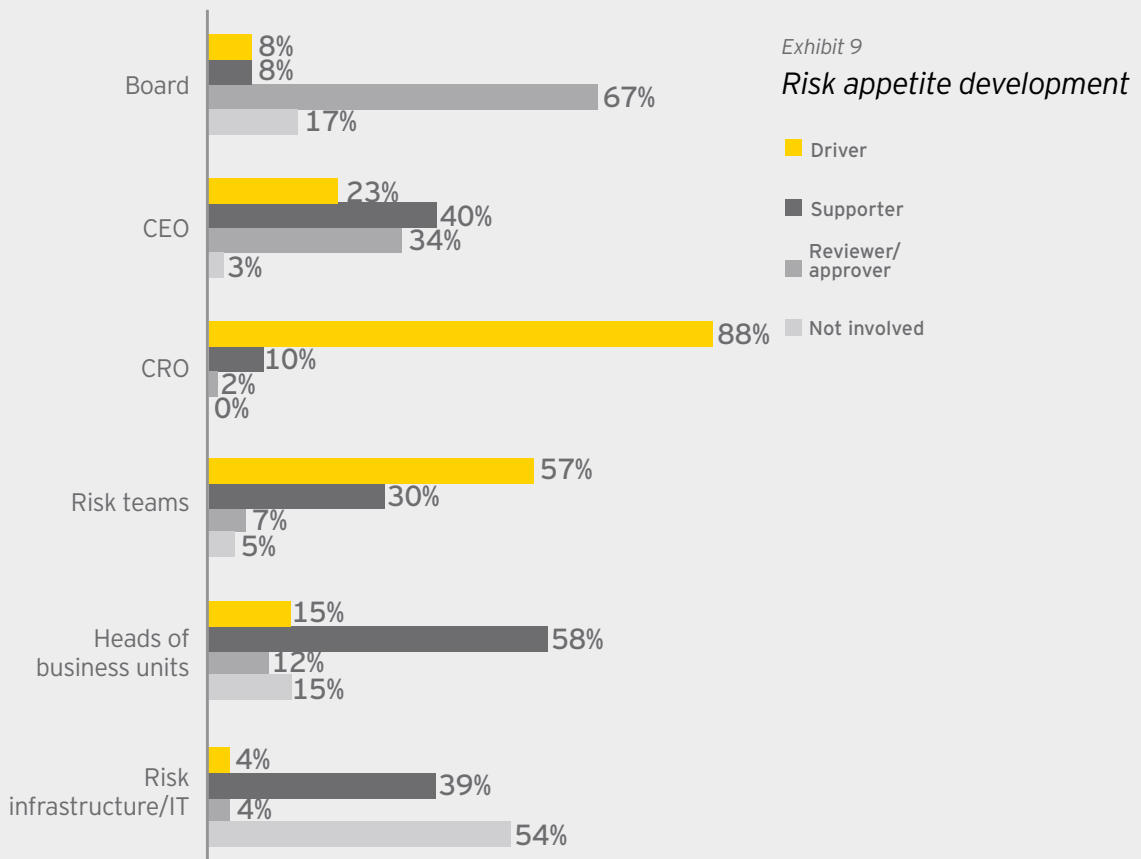
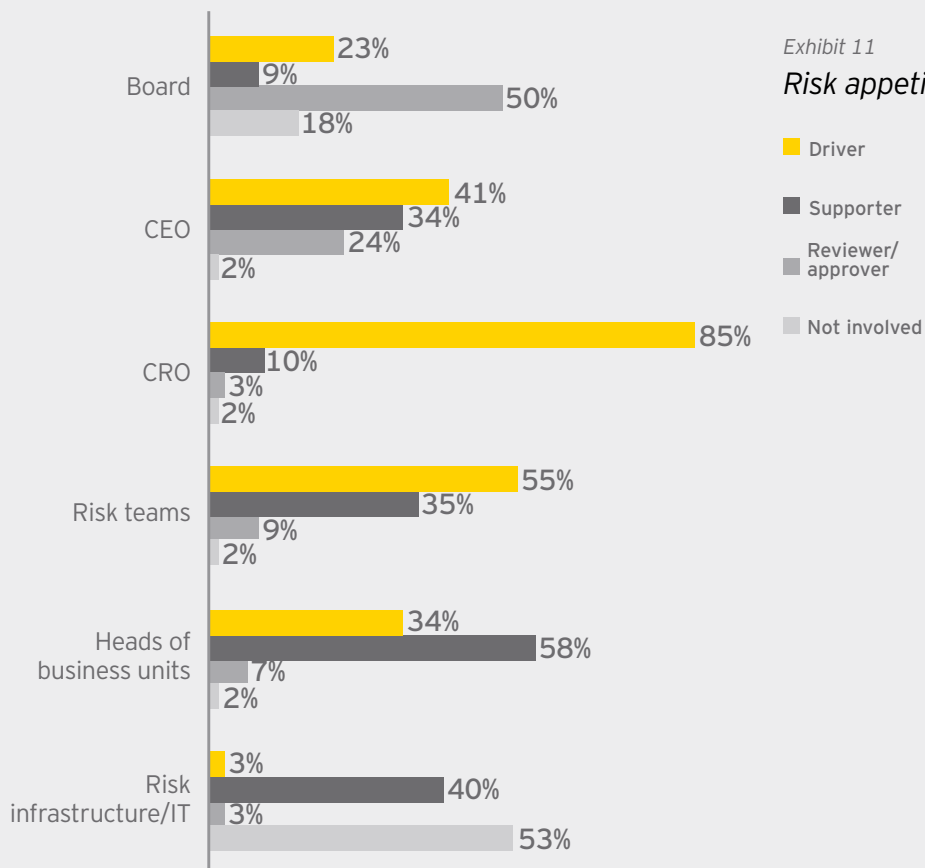


Exhibit 7
Only 26% overall report good progress embedding risk appetite into the business

Roles and responsibilities in the firmwide risk appetite process

CROs and risk teams are seen as the primary drivers of the risk appetite process from development to implementation and enforcement.





top-down and bottom-up effort of the senior team, including the board, CEO, CRO, risk teams and business unit leaders. All play important roles in the process. While the details of how each organization is progressing through the development and implementation stages vary, there is fairly consistent agreement on the roles and responsibilities of the key players in the process.

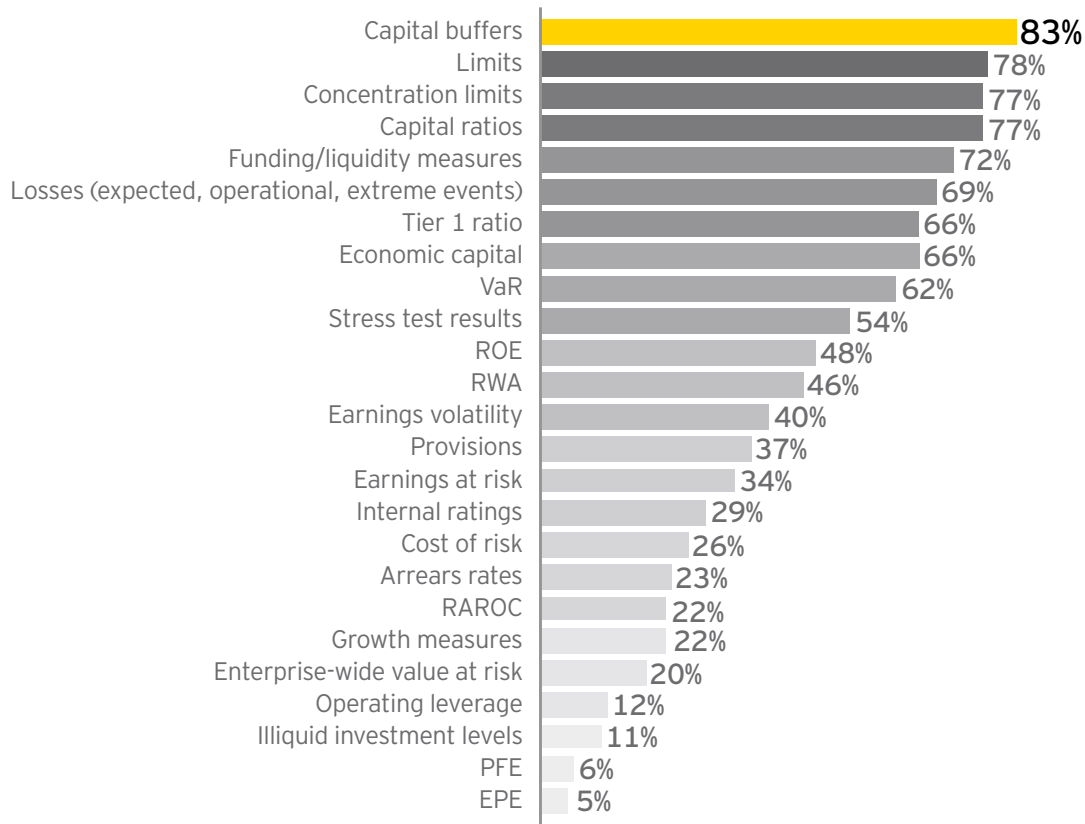
As depicted in the sidebar, “Roles and responsibilities in the firmwide risk appetite process” (Exhibits 9-11), the opinion of the executives surveyed is fairly unanimous that the CROs and their teams are the primary drivers of the risk appetite development, implementation and ongoing enforcement effort. The board of directors, who are unquestionably increasing their attention and involvement in risk appetite (see page 28 for further discussion), are positioned in the critical role of “reviewers and approvers” of the process from development through implementation. CEOs and the heads of business units are vital supporters and, to a lesser extent, drivers of the initial development and progression through the various stages. And approximately half of the interviewees indicated that the risk infrastructure and IT groups play a supporting role in their organizations.

One CRO described what appeared to be a fairly typical role for the risk function in the risk appetite process: “My job is to articulate and then propose the risk appetite statements to the board for their consideration, discussion and approval. Once the enterprise framework has been agreed to, the risk team works jointly with the business units along with the finance team to define the appropriate limits for each business consistent with the global view of risk and the general metrics established. I am responsible for monitoring all of the tactical aspects of adherence to the risk appetite and for ongoing reporting to the CEO and the board on progress and compliance.”

Many executives stressed the importance of having the buy-in and participation of the business unit leaders throughout the process, and most agreed that the business unit leaders must bear responsibility for applying and enforcing risk appetite within their business. As one executive emphasized, “The business leaders must believe in what is on the piece of paper, and be able to articulate to their teams why it’s on the piece of paper. Otherwise it doesn’t work.”

Exhibit 12

Top quantitative metrics for setting and monitoring risk appetite at the group level



- **Clarity on definition and metrics.** As discussed earlier in this section, definitions of risk appetite vary across the industry. Many executives emphasized the importance of clearly defining the organizational view of risk appetite – what it means, how it will be used and what the expectations are. As one CRO explained, “This sounds really basic, but you’ve really got to have clarity throughout the organization as to what risk appetite fundamentally means. Does it mean your limits? Does it mean your plan for any given year? Is it a through-the-cycle metric? Is it all of the above?”

An equally critical success factor is agreeing on the metrics that will be used to set and monitor the risk appetite. Over one quarter (27%) of interviewees listed “determining the right metrics” as one of their top challenges in the risk appetite effort (see Exhibit 8). Defining the organizational risk appetite is a quantitative and qualitative process that requires careful review of both external and internal factors. Exhibit 12 prioritizes the quantitative metrics that respondents are using to set and monitor risk appetite across the group. Capital buffers, limits, capital ratios and funding/liquidity

measures topped the list, followed by metrics on losses, which include operational and expected losses and loss in extreme events. There is evidence that the largest firms in the industry are moving toward some form of loss as a core metric to measure risk appetite.

