Risk accountability and risk appetite: enhancing risk culture

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Abstract
The magnitude of risk taking that was revealed by the financial crisis has led to increased attention being placed on risk culture and governance of financial institutions. The "three lines of defense" model is often used in risk management, with the second line (independent controls) usually being emphasized. However, it is the first line of defense, the business line, where the emphasis should lie, as it is closest to financial risks and it is where leaders can influence risk taking behaviors, including conduct. A framework needs to be developed within banks, which supports clarity in both the business line and control functions, especially with regards to the risk appetite of the board.

This article looks at the changes that are needed in terms of accountability frameworks, and the role of risk appetite within firms and how it can be used to delineate the accountability of the business line and leaders. There will also be discussion of changes that are needed to risk metrics, and how risk transparency is necessary in order to use the risk management model effectively.

1. Introduction and background

The magnitude of risk taking uncovered by the financial crisis, combined with the post-crisis discovery of a range of conduct issues, from London Interbank Offered Rate (LIBOR) and foreign exchange (FX) to breaches of anti-money laundering and sanctions rules to abetting tax evasion, has turned the spotlight on risk culture in banks and the changes that are needed for governance to go forward. In their 2014 paper on risk culture, the Financial Stability Board (FSB)[1] set out their definition of risk culture as "the norms, attitudes and behaviors related to risk awareness, risk taking and risk management." This article focuses on the role of risk accountability combined with risk appetite as one essential part in the delivery of a stronger and more effective risk culture, and sets out the expectations from regulators in this area. It builds on the thinking in the economics literature on the use of precommitment to keep risk taking within bounds.[2] It also looks at the practical steps needed to embed risk accountability down through a bank.

The so-called "three lines of defense" model is often implemented in risk management. Under this model, the business line is the first line of defense, the independent control functions (such as risk) are the second line, and the third line is the internal audit function examining how both the first and second lines operate.

Within a bank, those in the business line are closest to both the financial risks being taken and to behavior (which could affect operational costs or reputation risk). The leaders in the business line, both senior and middle management, are also best placed to influence behavior. Although there will be a bank-wide framework for remuneration and promotion, the line management has a strong influence on the outcomes. In addition, and perhaps even more importantly, they control or have a strong influence on many other levers — informal local status and targets inside the business line as well as influencing negative incentives, such as individuals being dismissed for not meeting targets — all of which can have a powerful effect on individual behavior. Being closest to the business activities, the business line management will also be most likely to identify risks quickly. In theory, then, to achieve lasting change in risk culture, it is essential that accountability for these wider risks is firmly placed with this group. Independent control functions (the second line of defense) also play an essential role. They need to review the way that the front office is managing risks, assess aggregate risk, set limits, and monitor performance against limits and other controls.

In practice, however, how the three lines of defense model has been implemented in almost all financial institutions is very different. The focus has been on the role of the second line in risk management rather than the first, where the prime responsibility is revenue generation. Although the business line may have notional accountability for risk, it has not played a central role in risk governance beyond responsibility to stay within limits set by the second line.

The FSB and different national regulators have now made clear that this shift in accountability to the business lines must happen. The regulatory expectations were set out in the FSB papers in 2013 and 2014.[3] However, for the new approach for accountability to be effective and practical, it is essential that boards and top management go much further than setting tone and values at the top. They must ensure that individuals are clear about how much financial risk the board and top management are willing for the company to take, and what the expectations are regarding nonfinancial risks. To achieve this, the risk appetite framework within a bank must support clarity in both the business line and control functions regarding the amount of risk the board is comfortable with in that specific area. The business line heads can then be held to account for delivery of a risk profile that is not in excess of this level.

This article looks first at the change required in terms of accountability frameworks. It then examines the role of risk appetite in clearly delineating the accountability of the business line and the business line head. It then considers the parallels between this approach to risk appetite and precommitment frameworks in the economics literature. The final two sections look at the change required in risk appetite metrics and risk transparency to make the approach effective.