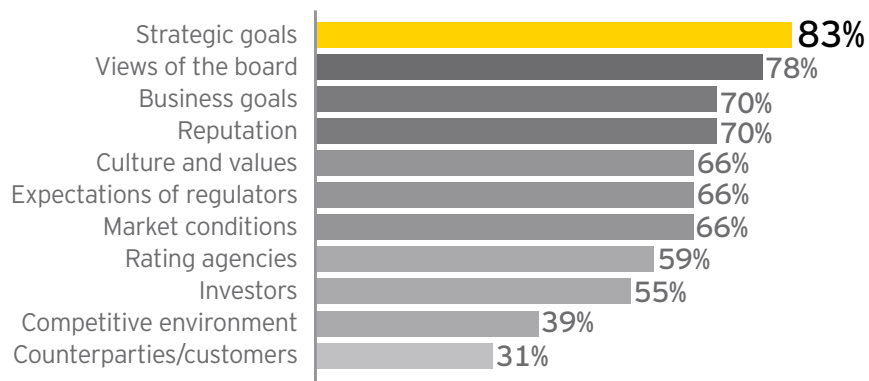
On the qualitative side, firms are striving to balance internal strategic business and cultural goals with stakeholders’ opinions and expectations (see Exhibit 13). Viewpoints of the board, regulatory authorities and rating agencies must be balanced with the business goals and objectives of investors, counterparties and customers. Organizational philosophy, culture and values set the tone for risk tolerances and must play a pivotal role in the decision-making.

While opinions vary on the optimum number of parameters that strike the right balance between the comprehensive and the comprehensible, most firms consider approximately 11 quantitative and 7 qualitative metrics at the board level, with increasing detail at the business and operational levels. However, there is wide disparity, particularly around quantitative metrics, with



Exhibit 13

Respondents consider several key qualitative issues in setting risk appetite



some firms including more than 20 metrics and others as few as 5. Several agree that too many metrics make it difficult to hold business units accountable and hamper the embedding process, and there is evidence that some of the larger firms in the industry are shifting to a smaller number of metrics to reduce complexity.

Fifty-five percent of interviewees admit that utilizing the risk appetite as a dynamic tool for managing risks, rather than just as another way to set limits or strengthen compliance, is one of their top challenges (see Exhibit 8). While limits and risk policies are important ways of delivering the risk appetite framework, they are only one aspect of the process. Several cautioned that it can be dangerous to get bogged down setting multitudes of limits that are not well understood or accepted by the businesses. One CRO commented, “You don’t want to create a system that will fall under its own weight. You have to be reasonably granular without being too granular. You’ve got to be able to go to the function level without trying to dictate it to individuals.” Forty-seven percent of interviewees say they are struggling to find the most effective way to express risk appetite for different risk types (see Exhibit 8). Some risk types, such as

credit and market risks, where there is abundant historical data, are relatively easy to quantify. But more qualitative risks, such as operational and reputational risk, are much more difficult to quantify. A few mentioned the challenge of establishing a common language across the organization, which they believe is necessary to successfully embed and enforce risk appetite.

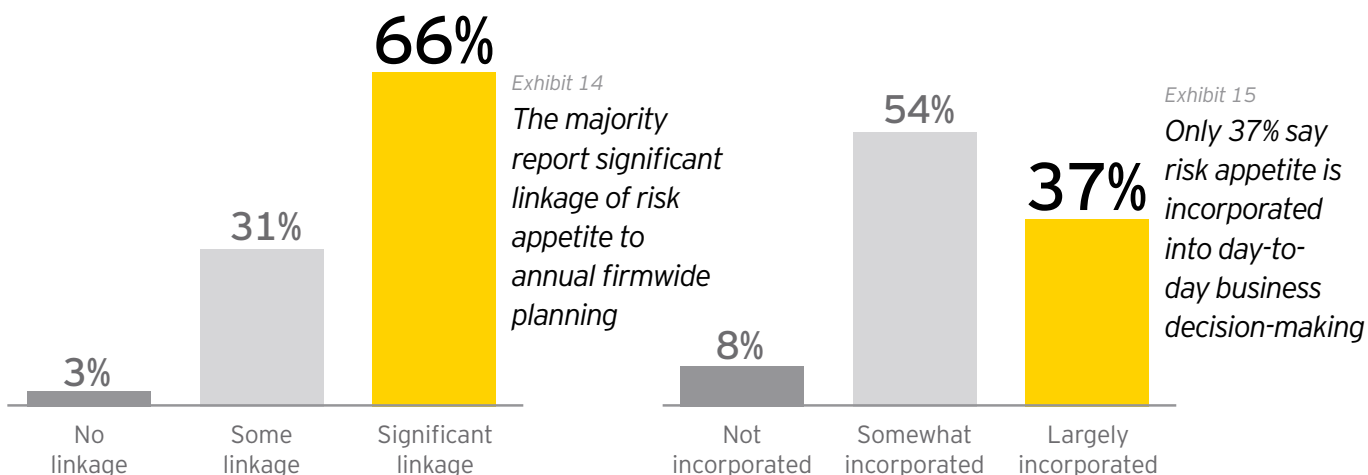
- ▶ **Link to business planning and drill it down into the organization.** Executives from those firms that report progress in incorporating risk appetite into the businesses warn that it is critical that risk appetite not be viewed as an independent senior team exercise unconnected to the strategic and business discussions of the firm. As one executive commented, “I think that one of the reasons why we have been successful so far in implementing risk appetite is because it is not a stand-alone parallel world alongside the business process, but an integral part of the business planning, follow-up and review process.” Many report progress at the enterprise level in incorporating risk appetite into the planning process, with 66% claiming significant linkage to the annual firmwide business planning process (see Exhibit 14).



However, only 37% indicate that risk appetite is largely incorporated into day-to-day business decision-making (see Exhibit 15). Drilling down to “where the rubber meets the road” remains an ongoing challenge for many firms. Taking a broad risk appetite framework and applying it to the day-to-day operations is difficult. As one CRO explained, “How do you take a document which is by definition general, and practically apply it to the derivative business or the trading or asset servicing businesses? It is not easy to do.”

Most agree that embedding the risk appetite requires attention to all of the activities addressed throughout this report: shifting the cultural mindset around risk; strengthening governance roles and responsibilities; adjusting performance requirements and compensation; and upgrading processes and systems to test, track, report and assess progress. The process for most is a long-term effort to develop and implement, and sustaining it over time is an ongoing program.

- **Monitor, measure, review.** Tracking status, reporting on progress, and regularly reviewing and adjusting the risk appetite framework were all discussed as important components of a successful program. As one CRO summed it up, “We need to make certain that when the board turns the steering wheel, the car is following.” Fifty-four percent of respondents report significant progress in their ability to track adherence to risk appetite, up from 37% in the IIF/EY 2011 report (see Exhibit 16). And as discussed on page 32, stress testing is an increasingly important tool for the senior team to monitor and manage adherence to risk parameters. Despite this progress, respondents cited lack of clarity around metrics, ill-defined methodologies for capturing and reporting information, poor data quality and inadequate systems as continued challenges to effective monitoring.



Governance roles and responsibilities

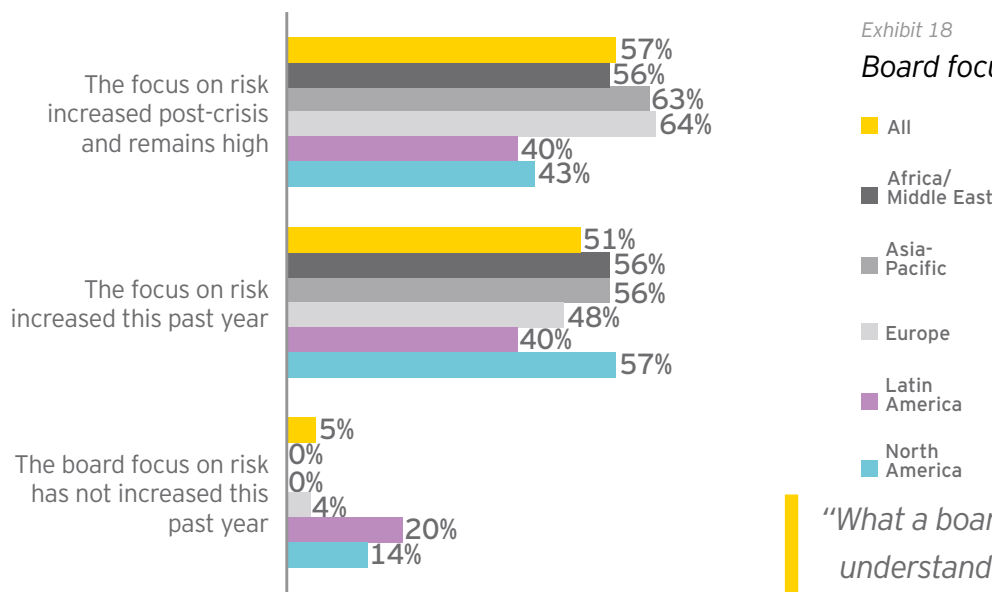
Boards increase focus on risk while CROs expand influence

The involvement of boards in risk management and oversight has increased significantly since the 2008 crisis and continues to grow. While 57% of respondents say the board increased its focus on risk post-crisis, over half (51%) of the respondents across all regions report that board focus on risk has increased in the past 12 months (see Exhibit 18). The majority stated that their boards are more actively engaged and involved in risk policy setting and governance, spending more focused, higher-quality time on risk issues. Many report changes to their boards since the crisis to upgrade the level of experience and skill on risk, banking and the regulatory environment (see Exhibit 19).

Not surprisingly, liquidity and risk appetite topped the list of areas of board focus, followed by capital allocation and stress testing (see Exhibit 20). As discussed on page 20 of this report, risk appetite is clearly a heightened area of focus for boards and senior management teams as they work to establish and embed risk appetite into their businesses and

incorporate it into day-to-day decisions. Seventy-four percent of interviewees listed risk appetite as the area where the board is most influential in their organization. However, over 50% also listed an impressive assortment of key areas where the board plays an influential role, including: liquidity, risk culture, compensation, reputational risk, risk compliance and capital allocation (see Exhibit 21).⁶

An overwhelming majority of respondents (87%) report that their firms have stand-alone, board-level risk committees. Of those firms with risk committees, 77% say there is some overlap in membership between the audit and risk committees (see Exhibits 22 and 23). The role and scope of responsibilities of the risk committee are still evolving and vary across firms. There is some divergence of opinion on the risk committee's and the board's roles in risk decisions. Some see the committee as having a role in setting risk policies, while others believe it's not the board's role to make decisions on risk. All agree that the committee is an important part of the firm's control network and provides valuable advice, challenge, oversight and support to the CRO and risk team.



“What a board member is asked to understand and do today is at a much more detailed level. The accountability of board members is much greater.”

⁶ Greater board involvement in risk was one of the recommendations made in the IIF report, *Final Report of the Committee on Market Best Practices*, July 2008.

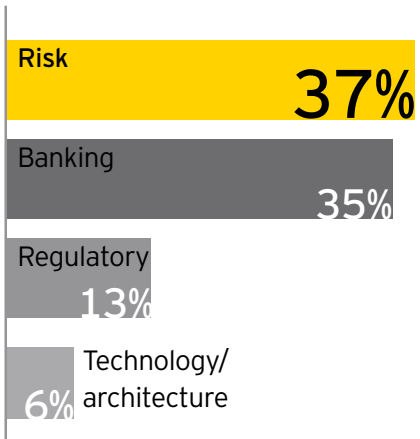


Exhibit 19
Expertise added to boards

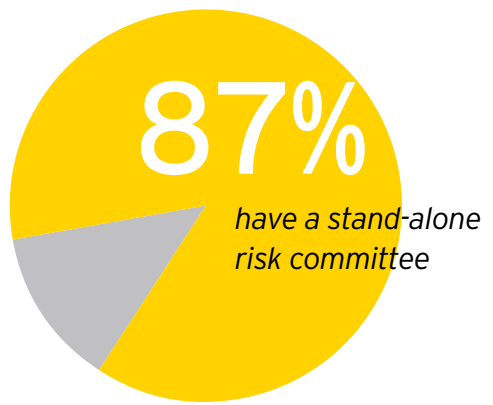
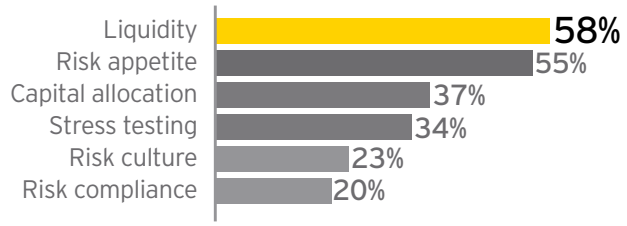


Exhibit 22: Status of risk committees

Exhibit 20
Boards' top areas of risk management focus



The majority report some overlap in membership between the risk and audit committees

Exhibit 21
Areas where board is most influential

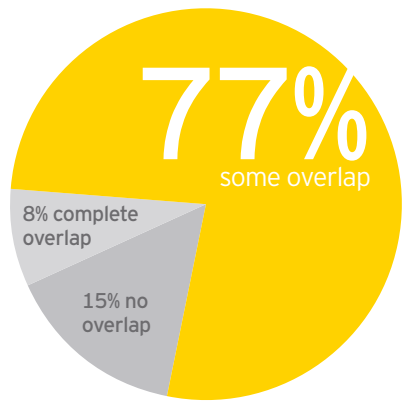
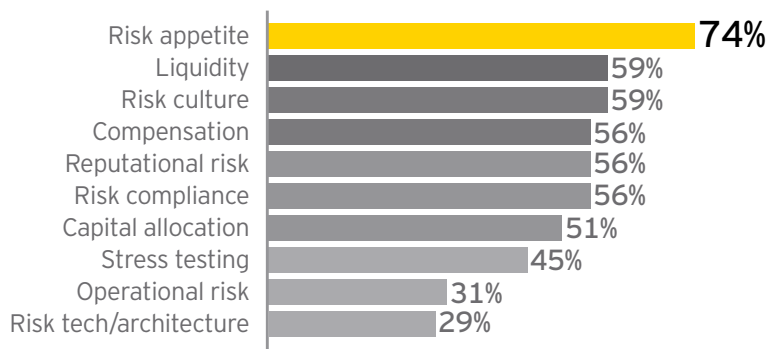


Exhibit 23: Common membership between risk and audit

The majority of CROs report directly to the CEO



Exhibit 24: CRO lines of reporting

Many firms have put programs in place to train and educate board members in key areas of responsibility. Virtually all have provided more focused information on risk issues; however, even after several years of progress, firms are still challenged to get the right amount of relevant and distilled information to directors.

Regulatory expectations have of course markedly impacted the board's involvement in the organization, and there is a belief that the burden on boards and risk committees is too high. As one executive commented, "What a board member is asked to do today, and understand today, and goes through today with the management team is at a much more detailed level. The accountability of board members is much greater." There is ever-increasing pressure for risk committees to approve risk limits and decisions, sometimes on matters that directors and executives view as management's role. Several respondents cautioned that while shifts in the regulatory environment have and will continue to necessitate changes in the roles of management and boards, the traditional delineation between these two groups must be preserved. Said one respondent, "In extreme cases, you could create a shadow management team within the board, which would be a disaster."

Chief Risk Officers

Unquestionably, the role of the CRO has changed significantly since the crisis. In Ernst & Young's 2008 report on risk governance that was released in the heat of the crisis, the CRO's role was described as, "framing risk agendas for senior management and acting as a sounding board for front-line risk professionals." While this may have underplayed the role for some, most CROs at the time did not have an end-to-end involvement in risk decisions. Today, CROs, together with their skilled risk teams, are generally involved throughout the chain of strategic decision-making. The CRO's influence is evidenced by, among other things, reporting lines. Fifty-eight percent of those surveyed say the CROs at their firms report to the CEO, and close to one quarter (24%) have dual reporting to the CEO and the risk committee (see Exhibit 24). Ninety percent report that CROs have direct access to the board or risk committee, and 89% say that CROs meet regularly with the risk committee of the board (see Exhibit 25). The majority (78%) of business unit risk

Exhibit 25
CROs' access to board

CRO has direct access to the board or risk committee out of the presence of the CEO and other senior executives **90%**

CRO meets regularly with the risk committee of the board **89%**

officers now report to group risk, which is yet another significant shift post-crisis (see Exhibit 26).⁷

When asked to discuss their areas of responsibility and committee participation, most CROs described wide-ranging responsibilities and involvement in diverse areas of the business, including strategy, product development, acquisitions and compensation. Credit risk, liquidity risk and risk appetite topped the list of risk issues requiring the most attention; however, close to 15 other risk-related issues made the "top five list" (see Exhibit 27). Respondents offered a variety of insights when asked to describe the characteristics of an effective risk function. Many agreed that it was vital to have support from both the CEO and the board for risk initiatives. As one CRO explained, "You have to have a very clear mandate, so that when you talk to business management, what you say carries weight." Another agreed: "Getting respect from regulators, internal constituents and from business is key."

The majority report increases in both group (57%) and business unit (48%) headcount over the past 12 months, even as staffing levels have been reduced in other areas. However, predictions for headcount increases for the next 12 months appear to have leveled off and some believe they will actually decline (see Exhibits 28-31). One explanation for this is that risk functions are becoming more effective and efficient as CROs and their teams de-layer and streamline processes. As more effective systems are put in place to support risk management, many are hopeful that headcounts will continue to remain steady.

The majority of business unit risk officers report to group risk

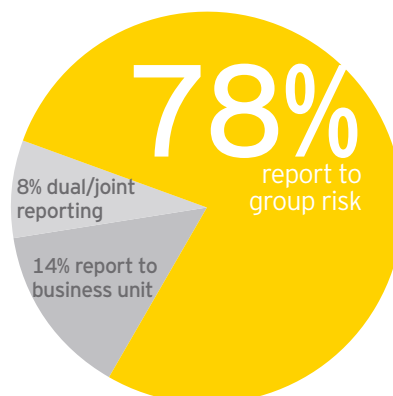
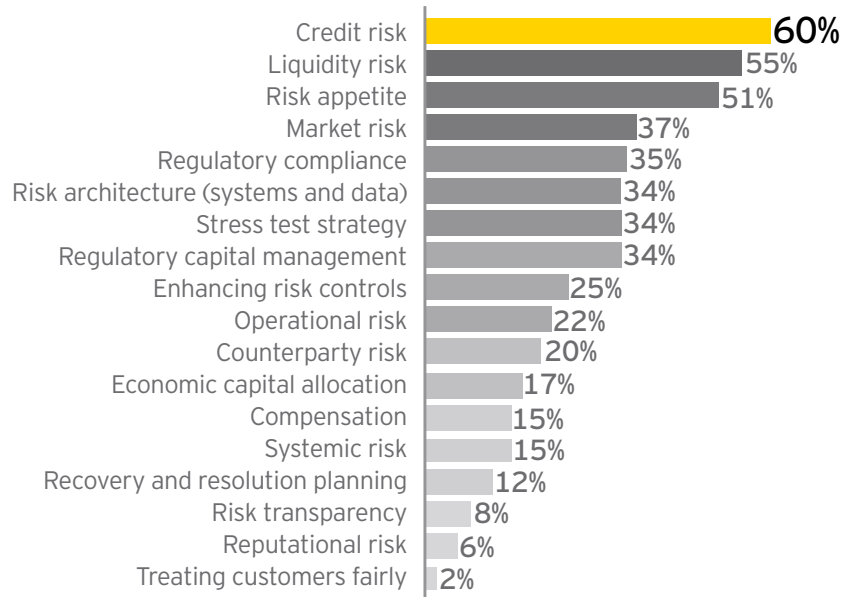


Exhibit 26: BU lines of reporting

⁷ A reporting line to the CEO or board was also one of the recommendations in the IIF report, *Final Report of the Committee on Market Best Practices*, July 2008.

Exhibit 27

Top issues requiring most CRO attention



The majority report group risk size increased in last 12 months

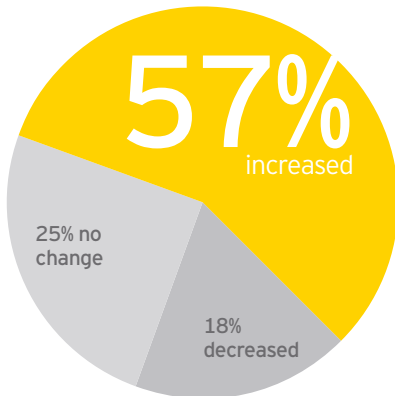


Exhibit 28: Group risk function size last 12 months

Almost half report an increase in BU risk size in last 12 months

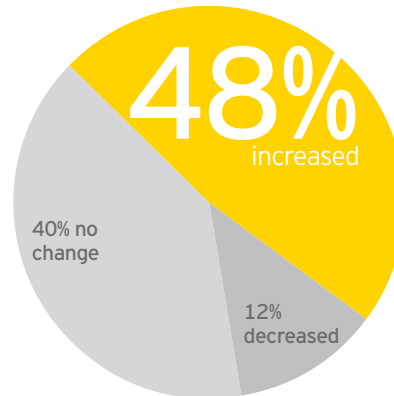


Exhibit 29: BU risk function size last 12 months

Predictions on group risk size in next 12 months vary

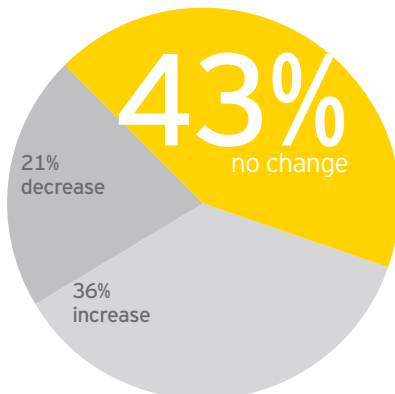


Exhibit 30: Group risk function size next 12 months

Predictions on BU risk size in next 12 months vary

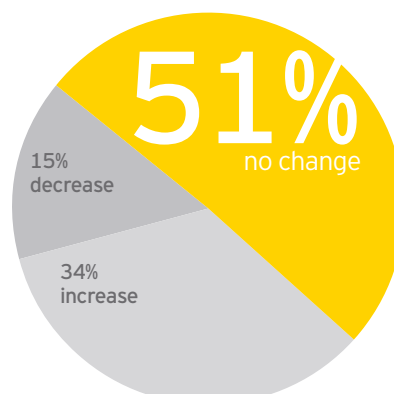


Exhibit 31: BU risk function size next 12 months

Stress testing



Firms are increasingly using stress testing as a strategic management tool

The evolving regulatory and market environment has heightened managements' attention on strengthening internal stress-testing strategies, systems and procedures. Seventy-five percent of respondents report they have created and implemented new stress-testing methodologies in the past 12 months (see Exhibit 32). Most of the interviewees agree that stress testing has become a very valuable tool to help steer the business through the volatile global and economic landscape. For some of the participating firms, stress testing for internal management needs has outpaced regulatory demands. As one executive explained, "Our internal stress tests go way beyond what is required by the regulators."

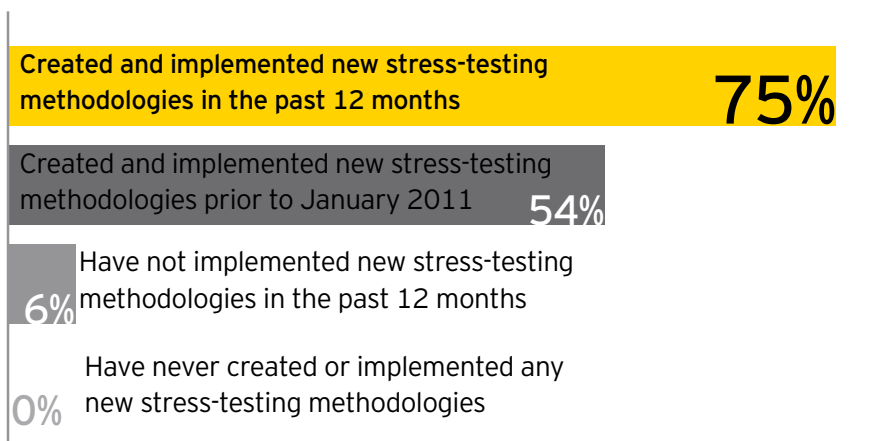


Exhibit 32

Firms continue to implement new stress tests

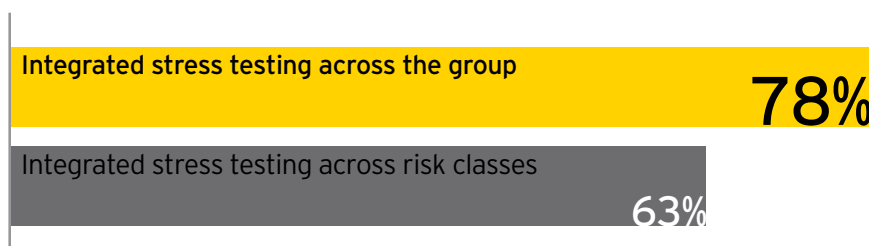


Exhibit 33

Stress testing is being integrated across the organization



Changes to focus and methodologies

Seventy-eight percent of respondents emphasized they are working to integrate internal stress testing at the group level of the organization (see Exhibit 33). Several discussed initiatives to move beyond “siloeed stress testing” to develop enterprise-wide integrated models that run stress scenarios across all risk classes on a globally consistent basis. As one CRO explained, “I think the single biggest improvement we have made is to develop enterprise-wide models that apply similar scenarios across the retail and wholesale credit book, the trading room and counterparty and credit risk simultaneously and consistently.” The goal, according to another executive, is to take stress testing from an ad hoc activity to something that is “institutionalized and productionalized.”