1 FSB (2014)
2 Kupiec and O'Brien (1997); Jackson (2014a)

3 Risk governance: FSB (2013a); risk culture: FSB (2014) and risk appetite: FSB (2013b)

First line	**Ownership of risk by the first line. Day-to-day operating model** ‣ Management of risks sits with units originating them ‣ The front line has responsibility for assessing and monitoring all risks, financial and nonfinancial, related to activities ‣ Frontline activities must be consistent with risk appetite
Second line	**All risk types, financial and nonfinancial, covered by independent functions** ‣ Any units responsible for identifying, measuring, controlling and monitoring aggregate risk must be independent and must not advise the front line ‣ They should identify and assess material aggregate risks and ensure that they are controlled consistently with risk appetite ‣ Compliance and legal functions should exert controls as well as the risk function ‣ Independent risk management should establish concentration limits
Third line	**Internal audit must exercise more judgment regarding risk governance framework** ‣ Much enhanced role for internal audit ‣ Overall opinion on risk governance framework ‣ Audit should rate risk presented by each front line unit, product line and function, and evaluate compliance with risk management framework policies

Table 1: Responsibilities of the three lines of defense under FSB recommendations (FSB 2013a)

2. FSB expectations on accountability

The FSB clearly sets out their expectations regarding the ownership of risk in the front line units, as well as the roles of the second line functions and internal audit.[4] There have already been rule changes to implement this approach by national authorities in a number of jurisdictions, including the US with the formal, codified "Heightened Standards" guidance of the Office of the Comptroller of the Currency.[5]

The core elements of the FSB approach are that (1) the front line has responsibility for all the risks attached to the business activities in the areas for which individuals have revenue responsibilities, (2) there must be fully independent second line functions responsible for identifying, controlling, and monitoring aggregate risk, and (3) the third line, embodied by internal audit, must be able to express an opinion on the overall risk governance framework. This is a substantive shift from current risk governance practice in relation to all three elements. The front line currently has responsibilities regarding risks, but those are crystallized in terms of the limits they must adhere to (set by the second line control functions). The reason that this does not achieve full risk accountability in the front line is that limit structures, because of their nature, do not contain all the risks that are attached to front line activities. An example is the trading area. Many trading desks are set value-at-risk (VaR) limits to contain the risks and these must not be exceeded in most banks without prior approval. This provides a forward-looking brake on the amount of risk that can be taken through the aggregate trading positions. However, VaR does not include nonlinear risks that may be covered in part by separate micro-limits. But many other risks are not captured in these limits, in particular all the nonfinancial risks, such as conduct, which relate to the way that the business is transacted.

4 FSB (2013a)
5 OCC (2014)

	Take	Help	Stop	Keep
Business lines	✓			
Control functions				
Risk			✓	✓
Compliance		✓	✓	✓
Legal	✓	✓	✓	

Table 2: Current accountability frameworks in many banks
N.B. ✓ denotes responsibility of line of defense

The FSB approach to accountability will also require a change for second line functions. The current approaches to risk governance put the second line control functions firmly in the frame for controlling risks. There has been considerable focus since the crisis on building up the seniority and independence of the risk function responsible for financial risk. Chief risk officers (CROs) now generally report to the CEO or jointly to the CEO and board risk committee.[6] Having a risk function that is fully independent of the business lines has been accepted as a necessity for a number of years. However, other second line functions are not equally independent of business decisions. The compliance functions, for example, usually advise the front line on the application of regulatory rules or laws, compromising full independence when it comes to their role in compliance monitoring and testing.

Similar issues arise with regard to legal risk and IT risk. Legal advises on contracts and even writes them, and IT creates the IT infrastructure. The FSB has asked for clearly independent second line functions. This has created the need to rework responsibilities for controls over nonfinancial risks.

The role of internal audit also needs to be changed. The third line internal audit function is fully independent but looks at governance in a piecemeal fashion. The focus is on whether individual units are meeting the laid-down processes and controls, and if these processes and controls are effective. The FSB wants internal audit to go beyond this remit to produce an opinion on whether the whole risk governance framework seems appropriate, which is much more judgmental.

6 EY/IIF (2014)

Table 1 summarizes the expectations of the FSB regarding the different lines of defense.

In the article "Risk management formations – an alternative approach to the three lines of defense model," Martin et al.[7] explore the role of different lines of defense using the following terminology to describe the different roles of risk taking and risk management:

- Take – the individual or function takes risk
- Help – the individual or function helps others to take risk
- Stop – the individual or function stops others taking excessive or the wrong risk
- Keep – the individual or function keeps score regarding the amount of risk that has been taken

These terms can be used to look at the current and proposed accountability frameworks (see Tables 2 and 3).

This creates the need for a considerable reworking of not only the business lines, but also the control functions. For control functions, such as compliance and legal, this requires a splitting of the functions. The areas that provide advice (and which need to continue to provide advice) are being split from the true control function – giving a line 1A (a function in the first line providing advice) and a line 2 (a separate control oversight function in the second line). Alternatively, some banks are considering splitting the functions into two second line functions – 2A and 2B. The control functions (other than risk) are also not set up to look at forward-looking aggregate risk. For example, they do not examine whether compliance risks are building up because of a change in the organization of the business or business activity, which has increased intrinsic risks or weakened controls. This goes beyond risk and control assessments into identification of risk factors — see section 7, "Risk transparency and risk accountability", below.

Banks are starting to create structures, which ensure that those in the business line are accountable (not just in name but in actuality) for all the risk attached to their revenue stream, but this requires rethinking the capabilities in the front line. The business line cannot be held to account for assessing individual risks if they do not have people who understand the

7 Martin et al. (2015)

	Take	Help	Stop	Keep
Business lines	In taking risks, individuals need to consider if they are excessive or the wrong risks to take		Business line heads/managers will have a responsibility regarding identifying and stopping excessive or wrong risks	Business line heads/managers will have to consider if individual risks are appropriate relative to the board-set risk appetite
Control functions				
Risk			Although the business line has accountability for the risks taken, the risk function must continue to look at the adequacy of controls, set limits, review sizeable transactions, and stop excessive or wrong risks where they see them	The risk function is responsible for assessing aggregate forward-looking risk relative to risk appetite
Compliance		The independent control function cannot provide advice		The control function must consider adequate forward-looking risk relative to risk appetite
Legal	The independent control function cannot take risk	As above		As above

Table 3: Future accountability frameworks

risks. This requires risk training as well as the establishment of control functions in the front line, which report to the head of the business line.
The UK's Financial Conduct Authority (FCA), as part of their review of the treatment of benchmarks, highlighted the importance of front-office engagement in assessing the risks. They said "we found instances of inadequate or poor monitoring by the first line of defence at a number of firms".[8] They give as examples: desks not having oversight over alterations to submissions by traders, very limited front-office review and inconsistent monitoring of data.[9]

This change must not result in a weakening in the power of the second line functions. They are still responsible for ensuring that risks in aggregate are consistent with risk appetite, which means that they must set limits and review control structures in the first line, and they must review significant transactions and changes in strategy and products. Questions have been raised whether the front line can be held to account, if the second line can overrule their proposals. However, the business line can still be held responsible for the proposed transaction, even if it is not finally approved.

8 FCA (2015b, 19)
9 FCA (2015b)

3. How will risk accountability help to improve risk culture?
In the economics literature, it is recognized that there is a cascade of principal agent problems in companies.
These affect firms in general, but particularly financial services, because of the potential of individuals to take decisions and translate these into actions that can impact the risk profile and reputation of the organization in a significant way. There is a principal agent problem between the shareholders and the management and also between different layers of management. To quote Kern Alexander: "the opportunity exists for some managers to improve their economic payoffs by engaging in unobserved, socially costly behavior or 'abuse'."[10] Alexander is focusing on conduct risks, but precrisis there were many examples of decisions taken by individuals, which led to an excessive buildup in financial risk and which could not always be seen at the board or senior management level. A particular example is the removal of the liquidity lines from the structured investment vehicles in London discussed below.[11]

The authorities and boards have been focusing considerable efforts on redesigning financial remuneration arrangements in order to provide the right incentives for individuals. There