While credit risk has been a traditional area of focus for stress testing, respondents say they have enhanced stress testing

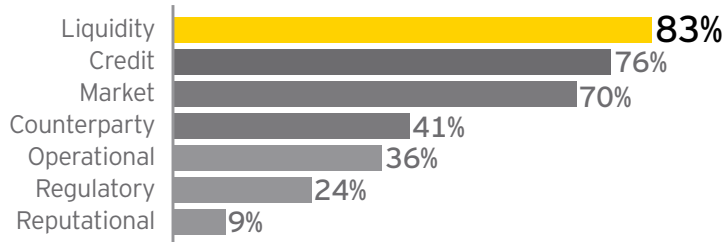
across a number of key risk areas over the past 12 months. Not surprisingly, liquidity risk has been the top area of increased focus for 83% of respondents, followed by credit, market, counterparty and operational risk (see Exhibit 34).

Executives use a number of methods for running internal stress testing and calculating outcomes. Seventy-six percent set scenarios across countries and business units and calculate the effect on each portfolio and business line; 55% stress internal ratings-based (IRB) models for credit portfolios; 48% stress IRB models for sub-portfolios; and 29% run the economic capital model to a higher confidence level (see Exhibit 35).

Scenario planning has become an increasingly important tool to help boards and the senior management teams consider and assess the full range of market factors and macroeconomic events that could potentially influence revenue streams and stability. Executives agree that effective escalation and use of

Exhibit 34

Risk areas of increased focus over the past 12 months



Setting the scenario across countries and business units and calculating the effect for each portfolio/business line **76%**

Stressing IRB models for credit portfolios as a whole **55%**

Stressing IRB models for sub-portfolios **48%**

Running the economic capital model to a higher confidence level **29%**

Exhibit 35

Methods for running internal stress testing and calculating outcomes

Liquidity management



A top area of focus for senior management

Liquidity management is unquestionably at the top of senior management agendas for most of the organizations that participated in this year's study. As discussed earlier in the report, liquidity topped the list of areas of highest focus for boards and ranked a close second to credit risk as issues requiring the most attention from CROs over the past 12 months. This reflects the response to pressures from the crisis and the continuing funding pressures. Another theme was the complexity and cost of implementing the new Basel III requirements – the liquidity coverage ratio (LCR), net stable funding ratio (NSFR) and new liquidity reporting.

Interviewees described a number of initiatives under way to enhance liquidity governance, policies, processes and systems. Most of the insurance companies that participated in the study acknowledged that, while they are not subject to Basel III requirements, they are nonetheless working to strengthen their liquidity management practices – reviewing liquidity risk

tolerances and buffers and incorporating more rigorous stress testing and scenario analysis into business planning.

The survey responses highlight the changes to liquidity management post-crisis. The majority (89%) of executives report that their asset and liability committee (ALCO) is responsible for management and monitoring of liquidity risk (see Exhibit 43). It was clear from our discussions that board risk committees together with the risk function are increasingly responsible for policy, management and oversight of liquidity risk. Several firms report the formation of liquidity risk management groups and dedicated liquidity risk management functions.

There were some heated discussions during interviews about the added burden on boards and risk committees under the new regulations. As one CRO commented, "We have counted about 170 new obligations and issues for the board and risk committees to opine about liquidity. By some estimates, some of our independent directors would have to literally be here two days a week, and the head of the risk committee would almost become a full-time employee."

Exhibit 43

ALCOs are primarily responsible for liquidity risk

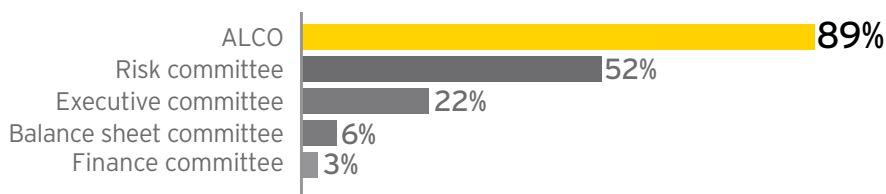
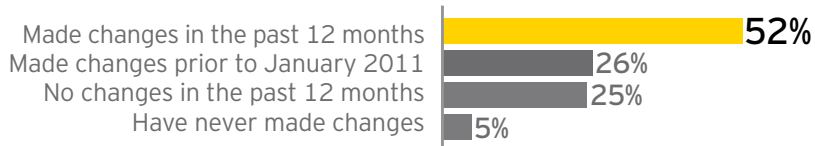


Exhibit 44

Over half have made changes to counterparty/customer liquidity charging structures in the past 12 months





Many firms reported they have instituted a more stringent liquidity-charging structure both externally with counterparties and customers and internally with businesses. Fifty-two percent have made changes to charges to counterparties and customers in the past 12 months, primarily focused on increasing charges on lines of credit and lines drawn – a particular focal point of the Basel III liquidity framework (see Exhibits 44 and 45).

Many firms have introduced more rigorous internal funds transfer pricing (FTP) approaches to better allocate liquidity costs to products and business units. Forty-seven percent of respondents overall, particularly in Europe and North America, say they have introduced a new approach to FTP (see Exhibit 46).

Executives admit that their pre-crisis pricing practices – where businesses were typically charged either the average or historic cost of funds – did not accurately reflect the unique liquidity risk posed by different businesses. For example, a corporate lending business with large committed lines might, in some cases, have only been charged on the drawn loans and not on the liquidity risk of having large quantities of committed lines drawn down. Pricing practices have already been changed in many firms and will be subject to further evolution as the Basel III liquidity regime becomes fully implemented. Almost half of participants (49%) report they are now including the cost of the liquidity buffer in their internal pricing, which means that businesses will be charged up front for generating risks that contribute to the buffer (see Exhibit 47).

Exhibit 45
The focus of specific changes to counterparty/customer charges varies

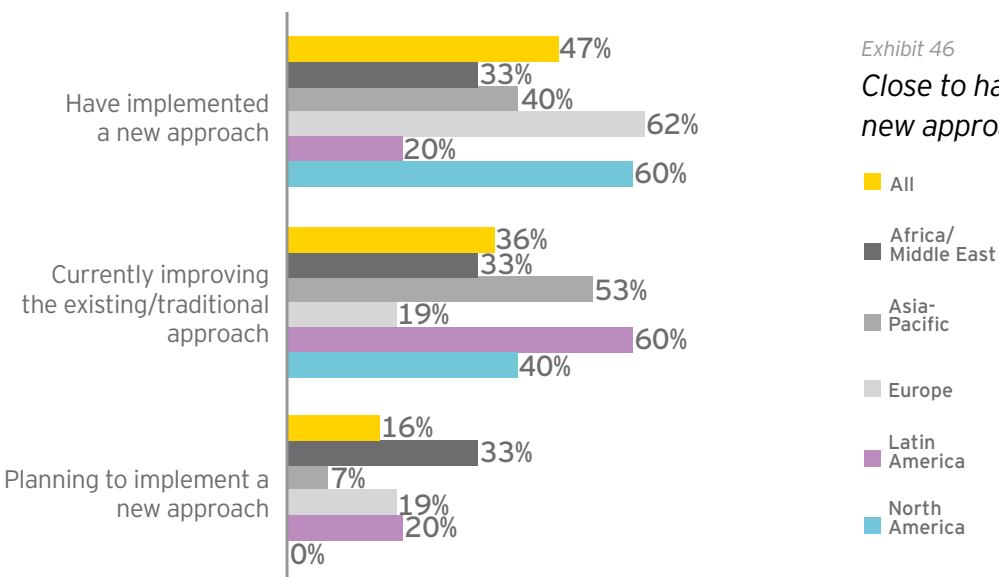
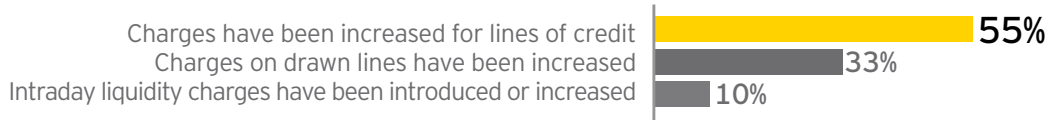


Exhibit 46
Close to half have introduced new approaches to FTP

Exhibit 47

The basis of FTP approach varies

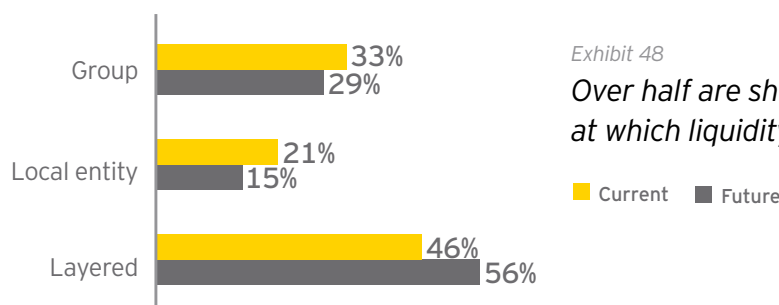
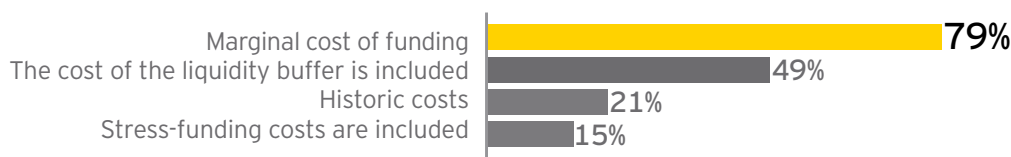


Exhibit 48

Over half are shifting the level at which liquidity is managed

Most agree that the repricing process has had a positive impact on the units, raising awareness of liquidity risk and its importance to both their business and the organization overall, clarifying responsibility, incenting accountability and contributing to improved control of liquidity risk.

While a number of executives think stress-funding cost is an important component in their FTP analysis, only 15% report that this measure is currently included in their approach.⁹ The majority (79%) use the marginal cost of funding as the primary basis of their FTP approach (see Exhibit 47).

Many executives described initiatives to provide more transparent, frequent and comprehensive reporting on liquidity positions for the management team, CRO and risk teams, treasury functions and funding desks. Stress testing is considered a critical tool to manage liquidity in the new Basel regime and several report they are strengthening their processes to incorporate more sophisticated modeling techniques to better understand and reflect market volatility and comply with regulatory demands. A number of firms are planning to shift the level at which they manage liquidity risk across the firm, with 56% reporting they are working to introduce a more layered approach across the group and entities (see Exhibit 48).

Of course, all of these initiatives require sophisticated systems and quality data and most firms surveyed described considerable investments in data improvements and system upgrades. One firm, for example, has launched a dedicated groupwide liquidity risk data project to meet regulatory and internal liquidity requirements on a daily basis. As the CRO described the initiative, "In order to have a minute-by-minute view, or at least a day-to-day view of cash flows at a fairly detailed level to manage liquidity decisions, the investment to upgrade has to be significant. The systems we have in place

are not adequate for what we need today. And as a result, we are spending \$50 million on system improvements in corporate treasury and risk management alone."

Experiences and challenges to implementing Basel III and LCR-style requirements

Some firms have had experience implementing LCR-type requirements in local jurisdictions that have already moved to new-style requirements – for example, the UK (FSA and ILAA liquidity reporting); the United States (Basel Sound Principles and 4-G reporting); Canada (Basel Sound Principles and shadow LCR); and in other home countries as appropriate. As shown in Exhibit 49, the UK FSA implemented first, and firms required to comply in the UK are furthest along in implementing the new-style regulations, with 71% reporting they have completed the process. In contrast, the majority of firms required to comply with regulations in the US, Canada or other home countries say they are under way or in the planning stage reflecting later timelines.