10 Alexander (2004, 6)
11 Jackson (2014b)

is a move towards risk-based compensation, including using balanced scorecards and, as a fail-safe, longer vesting periods for bonuses, with the possibility of clawing back even vested bonuses if poor behavior comes to light later.[12] However, changes to remuneration do not provide the full answer. Research in the nuclear power industry has shown that reward comes in many forms. Paradies shows that financial reward does play a role in influencing behavior as does the desire to save time (cutting corners), but the views of colleagues can outweigh the other influences. He finds that the effect of an immediate boost to standing in the eyes of colleagues may outweigh a future uncertain effect on a bonus.[13] Informal standing of an individual in their business unit is therefore very important, allied to their standing in their cross-firm peer group. The FCA has referred to the tribal loyalties that cross firms.[14] The important message regarding accountability is that line management is much better placed than second line control functions to influence the local standing of an individual. If a trader breaches the controls, but makes a large profit, are they criticized or applauded? If the business lines are to be held to account for risks, including conduct, then negative behavior is more likely to be criticized.

The effect of wider incentive structures, such as targets, set by line management can also have a powerful effect on behavior. Cass Business School and New City Agenda, in their joint report on the culture of retail banking, [Spicer et al.] cite examples from several banks where low-paid staff were encouraged to meet sales targets through negative incentives – in one case, tellers in a branch were given cabbages or cauliflowers, which had to stay on their desk until they opened a new customer account; in another bank, each week, staff exceeding sales targets were given a cash bonus and those falling short were given a cabbage. They conclude that this widespread sales culture "led banks to make risky loans and engage in bad practices."[15]

These examples demonstrate that it is essential that managers in the business line are accountable for the wider risks, including behavior, that can lead to reputation damage and financial penalties. It is not enough to rely on centrally determined compensation structures to influence behavior. The conduct failures are becoming too expensive for the industry in monetary and reputation terms, and thus need to be dealt with in a fundamental way. In the UK alone, by 2015, costs due to remediation, litigation and fines related to conduct issues had reached £39b[16] over the period since the global financial crisis (GFC). CCP Research Foundation has calculated that globally, the cost of conduct events (from 2010–14) for a group of 16 international banks reached £200b (CCP, 2015). This includes regulatory fines, remediation and other costs.

4. Risk accountability and risk appetite

To make accountability practical, it is essential that the business line heads know the acceptable limits on risk taking. This requires banks to go much further in the direction of cascading risk appetite across risk types and business lines.

- A business line, across all activities in the line, needs to be clear about how much risk the board and senior management are willing for them to take – capturing all risk, not just risks covered by explicit limits
- They also need to understand expectations regarding their responsibility for the behavior of those in the line
- The risk, and accountability for the risk, needs to be forward -looking — it can be too late once losses or behavior problems have occurred
- The accountability needs to cascade down the front line to ensure that business leaders and middle management set the right tone for those below

The adoption of new and more stringent individual accountability regimes in some jurisdictions, such as the Senior Managers Regime in the UK,[17] underline the importance of clearly defined limits to the type and amount of risk taking that is acceptable to senior management and the board. Without this, individuals are managing risk in the dark. This needs to be made specific to the business line and needs to be more holistic than simply a set of limits – the onus should be on the business leaders and the second line control functions to demonstrate how the controls and limit structures in place

12 Lopez del Olmo (2015)
13 Paradies (2007)
14 Speech by Tracey McDermott, of Enforcement and Financial Crime at the FCA McDermott (2014)
15 Spicer et al. (2014, 9)
16 Sky News (2015)
17 FCA (2015a)

Role in risk appetite framework (RAF)	CEO	CRO	CFO	Business line leaders and legal entity management
Establish a prudent risk appetite for the firm, which is consistent with the firm's short- and long-term strategy, business and capital plans, risk capacity, as well as compensation programs, and aligns with supervisory expectations.	✓	✓	✓	✓
Be accountable, together with the CRO, CFO and business lines, for the integrity of the RAF, including the timely identification and escalation of breaches in risk limits and of material risk exposures.	✓	✓	✓	✓
Ensure that the "risk appetite is appropriately translated into risk limits for business lines and legal entities, and that business lines and legal entities incorporate risk appetite into their strategic and financial planning, decision-making processes, and compensation decisions."	✓	✓	✓	✓
Ensure that the firm-wide risk appetite statement is implemented by senior management through consistent risk appetite statements or specific risk limits for business lines and legal entities.	✓			
Provide leadership in communicating risk appetite to internal and external stakeholders so as to help embed prudent risk taking into the firm's risk culture.	✓			
Set the proper tone and example by empowering and supporting the CRO and CFO in their responsibilities, and effectively incorporating risk appetite into their decision-making processes.	✓			
Immediately escalate to the board and CEO any material risk limit breach that could seriously put the financial condition of the firm in danger.		✓	✓	✓
Act in a timely manner to ensure effective management, and where necessary mitigation, of material risk exposures, in particular those that are close to or exceed the approved risk appetite and/or risk limits.	✓	✓	✓	✓
Incorporate risk appetite into the firm's compensation and decision-making processes, including business planning, new products, mergers and acquisitions, and risk assessment and capital management processes.	✓	✓	✓	
Independently monitor business line and legal entity risk limits and the firm's aggregate risk profile to ensure they remain consistent with the firm's risk appetite.		✓		
Establish and approve appropriate risk limits for business lines and legal entities that are prudent and consistent with the firm's risk appetite statement.	✓	✓	✓	
Ensure the integrity of risk measurement techniques and MIS that are used to monitor the firm's risk profile relative to its risk appetite.		✓		
Establish a process for reporting on risk and alignment (or otherwise) of risk appetite and risk profile with the firm's risk culture.		✓		
Actively monitor the firm's risk profile relative to its risk appetite, strategy, business and capital plans, risk capacity, as well as compensation programs.		✓		

Role in risk appetite framework (RAF)	CEO	CRO	CFO	Business line leaders and legal entity management
Obtain the board's approval of the developed risk appetite and regularly report to the board on the firm's risk profile relative to risk appetite.		✓		
Establish a policy for notifying the board and the supervisor of serious breaches of risk limits and unexpected material risk exposures.	✓			
Dedicate sufficient resources and expertise to risk management, internal audit and IT infrastructure to help provide effective oversight of adherence to the RAF.	✓			
Ensure business lines and legal entities have appropriate processes in place to effectively identify, measure, monitor and report on the risk profile relative to established risk limits on a day-to-day basis.	✓			
Implement controls and processes to be able to effectively identify, monitor and report against allocated risk limits.				✓
Establish and actively monitor adherence to approved risk limits.				✓
Be accountable for effective management of the risk within their business unit and legal entity.				✓
Ensure alignment between approved risk appetite and planning, compensation, and decision-making processes of the business unit and legal entity.				✓
Embed the risk appetite and risk limits into their activities and day-to-day management of risk.				✓
Act in a timely manner to ensure effective management/mitigation of material risk exposures, in particular whether they could exceed appetite/limits.				✓
Escalate promptly breaches in risk limits and material risk exposures to the CRO and senior management.				✓

Table 4: FSB expectations regarding risk appetite
Source: FSB 2013b

collectively keep risks within the overall risk appetite for the business line.

The FSB has made clear that the business line heads do have responsibility for ensuring the business activities are aligned to risk appetite. Table 4 sets out the accountabilities the FSB expects regarding risk appetite for the CEO, CFO, CRO and business line heads.

5. Risk appetite as a precommitment mechanism
In terms of accountability, risk appetite can be seen as a way of establishing a precommitment approach throughout a bank. There was interest in the late 1990s, led by the Federal Reserve, in the possible use of precommitment approaches to align incentives with risk taking. This was seen as a way to overcome the challenges of setting market risk capital requirements for trading books. Kupiec and O'Brien[18] suggested that banks could pre-commit to the regulators a maximum loss that they would make and would face penalties if losses rose above this level. Goodhart et al.[19] raised the idea of extending the concept from market risk to the banking book and counterparty risk.

For a bank, the risk appetite is a way of achieving precommitment by the bank's senior management that risk levels will be contained within a set amount. The overarching risk appetite statement, if included in the annual report, is a precommitment by the board to

18 Kupiec and O'Brien (1997)
19 Goodhart et al. (2013)

shareholders. By cascading the risk appetite down into business lines and sub-business lines, the management lower down is also committing to top management and the board that risk will not exceed preset levels.