While it is too early for firms to know what the cost of implementing the Basel III liquidity rules will be, it may be useful to look at the cost of complying with similar

"The systems we have in place are not adequate for what we need today. We are spending \$50 million on system improvements in corporate treasury and risk management alone."

⁹ Stress-funding costs take into consideration the possible future cost if the market gets extremely tight or the bank itself is put under pressure.

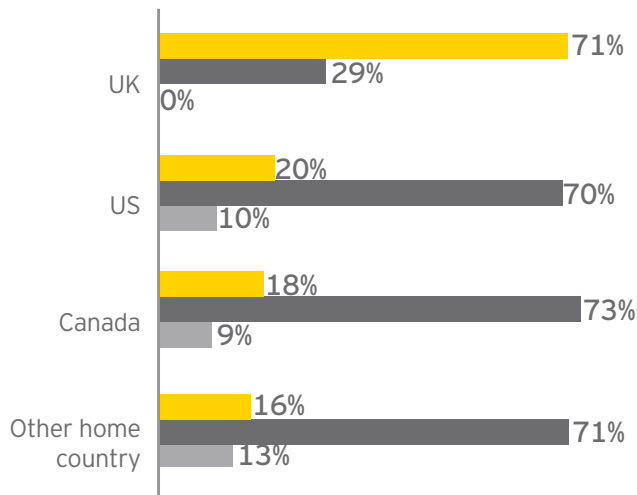


Exhibit 49

UK firms are furthest along in implementing LCR-style requirements

Complete Under way Planned

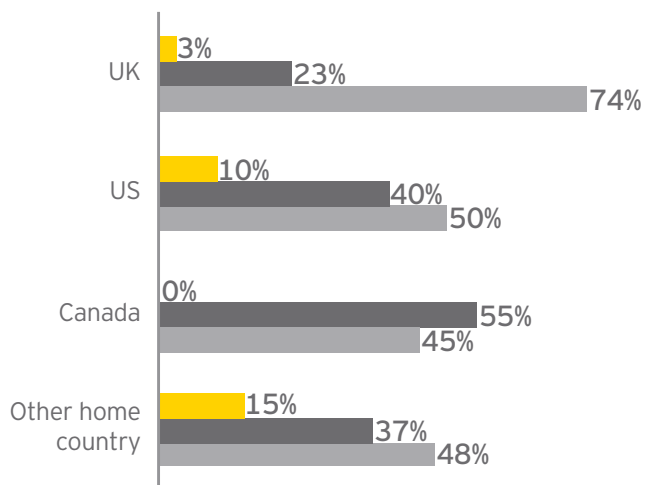


Exhibit 50

Time to implement LCR-style requirements

More than 3 years 2-3 years Less than 2 years

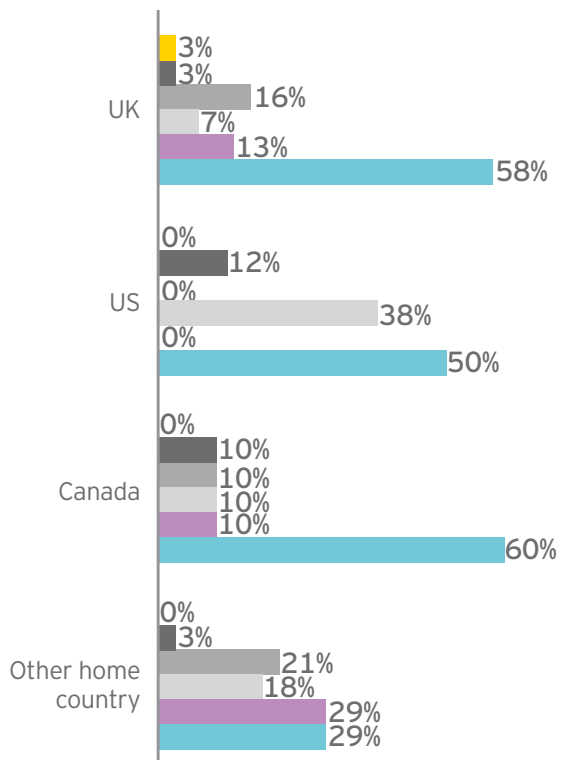
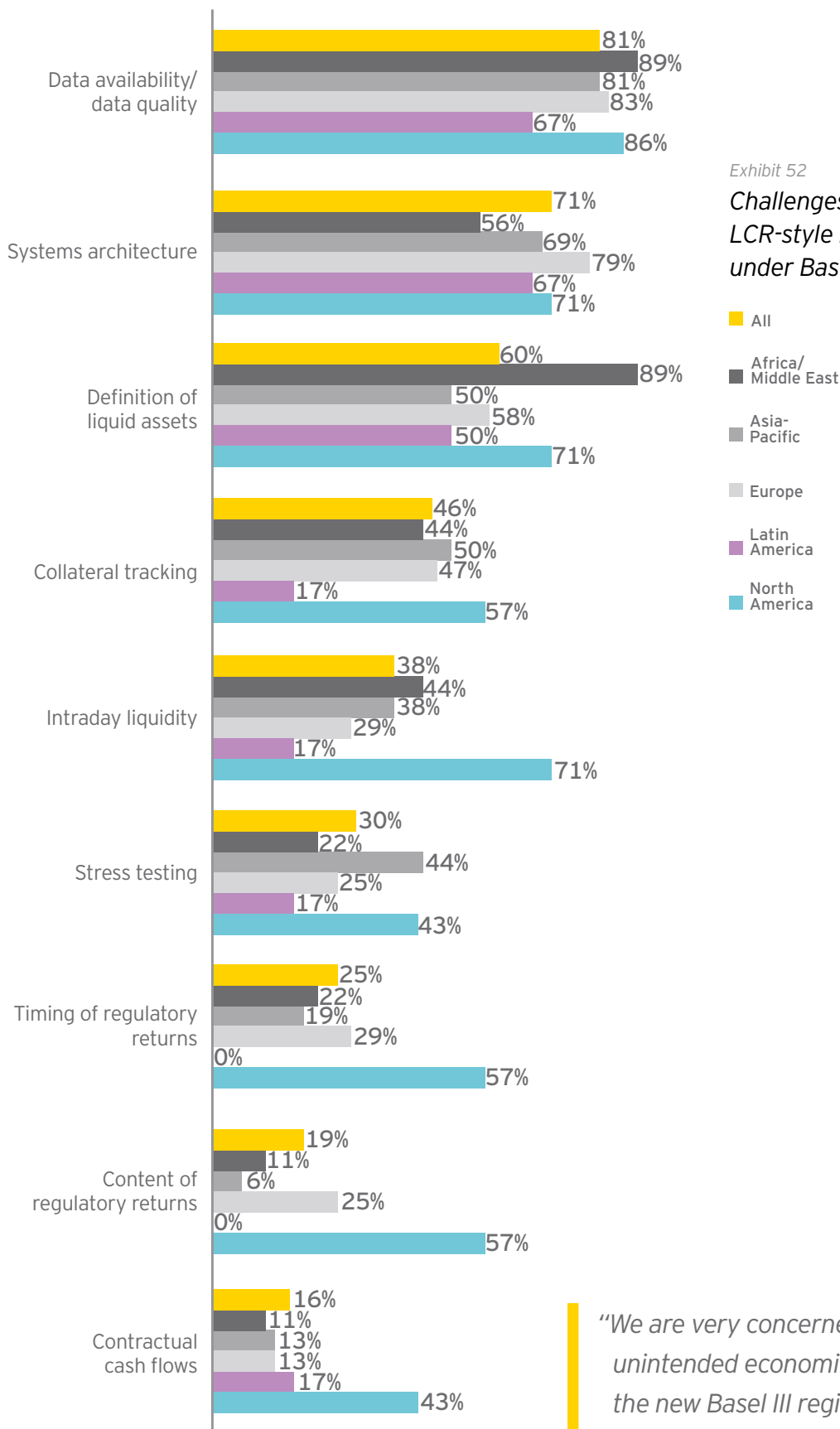


Exhibit 51

Cost of implementing LCR-style requirements

Above US\$100m
US\$51-US\$100m
US\$21-US\$50m
US\$6m-US\$20m
US\$2m-US\$5m
Up to US\$2m



“We are very concerned about the many unintended economic consequences of the new Basel III regime.”



requirements in the UK and the US. Seventy-four percent of firms complying in the UK reported it took less than two years to implement the FSA regulation, and the majority (58%) indicated the total cost to complete was less than US\$2 million (see Exhibits 50 and 51). In contrast, firms required to comply in the US, Canada or other home countries anticipate longer time horizons and slightly higher costs to implement.

Overwhelmingly, respondents agreed that data availability and quality (81%) and systems (71%) are the top challenges to complying with the new liquidity requirements (see Exhibit 52). Current systems are not designed for the new calculations and regulatory returns, and everyone anticipates an enormous expenditure to make the necessary changes.¹⁰ One of the problems, according to some, is that the data used in the finance system is net, and while the data in treasury has behavioral components, neither can supply the contractual flow data and estimates needed by the new regulations. One interviewee, for example, discussed the lack of granular data on liabilities. As he explained, "We have always focused on assets. According to the new rules, you can claim that your liabilities are more sticky if they are with clients that have operating accounts, and there is no variable in our system that says operational relationship: yes/no." Another executive in Asia discussed the challenges of creating the appropriate scenarios to estimate runoffs and roll-downs in the event of major withdrawals from a bank-specific crisis when they have never actually experienced such a crisis in their organization.

Other challenges cited include intraday collateral and liquidity tracking, aggregation of data across groups, stress testing, and the timing and content of regulatory returns.

Sixty percent of respondents listed the definition of liquid assets as one of their top challenges to implementing Basel III. There was a good deal of discussion and controversy on the composition and potential impact of the liquidity pool, which some say is unrealistic and subject to onerous and unsupported assumptions. As one CRO commented, "We've got a serious disconnect between regulatory treatment of assets for liquidity purposes and the actual liquidity characteristics of what's on our balance sheet." So far, the rules have called for a high proportion of the pool to be in government bonds, which many pointed out have proved to be either volatile and risky, particularly in the European Union, or in scarce supply in more stable countries with high-rated bonds. Many of the respondents called for a re-evaluation and broadening of the range of eligible assets that can be included in the pool.

The continued uncertainty about where the rules will ultimately land; the competitive impact of uneven implementation of Basel III across regions (including significant goldplating of Basel III norms and anticipation of Basel timetables in some cases); and the implications of embarking on long-term significant transformation initiatives in what one executive called "an overstressed and very volatile universe" are of major concern to the respondents.

Summary of liquidity management changes

- ▶ Increasing focus on reporting, stress testing and data quality
- ▶ Dramatically improving automation, stress testing and scenario analysis around liquidity
- ▶ Creating a global single-point liquidity management
- ▶ Implementing a dedicated liquidity risk management function
- ▶ Building a dedicated liquidity risk data project to meet regulatory and liquidity risk requirements on a daily basis
- ▶ Allocating liquidity costs to products and business units (funds transfer pricing)
- ▶ Refining liquidity risk policy
- ▶ Updating contingency plan
- ▶ Introducing new measures and matrices on calibrating and following up on liquidity risk positions
- ▶ Chartering liquidity risk management group

¹⁰ The challenges firms face, and some recommendations on improving risk IT, are explored more in the 2011 IIF report, *Risk IT and Operations: Strengthening Capabilities*.

Capital management



New regulations are driving strategic assessments of the business

The risks that emerged during the crisis, and the still-evolving new regulatory reality are driving senior management to strategically review their capital management priorities across geographies, political boundaries, legal entities and business lines. Seventy-seven percent of respondents report they have either completed or are under way with in-depth reviews to identify and assess the risks taken across business units, and 71% have done the same across entities (see Exhibit 53). As one CRO described their very thorough and systematic process, "We are assessing actual risks by business, by geography, by product, and all the way down to individual customers and facilities." As a result of these firmwide reviews and assessments, over half of the respondents (57%) say they have already changed their approaches to allocating capital across business units to more accurately reflect the risks taken throughout the enterprise (see Exhibit 54).