This has implications for the design of the risk appetite statement. The precommitment approach was not pursued in banking regulation because it was backward looking. Penalties could not be effectively imposed on the bank once substantial losses had been made. Fines are not really practical at that point and even imposition of higher capital requirements, looked at by Kupiek and O'Brien, might not be practical. Goodhart et al.[20] said, "in order for ex-ante incentives against … excessive risk taking … to work effectively, it is essential that banks perceive the (ex-post) imposition of penalties to be credible." The backward nature of the test created a further problem, identified by Goodhart et al., which was that it could not prevent a firm from gambling for resurrection if the franchise had been eroded.

For risk appetite to be an effective precommitment approach within a bank, it is essential that individual accountability includes estimates of risk (i.e., forward looking) and not just the imposition of penalties ex-post if losses arise.

6. Risk appetite metrics and accountability

Risk appetite statements have been set for a number of years, but unfortunately, they have proved difficult to embed in the business lines.[21] The statements were initially subjective, using qualitative statements, which made true accountability difficult. Subsequently, many banks added a range of quantitative elements, but without incorporating an overall connecting metric – some banks had 15, 20, and even more different metrics, which made it difficult to check consistency let alone accountability. In the last few years, there has been a shift towards a smaller number of metrics. Additionally, it is also important to have accountability against a true forward-looking metric that picks up the risk in extreme environments, given the cyclicality of the banking industry. This then provides a double incentive with regard to individual accountability. An individual would be held to account regarding the forward risk metric as well as backward -looking against a loss made, through deferred bonuses, clawback, etc.

20 Goodhart et al. (2013)
21 Shifting focus: Risk culture at the forefront of banking, EY/IIF (2014)

Banks are starting to move towards the use of forward loss in an extreme environment as a key element in the central risk appetite statement for financial risk. Table 5 analyzes the information provided by globally systemically important banks (GSIBs) in the EY/IIF[22] survey on risk governance. Almost all the GSIBs sampled have a minimum acceptable tier 1 capital ratio as part of the primary risk appetite metric. Almost all also have a forward extreme loss metric – loss in extreme events, enterprise VaR, or stress test results. 15 of the 18 banks have stress test results in the risk appetite statement. This is consistent with also having a minimum tier 1 ratio because the maximum loss set would have to be consistent with that minimum capital ratio. The advantage of the forward loss figure is that it can be allocated to regions, risk types and business lines. Judgments have to be made about diversification benefits, but that is tractable.

To date, although forward loss is part of many banks' primary risk appetite at group level, the next step has not been taken to allocate the loss to individual business lines. Once this allocation has taken place, region heads and business line heads can be held accountable for ensuring the strategy and business decisions do not take the risk of forward loss above the figure set for their business line.

Clarity around this will support real accountability. The region or business line head can then be made responsible for ensuring that limits, controls and strategies keep risk within that set amount. The means of testing this would have to be agreed upon, for instance, by using the ICAAP stress testing, covering a stress equivalent in severity to the last crisis. The scenario used would be open to debate internally, but because the ICAAP stress testing is subject to supervisory oversight, there is an element of external accountability. Boards, too, are required to scrutinize the ICAAP stress testing. In some jurisdictions, there are also regulatory stress tests (US, EU, UK) and these too could form part of the test.

However, it is noticeable from looking at the GSIB metrics from the survey that banks still have a large number of metrics in their primary risk appetite statements (with a number covering similar territory) which will confuse accountability. The average number of metrics is close to 10 per bank. In addition, some metrics could encourage risk taking, for example ROE and growth measures

22 EY/IIF (2014)

	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7	Bank 8	Bank 9	Bank 10	Bank 11	Bank 12	Bank 13	Bank 14	Bank 15	Bank 16	Bank 17	Bank 18
Capital ratios	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Tier 1 ratio	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Stress test results		✓	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Earnings at risk	✓				✓										✓			✓
Loss in extreme events	✓		✓		✓	✓						✓	✓					✓
Enterprise-wide VaR			✓		✓	✓												✓
Operational losses	✓			✓	✓	✓			✓				✓	✓	✓	✓		✓
Funding and liquidity measures		✓	✓	✓	✓	✓	✓		✓		✓		✓	✓		✓	✓	✓
Illiquid investment levels						✓												✓
ROE	✓	✓							✓	✓	✓			✓			✓	
Earnings volatility	✓	✓	✓	✓											✓			✓
Economic capital		✓		✓	✓	✓	✓		✓	✓	✓	✓	✓				✓	✓
RAROC											✓			✓			✓	
RWA	✓		✓		✓		✓		✓	✓	✓	✓		✓		✓	✓	
Cost of risk		✓	✓						✓				✓	✓				✓
Internal ratings		✓											✓	✓		✓		
Expected loss													✓			✓		
Operating leverage							✓		✓				✓					✓
VaR	✓		✓	✓	✓	✓				✓	✓					✓		✓
Tail VaR	✓											✓						
Limits	✓		✓		✓				✓		✓	✓	✓					✓
Provisions	✓								✓				✓					
Concentration limits	✓		✓		✓	✓			✓		✓		✓	✓		✓		✓
Growth measures									✓								✓	

Table 5: Primary risk appetite metrics used by GSIBs
Source: Data collected for the EY/IIF Risk Management Survey, 2014

used by a minority of the banks.

In the past, many banks have used risk-weighted assets (RWAs) as a core risk appetite metric and 11 banks in the sample continue to use RWA. However, RWA has disadvantages as a risk measure, particularly because assets are multiplied by the pillar 1 risk weights, which assume asset diversification. This measure, therefore, does not reflect a firm's risk concentrations. In addition, the pillar 1 risk weights do not take into account a range of risks, such as interest rate risk in the banking book and pension risk. These should be captured in the regulatory pillar 2 capital requirements, but are not included in the RWAs. If RWA were the main metric, this gap would affect accountability. Risk concentrations would, in contrast, be picked up by the stress testing results, of course, depending on the shape of the stress test.

The various conduct breaches that have come to light since the crisis (LIBOR, FX, money laundering controls, tax, sanctions and retail product mis-selling) underline the importance of nonfinancial risks being covered by the risk appetite framework and the cascade of responsibilities. This is clearly one of the FSB's objectives. One way to achieve this is through maximum operational risk losses being set (again for extreme environments). This is the path that many banks are taking. The operational loss figure can then be allocated to business lines. However, the operational risk pool is an amalgam of a large number of different components – conduct, fraud, IT, legal and so on. It would probably be better to treat each separately. This would make it easier to focus on the intrinsic risks and the controls to keep losses in check. There would then be more focus on behavior levers. However, estimating forward loss for each is very difficult and thus another route to expression of risk appetite is needed.

Considering the events that could cause severe difficulties for the bank, and then setting either specific actions that are expected ex ante or risk tolerances (for example, downtime for primary systems), and holding management to account for those, might be more fruitful than just setting an operational loss figure. For example, in the area of market manipulation, senior management could make clear that the heads of the trading lines have two requirements: (1) ensuring that an analysis has been done regarding whether the markets and transactions in their area are vulnerable to manipulation, and (2) in light of that analysis, an assessment of whether the controls are adequate. Again, this would result in responsibilities being cascaded down the chain of command within a business line. This is far more likely to be successful in achieving real accountability than, for example, just saying the business line heads are responsible for the effectiveness of, say, 7,000 end-to-end controls or that the business line head should keep operational losses within GBP 500m (approximately USD 708m).

Subsidiaries of global banks are increasingly being required to tighten risk governance structures. The creation of an appropriate risk appetite framework for that entity and appropriate accountability structures plays an important role.

7. Risk transparency and risk accountability

A very important part of the implementation of risk accountability through the risk appetite framework is risk transparency. Without a view of risk, which fully reflects the downside, the risk appetite framework (and the precommitment it is achieving) will be undermined. The framework clearly requires a forward-looking analysis of aggregate risk in extreme periods, including identifying the risks to assess. One problem in the run-up to the crisis was that severe risks were not fully identified, in part because plausibility filters had been applied at the business unit level – risk was taken and indeed acknowledged, but the crystallization was deemed to be implausible and, therefore, the risk was not debated at a bank-wide level nor stress tested. An example is the structured investment vehicles (SIVs) in London. These were off-balance sheet vehicles that invested in structured products and were funded through the issuance of three-month commercial paper. In the traditional US design, the vehicles had prearranged undrawn bank funding lines to be utilized if sufficient commercial paper could not be issued. To increase profits, those designing the vehicles in London took the decision not to include the lines. The risk was fully understood, but as a drying-up of the commercial paper market was deemed implausible, it had not been debated at the top of the banks nor was it included in stress testing.[23] This led to massive funding needing to be injected by bank sponsors; the alternative was risking the reputational damage caused through the failure of SIVs.[24] This problem of a