According to executives, there have been several key drivers of decisions to reallocate capital. Sixty-one percent of respondents listed aligning economic capital with present and future regulatory requirements as the primary driver for changing their approach to capital allocation (see Exhibit 55). Many executives discussed the challenges to effective capital planning and management given the widening gap between internal measures of how much capital is needed and regulatory requirements. Particularly for European and US banks, regulatory capital is now substantially higher

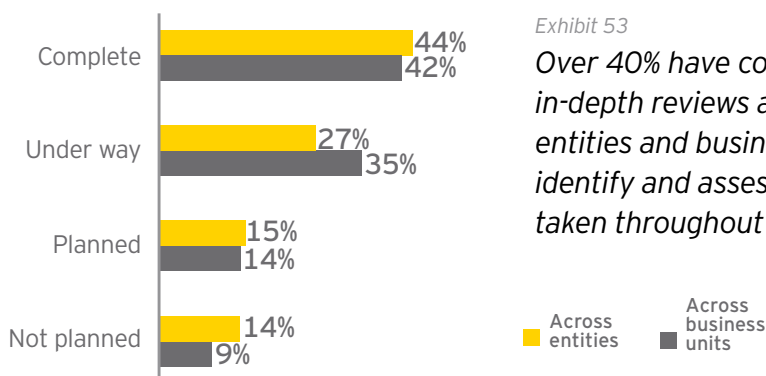


Exhibit 53

Over 40% have completed in-depth reviews across both entities and business units to identify and assess the risks taken throughout the enterprise



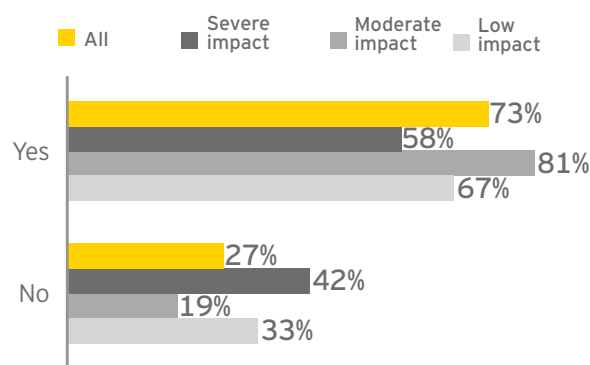
Respondents agree that the complexities of managing capital under Basel III are significant, and many discussed initiatives under way in their organizations to strengthen capital management to adhere to the more stringent regulatory requirements. Seventy-three percent of respondents believe they have the right tools in place to manage capital and business planning under Basel III; however, 42% of firms that were severely impacted by the crisis are not yet confident they are positioned to manage the potential impact of the new rules, which are not yet fully implemented (see Exhibit 56).

Several discussed the complexities of managing the business with multiple capital buffers, such as the capital conservation buffer, the countercyclical buffer and surcharges for systemically important financial institutions introduced under the new regulations. And some discussed the importance and challenges of strategically carrying out a “three-way optimization” of the business across capital, liquidity and leverage.

The focus on legal entities and geographies has increased for the majority of firms (87%) across regions. Seventy-eight percent report they are working to simplify and optimize legal entity structures to streamline complexities and identify trapped capital across geographies (see Exhibits 57 and 58). The question of branches vs. subsidiaries was discussed by several executives who are in the process of assessing, “branch by branch and subsidiary by subsidiary,” the trade-offs between efficiency and financial stability for each model. As one CRO summed it up, “There is a lot more pressure to subsidiarize entities, which obviously have capital implications, so we have a lot of work going on to determine the right legal entity structure for our organization.” To an important extent, this focus reflects the intersection of Basel III requirements with the recovery and resolution planning that firms are now required to undertake, the contours of which are still unclear as firms and supervisors are new to the process.

Exhibit 56

The majority believe they have the right tools to manage capital and business planning under Basel III



Impact of Basel III



Regulatory requirements are driving fundamental changes to the business

There was much discussion and speculation on the ultimate impact of the new regulations unfolding globally under Basel III. The new regulations, combined with the ongoing complications of the European debt crisis, and the continued market, macroeconomic and geopolitical volatility and instability, are creating a very uncertain time for the banking industry. Boards and senior management teams are strategically reviewing and assessing their businesses to determine how best to adapt to this “new normal” environment, and many are making some fundamental changes to how they do business. As one executive summed it up, “Basically, the business model is certainly being challenged by what is happening in the market,

the regulatory environment and the political sphere.” And another executive commented, “We are facing a significant challenge just to achieve technical compliance with the new rules and ratios, let alone reorient the institution for success.”

The majority of firms surveyed believe the more stringent liquidity and capital requirements under Basel III will have a fundamental impact on business models, and ultimately the profitability of the industry. Many respondents believe that the higher capital requirements and key elements of the new liquidity requirements – LCR and NSFR – are placing an enormous amount of pressure on the industry. Although the timelines for introduction are quite long, there is pressure from some regulators and the market for earlier compliance. Executives predict some potentially painful consequences as a result of the new rules: returns on equity will go down, costs and leverage will have to be reduced, margins will have to go up and business models will be changed. Most agree

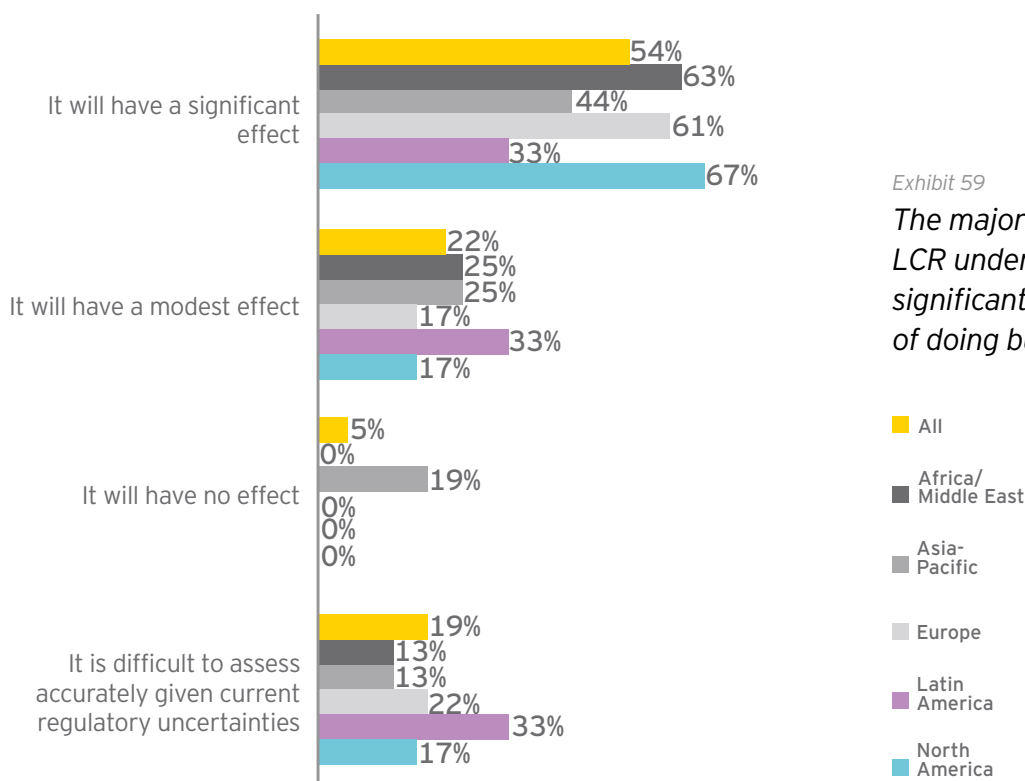


Exhibit 59
The majority overall predict LCR under Basel III will have a significant effect on the cost of doing business

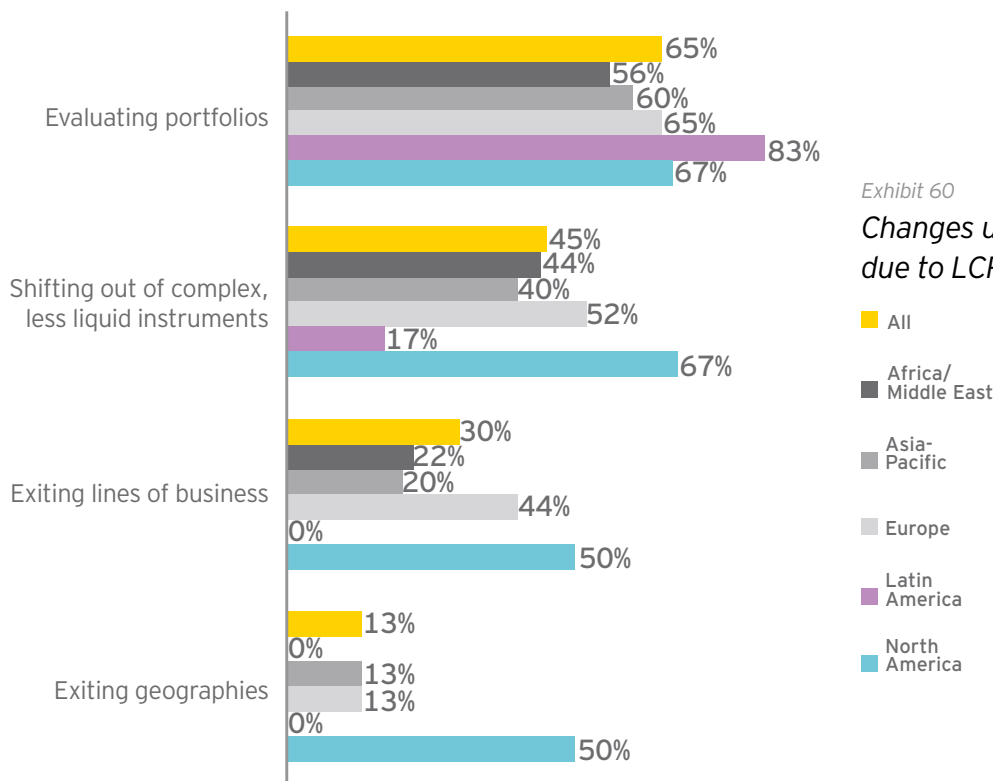


Exhibit 60

Changes under consideration due to LCR under Basel III

- All
- Africa/Middle East
- Asia-Pacific
- Europe
- Latin America
- North America

that complying with the new rules will require significant investment in people, technology and processes. As one executive stated, “Basel III is taking a huge amount of board and senior management time to figure out what to do, and an enormous amount of employee time and money to implement.”

The majority (54%) of respondents overall and across most regions predict that the new LCR will have a significant effect on the costs of doing business (see Exhibit 59). Although a number of firms believe they will be able to increase the portion of their funding that is stable, as anticipated to be defined in the NSFR, this was not the case for all firms and all markets. There was discussion about the highly detailed classification of funding sources required by the NSFR, and many believe it is not achievable for their organizations as proposed. Even more important, there is concern about capacity to increase stable funding sufficiently in an upswing to back necessary expansion of the loan books.

Changes to business models

Firms are under way with a host of initiatives to review and adjust business models. Several executives discussed the importance of these reviews in understanding the links, interdependencies and trade-offs among segments, as well as the relative costs, profitability and strategic importance of each and the consequences of retaining them. The LCR alone is leading to the rethinking of different business areas. Sixty-five percent of firms are re-evaluating portfolios and almost half (45%) report they are shifting out of complex, less liquid instruments into a more stable asset base and more secured funding sources (see Exhibit 60).

Part of the strategy for many firms is deleveraging, which is driven by business imperatives and the Basel III regime. About a third (30%) of respondents indicated they are exiting or selling portions of their businesses to reduce the impact of the new liquidity and capital rules. Deleveraging was mentioned particularly in Europe, where the European Banking Authority has set a June 2012 deadline for the continent’s firms to reach 9% Tier 1 capital levels.

Several firms (13%) have exited or are considering exiting certain countries where profitability is lower or where unfavorable regulations could trap liquidity and capital, and some are retreating back to their home countries. Several discussed streamlining legal entity structures to make regulatory changes, including resolution, capital, liquidity and tax changes, less painful. As one executive explained, “We are looking at trapped capital and liquidity based upon local regulations and adjusting our legal and operating business models to try to make us more efficient in the new world.” Most agree that retail banks with rich deposit bases are better

“How do you figure out how to comply with the liquidity coverage ratio? How do you deal with the net stable funding ratio? What are the changes we need to make to our business to manage all this appropriately? How can we do this on a cost-effective basis? These are the questions that are keeping us all awake at night.”

positioned to comply with the new liquidity regulations, and a few executives candidly admit they are looking for retail banks to purchase to gain the benefits of long-term deposits. Retail banks, however, are not complacent, and executives discussed efforts to raise core long-term deposits in their current markets with aggressive pricing incentives and the introduction of new products.