23 Jackson (2014b)
24 Morcroft (2007)

plausibility filter being applied is akin to "disaster myopia".[25]

Another factor is the tendency to concentrate on headline risks rather than those buried in the technicalities of particular instruments. There were many examples of this in the run-up to the GFC. One example is that the recession stress testing carried out precrisis did not include the default rate triggers on the pools in the securitization funding vehicles. This points to the need to develop better judgment tools to identify business fault lines at a business division level, which some banks are now utilizing. These can then inform the holistic bank-wide stress tests.

Monitoring also has to be developed to ensure that risk does not start to move away from risk appetite. These monitoring metrics also need to be carefully designed. Currently, monitoring nonfinancial risk types is relatively underdeveloped. The focus is on controls and control self-assessments, and reporting on the outcomes, as well as reporting on a wide range of different metrics, such as customer complaints. More focus is needed on forward risk, and here a paradigm shift is needed to move to assessing risks and not just relying on controls, under the assumption that they will prevent the risk being taken on. Consistent analytic frameworks to assess intrinsic risk in the nonfinancial risk types would also help to support accountability.

To take one example, product suitability risk, banks have introduced more rigorous product approval processes and escalation rules, some of which are backed up by hard analytic criteria. This process should sift out the most problematic products. But banks also need metrics at the top of the organization so that the pockets of higher risk can be identified as well as the trends in the risk profile across the bank – for example, are products generally becoming more complex? The first step is the identification of intrinsic factors for the risk. In this example of product suitability, the risk is driven by a combination of the complexity and opacity of the products being sold, volatility of returns, and the sophistication (or lack of sophistication) of the investors. Some banks are starting to develop scoring approaches so that the trends in product risk can be tracked. Risk appetite could be set by the maximum score for suitability risk that the bank is willing to see in a business line or product. The scores could also be used in the escalation processes to more senior committees. It is essential though that this is a common analytic framework, which requires judgment rather than being a "tick box" exercise. A scoring approach would enable changes in the product characteristics, delivery channels, incentives or client base during the life of a product to be picked up.

25 Guttentag and Herring (1986)

8. Conclusion

Risk accountability has an essential role to play in the strengthening of risk culture and thus risk governance. Currently, too much of the responsibility for the amount of financial and nonfinancial risk (such as conduct) de facto sits with the control functions rather than those taking the risks. This goes right up to board-level thinking and reactions. When a severe problem occurs, very often just the head of risk or head of compliance is fired. This does not put accountability in the right place. The control functions can police the business units, but are in a much weaker position to influence day-to-day actions and behavior. Banks have tried to deal with this by emphasizing remuneration structures and balanced scorecards to reflect wider cultural behavior. But this does not recognize the other ways that individuals receive reward, in particular, from their colleagues in the business line in terms of informal status. It also does not recognize the range of business line-driven incentives (positive and negative) outside the remuneration framework. It is the business line management that is best placed to influence behavior and is closest to the financial and nonfinancial risks being taken.

The FSB has made it clear that the business areas must be responsible for all the risks attached to their activities. Some national regulators have gone further and have tightened accountability of designated individuals. However, both moves raise the question of the standard regarding acceptable levels and types of risk against which an individual would be held accountable. Here, risk appetite can be used as a mechanism to deliver a clear precommitment by management in the business lines, regions and legal entities that risks will not go above pre-set levels, but this will require an evolution of the risk appetite framework in many banks. A move to forward loss in extreme environments as a key accountability metric would supplement the existing responsibility for not breaching a range of preset limits. This could include risk appetite and measured forward looking using, for instance, stress testing. Indeed, the business line would have the responsibility for ensuring that controls and limits would deliver risks not in excess of the risk appetite. Non-financial risks pose different challenges, but also need to be clearly within the accountability framework. Here, clarity over acceptable tolerances and expected actions would help.

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