Looking beyond deposit funding, especially in countries where deposit-generation capacity may be lower than credit demand, several firms discussed the importance of diversifying into new investor bases and new markets around the world to tap into new capital and funding sources, especially given the premium put in Basel III on longer-term funding.

Changes in pricing to reflect the increased costs associated with Basel III were expected – as one executive commented, “Customers will have to understand that there will be extra costs involved in having a safer banking system.” However, the realities of raising prices in a highly competitive market will be a constraint for many firms. Executives were asked to estimate how much they thought spreads on unsecured corporate loans would rise because of the new capital and liquidity charges. This is an area where there are clear

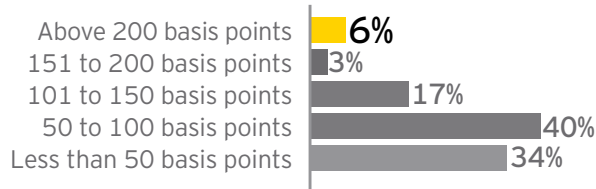
constraints because large corporates can tap the bond markets. Fifty-eight firms answered the question and 23 said they were uncertain about the future increases in margin. Of the 35 firms that estimated the size of the effect of Basel III on margins, 65% thought the change would be significant – 40% thought that margins would increase by 50 to 100 basis points and 26% saw increases of over 100%. Respondents believe that if spreads cannot be increased, profitability will fall, leading to a cut in this business (see Exhibit 61).

There is concern that the appetite for investing in the industry has been seriously eroded by the pressures of the new regulations on costs and return on equity, and because of the enhanced risks reflected in new resolution processes as recommended by the Financial Stability Board (FSB). For example, the new capital ratios will affect many standard corporate banking products, especially those with relatively high risk weights such as unsecured corporate loans, which will face increased funding costs.

Many say investors are questioning profitability at this point in the cycle as well as the core earnings power of the industry in the future. As one executive summed it up, “If you keep putting on capital charges, at some point the question becomes, why would an investor put money into an industry where the returns are so low because of high capitalization?” According to several executives, the key is to persuade investors that bank equity is safer by improving the quality of the disclosure so that investors can rely on the published capital ratios to judge the relative strength and health of different firms. As one CRO explained their process to keep investors on board, “We have several initiatives under way to increase the transparency of our external reporting and I spend a considerable portion of my time communicating with investors, shareholders and analysts to bolster and maintain confidence in our performance.” Consistent industry stress tests, that apply the same standards across different parts of the system, are believed to be an important tool to build investor confidence.

Exhibit 61

Estimates of margin increases caused by Basel III



Changes under way to comply with Basel III requirements

Business model changes

- ▶ Exiting countries based upon local regulations to avoid trapped liquidity and capital
- ▶ Exiting certain businesses, adjusting product offerings
- ▶ Readjusting legal and operating models to improve efficiency
- ▶ Purchasing retail banks to access long-term deposit bases
- ▶ Decreasing the level of degrees of transformation on the balance sheet
- ▶ Reducing complexity – branch by branch and subsidiary by subsidiary
- ▶ Shedding noncore businesses and regions to focus on core businesses
- ▶ Focusing more strictly on risk-return basis profit of the business to cover higher capital costs
- ▶ Reducing headcount

Funding changes

- ▶ Diversifying funding from depositors, investors and markets to reduce dependency on any one area
- ▶ Incentivizing longer-term deposits
- ▶ Pricing more aggressively to encourage longer-term funding
- ▶ Increasing loan pricing to reflect liquidity costs
- ▶ Derisking the sources of funding and liquidity by tapping into new markets around the world
- ▶ Building US dollar funding base by attracting funding from US corporates through wholesale and transactional services

Capital changes

- ▶ Reinvesting earnings
- ▶ Issuing convertible loan stock to give access to incremental capital subject to certain triggers in a downturn
- ▶ Offering rights issues
- ▶ Selling assets to comply with Tier 1 capital requirements
- ▶ Looking at RWA by product and geography
- ▶ Keeping shareholders, investors and analysts confident with more transparency of reporting and communication
- ▶ Improving the transparency of internal reporting
- ▶ Educating businesses to make certain capital costs are integrated into strategy and business line management

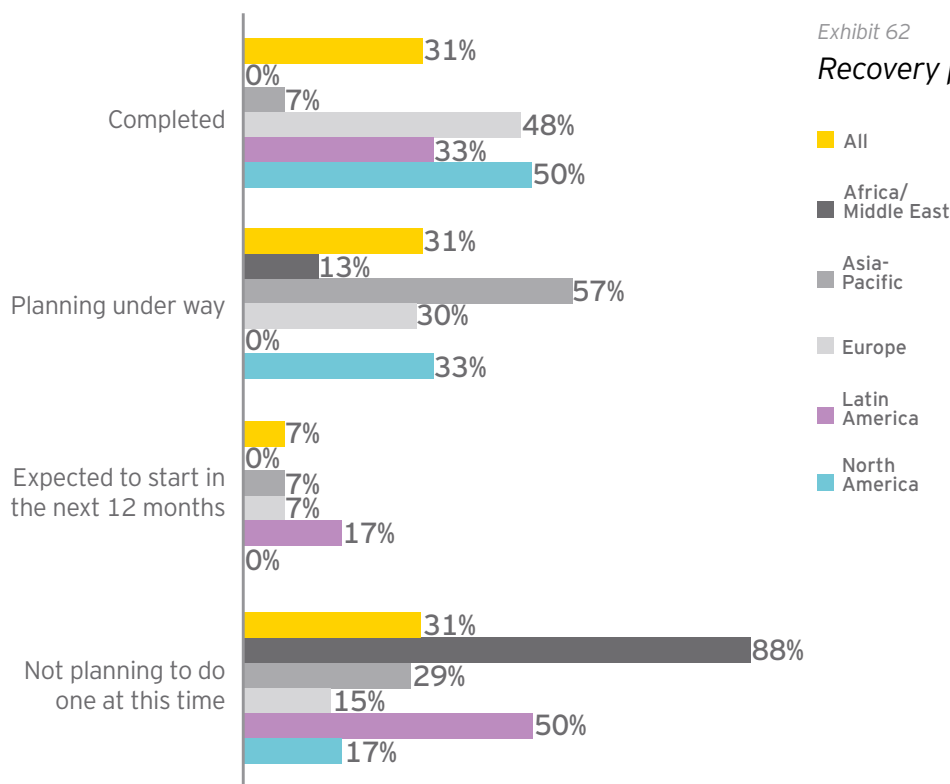
Recovery and resolution planning

A work in progress

Recovery and resolution planning (RRP), often called living wills, is a work in progress for many of this year's study participants, with around a dozen countries having requested formal or informal pilots. Regulators have moved at different speeds, which has resulted in widely varying industry actions across jurisdictions. Nonetheless, most G20 countries have either required that their G-SIBs (global systemically important banks) submit initial RRP to local regulators by year-end 2012, with further enhancement scheduled during 2013, or, in the case of those without G-SIBS, started to collect information and are engaging with the industry.

Recovery plans, which set out how the firm will use a series of predefined options to avoid failure, are further along in

development than resolution plans. Forty-eight percent of respondents in Europe and 50% of respondents in North America report they have completed some plans (sometimes in advance of being asked to do so by regulators), along with a few firms in Asia-Pacific and Latin America. Resolution plans require firms to submit data to the authorities so they can determine how best to wind down the firm in case of failure. More than one-third (37%) of respondents reported they are under way with initial resolution plans – again, predominately firms in Europe and North America (see Exhibits 62 and 63). While a number of firms in Africa and the Middle East, Asia-Pacific and Latin America report they are not currently planning to develop RRP at this time, executives interviewed in these countries say they expect that local regulators will soon be requiring nationally important firms to begin implementation.



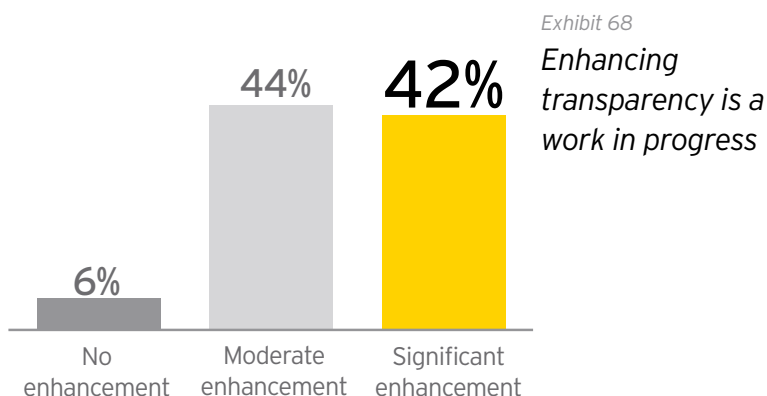
Internal transparency, data and systems

Firms are investing substantially in data and systems upgrades

Internal transparency of information has repeatedly been mentioned throughout this report as a critical aspect of 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.

Improving internal transparency of information is an ongoing initiative for most study participants. Forty-two percent report that post-crisis they have significantly enhanced transparency in internal controls across their organizations, and another 44% report moderate enhancement (see Exhibit 68). As one executive described their improvements, "All information on risk, return, performance, audit and control is now readily available to any who need it, including the board. That was definitely not the case in 2007." While progress is indeed under way for the majority of firms, systematically improving transparency is an enormous multiyear investment of management time and resources.

"It is a permanent challenge to have the right information and tools to manage a complex organization. But it is not only to please the regulators. We need to have quality, integrated and timely data to effectively manage risk throughout the enterprise."





The firms interviewed are predominately focused on driving improvements in four critical areas:

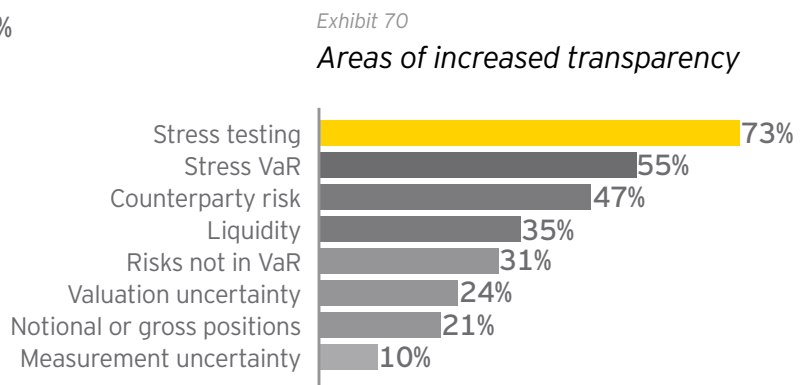
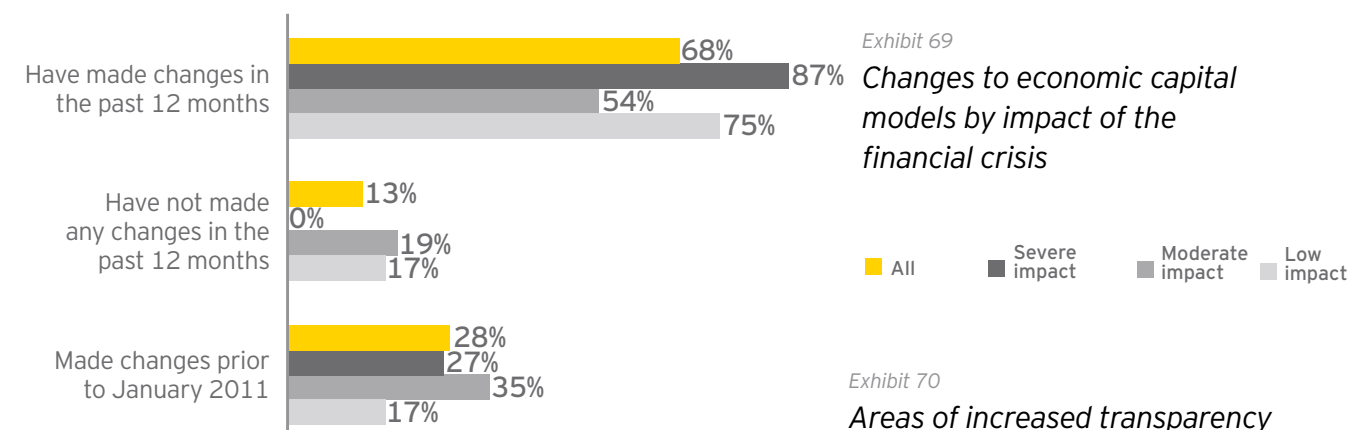
1. **Upgrading economic capital models and metrics to measure risk.** Sixty-eight percent of respondents overall indicated they have made changes to their economic capital models in the past 12 months to increase risk sensitivity and transparency. As we have discovered in other areas of risk management discussed in this report, those firms that were severely impacted by the 2008 crisis have made the most changes, with 87% reporting adjustments to their economic capital models this year (see Exhibit 69).

Many respondents agree that the models in place before the crisis often underestimated the size and risk of some exposures, particularly across business units. Correlations were far too optimistic and models ignored

risk types that proved to be at the center of some of the pressure during the crisis. Some of the most prominent changes to economic capital models have been: adjusting correlations to reduce diversification benefits; adding in risks not in VaR and business risk; and consolidating risks across the group.

Executives report progress on transparency in several areas as noted in Exhibit 70. Stress testing and stress VaR have been the top two areas of improvement, followed by counterparty risk, liquidity of positions, risks not in VaR, valuation uncertainty, and notional or gross positions.

2. **Improving data aggregation, accuracy and quality.** Data and systems vied for the top spot on the challenges to internal transparency, and many initiatives are under way to improve the data management and data infrastructure of the organization. Some firms are reviewing and revising the





counterparty exposure, which is a slight improvement from 81% in the 2011 study (see Exhibit 72).

4. **Investing in systems.** It is not surprising that investment in IT upgrades to meet regulatory demands has been substantial for all study participants across regions. Seventy-seven percent report an increase in IT investment post-crisis, with 78% reporting spend increases of up to 40% (see Exhibit 73 and 74). And most (63%) anticipate the investment in IT to continue for at least the next two years, with the majority anticipating up to a 20% increase in spend (see Exhibit 75 and 76). As Exhibit 77 indicates, most firms report that work across a range of initiatives is under way. Not unexpectedly given the new Basel III requirements, the top three IT initiatives reported relate to supporting improvements in liquidity and capital management and strengthening internal stress testing processes. Other systems initiatives include: aggregation of group/firm data; convergence and reconciliation of

risk and finance data; capture of exposures across the group to single entities; and support of both collateral management and recovery and resolution planning.

In summary, a significant number of multiyear initiatives are under way to improve the aggregation and quality of data and systems needed to meet regulatory demands and support risk governance. But these efforts take an enormous amount of management time, money and resources. Several expressed frustration about the lack of coordination and consistency in regulatory information requirements across jurisdictions, and one executive commented on the challenges of “building systems to support businesses that we may no longer be in.” Several questioned the true value of the new regulations from a risk governance perspective. As one executive commented, “We need to gather and analyze information for the regulators and we need to gather and analyze information to manage the business – and they are not always the same thing.”

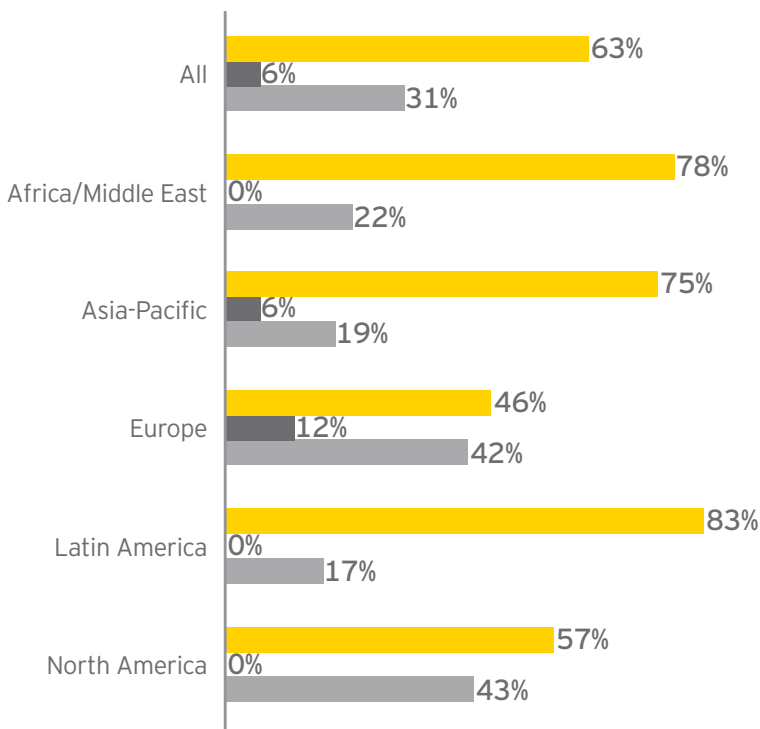


Exhibit 75

The majority predict increase in IT spend over the next two years

■ Increase ■ Decrease ■ No change

Most predict a percentage increase in IT spend up to 20%

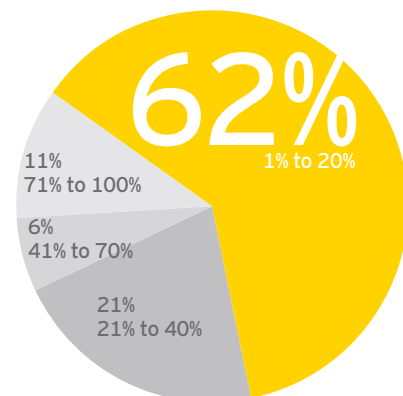
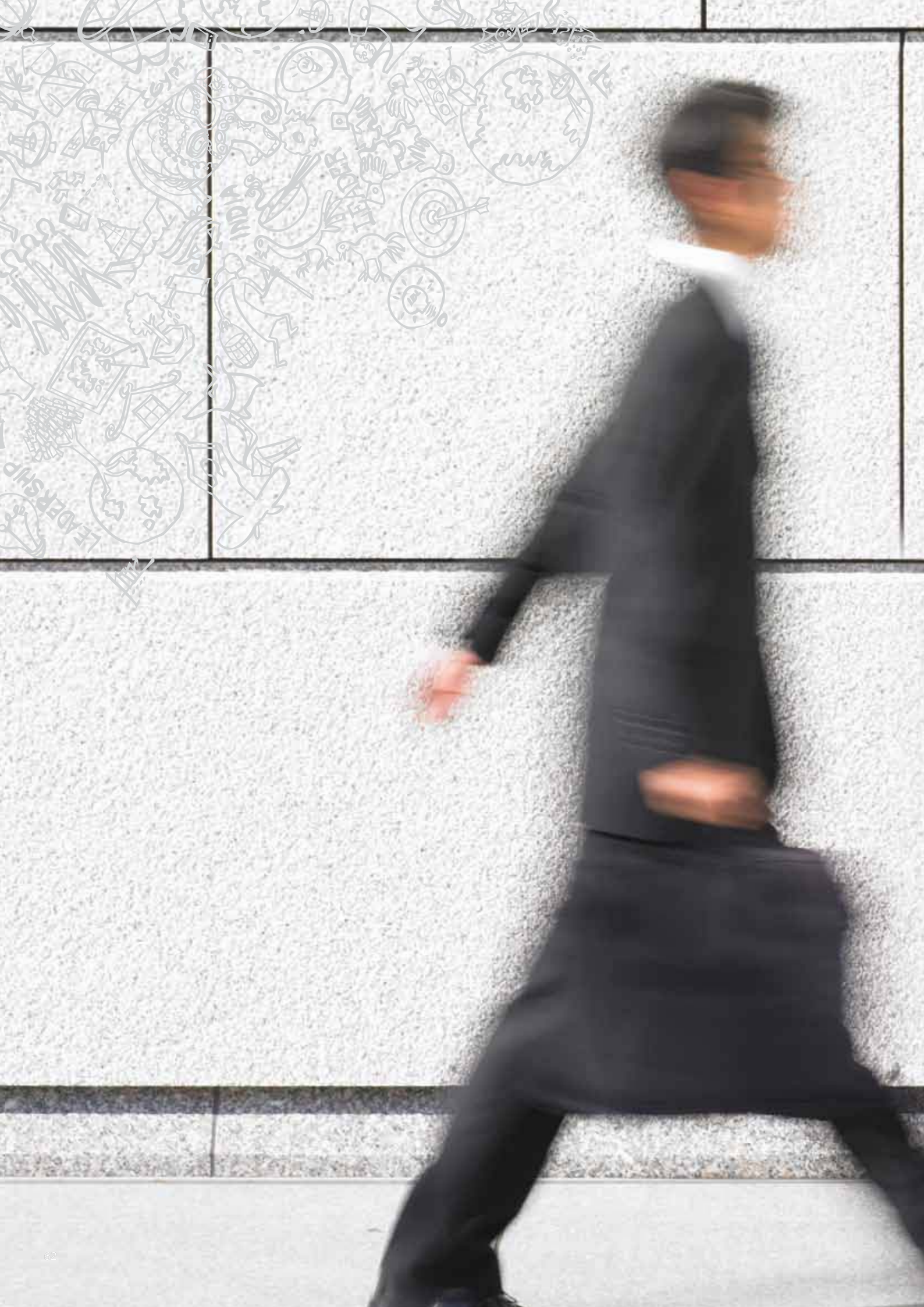


Exhibit 76: IT spend over next two years



Conclusion

Progress has been made but more needs to be done

The industry has made considerable progress in addressing the weaknesses in risk management exposed by the financial crisis. The results of the last three annual surveys on risk management conducted by the IIF and Ernst & Young demonstrate that substantial reform initiatives are being implemented in many institutions, particularly those most affected by the crisis.

Risk governance structures in particular have undergone significant change since the crisis. Boards of directors are now playing a prominent role in setting organizational risk policies and parameters and are spending more focused time on risk issues. The power and influence of the CROs and their teams has been elevated and CROs are now actively participating in diverse areas of the business, including strategy and planning, risk appetite development and management, product development and compensation.

Firms made clear they have learned the liquidity lesson from the crisis, and many are strengthening the management and control of liquidity risk. Many firms have reassessed their capital structure across all of the businesses to more appropriately analyze the costs of capital, and to determine how those costs are calculated and allocated to each business to more accurately reflect risk. Firms also reported considerable progress in the development and strategic use of stress testing. New, more sophisticated models have been put in place to provide a holistic view of potential risks and their impact on the entire organization. Many have made changes to their economic capital models and have added new metrics to increase transparency and more realistically assess and measure the size and riskiness of exposures.

Despite impressive progress, there is still much to be done to change and fully embed new methodologies and processes. Risk appetite, which post-crisis emerged as a critical foundation of the risk management process, remains a key challenge for many firms. While most

have established an enterprise-wide appetite, many have not yet been able to effectively cascade it down into the operational levels of the organization and embed it into decision-making. Data and systems are persistent impediments to risk management; while many are investing substantial time and resources in initiatives to improve data aggregation to support liquidity and capital management and strengthen internal stress testing processes, it will be many years before these upgrades are operational. And finally, the changes required to institute a strong risk culture – where risk is everyone's business, from the board to the front line – are fundamental and far reaching for many organizations. Shifting the cultural mindset is a long-term change initiative requiring ongoing commitment of senior management time and resources to institutionalize, and executives admit they still have substantial work to do in this area.

As discussed throughout the report, the changes to risk management are taking place against a backdrop of global issues – continuing economic pressures in the US and Europe, the European sovereign debt crisis and a fast-changing regulatory environment. The scope, timing and potential impact of the still-evolving global and national regulatory reforms are driving fundamental changes to the business. The combination of higher capital and liquidity buffers proposed under Basel III and a continued weak economy is changing the economics of many businesses. Boards and senior teams are spending an enormous amount of time strategically reviewing, assessing and in some cases fundamentally reshaping their businesses to adjust to the new regulatory landscape. Some CROs expressed concern that the enormous amount of time and resources being devoted to compliance, coupled with the intense pressure to find new ways to remain profitable, will cause management to “take their eyes off the risk management ball.” As one executive commented, “Balancing growth with risk is the challenge – we must do what we can to facilitate sustainable growth without compromising risk standards.”

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