

**The Development of Risk Based Regulation in Financial Services:
Canada, the UK and Australia**

A Research Report

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All responsibility for views expressed, errors and omissions is my own.

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Executive Summary

Introduction

In the last few years, financial regulators have been developing 'risk based' approaches to regulation. This Report considers these developments in three of the main proponents of risk based regulation: the UK Financial Services Authority (FSA), the Canadian Office of the Superintendent of Financial Institutions (OSFI), and the Australian Prudential Regulation Authority (APRA). The details of the developments are contained in the first three parts of the report. The fourth, concluding part compares the motivations which prompted the development of risk based regulation, the process of development, the main elements of the frameworks, some of the outcomes to date, so far as those regulators have identified them, and five reflections on risk based regulation. The Annex compares the frameworks in more detail.

Motivations for developing risk based approaches to regulation

The motivations for developing the frameworks were strikingly similar. These were primarily:

- Political pressure following financial collapses
- The need to create a new organisational culture within a recently formed regulatory body
- The need to bring supervisory practices in line with developments in financial institutions' operations and risk management practices
- The need to deliver 'integrated' financial regulation
- A need to improve internal managerial control, to prioritize resources and shift regulation onto a more proactive footing
- A concern to manage the expectations politicians and the wider public had of what regulation could and should achieve

Comparing the frameworks

The frameworks share the same basic approach: to identify and assess the risks to the regulator's objectives that are posed by the financial firms being regulated, and to address those using the various regulatory tools, formal and informal, that they possess. They share central elements:

- The identification of two main categories of firm-specific risks: inherent risk arising in the business itself, and risks arising in the management and control of those inherent risks by the financial institution itself;
- Risk assessment and ranking;
- Communication of final result, but not the details of the assessment, directly to the chief executive and / or board members;
- Duties on firms not to disclose the risk ranking ;
- Linking of supervisory response to the risk ranking.

There are, however, five key differences in design and methodology between the frameworks:

- The criteria for assessing risks
- The formula and methods used for arriving at a final risk score for an institution
- The role played by impact assessments in the frameworks;
- The extent to which supervisory response is framed by the risk assessment;
- The use to which the frameworks are put within the regulatory bodies.

Comparing Outcomes

The frameworks have only just been implemented across the whole of the regulated constituencies in all three jurisdictions; it is thus too early to assess their outcomes in full. Moreover, the research focused only on the regulatory agency's own perspectives on the development of risk based regulation, and not on those of outside observers or regulated institutions. However, those within the regulatory agencies noted some immediate effects.

- Extensive organizational restructuring in OSFI and FSA to implement the framework;
- A clear shift in the deployment of resources away from low impact firms towards higher impact firms in FSA and APRA, and, in the case of FSA, between different areas of its responsibilities (away from banking to insurance, away from prudential regulation to conduct of business regulation);
- Modes of interaction with firms have changed in all organizations, and the FSA in particular has changed the basis on which its enforcement decisions are made;
- Implementation remains patchy within the organizations: re-skilling and changing organisational cultures is taking time;
- Attempts are being made to measure impacts of risk based approaches on performance overall, but none has yet devised a clear and conclusive measurement, though some are further on than others.

Reflections on risk based regulation

This report examines the development and design of risk based frameworks; it does not consist of a detailed study of their implementation, which will have to be the subject of further research. Nevertheless, some reflections on the operation and potential implications of risk based regulation may be made. Many within the regulatory agencies are aware of these implications, and some are taking active steps to address them. The five main reflections are:

- the danger of focusing more on diagnosis than cure;
- the importance of organizational culture in implementing risk based regulation;
- risk based frameworks can create risks;
- the danger of inappropriate reliance on firms' internal controls is reduced but not removed in risk based approaches;
- in making it clear what issues are not regulatory priorities, risk based regulation can have a potentially contentious political message.

Introduction

The report is based on research conducted in October 2003 - July 2004, the aim of which was to explore what prompted regulatory agencies to innovate, what the processes of innovation were, and what, from the regulatory agency's point of view, were the outcomes. The research focused on the development of risk based regulation from the perspective of the agencies themselves; it did not examine the observations or experiences of others on the developments. It also focused on the development and design of the frameworks; it did not explore implementation of the frameworks at all levels within the organisation.

The report is structured into three parts, with one Annex. Each part examines a different regulator: Part I considers the Canadian Office of the Superintendent of Financial Institutions; Part II focuses on the UK Financial Services Authority, and Part III examines the Australian Prudential Regulatory Authority. Each Part provides a background to the regulatory agency, considers the initial motivations for developing risk based regulation, the process of development, what the frameworks consist of, and, to the extent they have been observed so far, the outcomes of their development. Comparisons with the other regulators are made where relevant throughout the report. The Annex contains a table comparing the frameworks in more detail, and the Executive Summary contains a more general comparison of motivations, frameworks and outcomes, as well as providing some reflections on risk based regulation.

Part 1 The Canadian Office of the Superintendent of Financial Institutions (OSFI)

Introduction

OSFI was one of the earliest integrated prudential regulators, and it was formed following the failure of two Canadian banks in the mid-1980s on the recommendation of the subsequent Royal Commission.¹ OSFI regulates all banks registered in Canada, all federally registered or incorporated insurance companies, trust and loan companies and fraternal benefit (friendly) societies, cooperative credit associations, and pension plans, and provides actuarial advice to the Government. As in Australia, institutional integration has not been matched by legislative integration, and OSFI administers five main pieces of legislation with additional duties under three others.² Its principal objectives are discussed below, and are broadly to maintain confidence in the Canadian financial system, and to supervise financial institutions and pension plans to determine whether they are in sound financial condition (or in the case of pension plans, meeting the minimum funding requirements) and in compliance with the relevant legislation. OSFI currently regulates around 400 financial institutions and 1,200 pension plans, and has a staff of around 450.³

Background and motivations

In the mid-1990s there was a second wave of crises stemming from a series of failures of financial institutions, culminating in the collapse of a major life company. This prompted public outcry, political pressure on OSFI, including a Senate Committee hearing, and led to a number of recommendations for reform.⁴ The main thrust of those recommendations was that OSFI needed to be more interventionist in dealing with financial institutions. These events coincided with the appointment of a new Superintendent, John Palmer, in September 1994, which provided a window for changes to be introduced in OSFI's practices.

In 1996 the OSFI Act was amended to clarify OSFI's objectives and to give OSFI additional powers of early intervention. As well as the usual objectives of maintaining public confidence in the financial system, protecting deposit holders and policy holders, and ensuring that financial institutions and pension plans are in sound financial condition,⁵ OSFI was given an 'early intervention mandate': that is a legal obligation to anticipate problems and intervene early in the affairs of troubled financial institutions so as to minimize losses to depositors and policy holders, and an obligation to promote the management of risk within financial institutions and pension plans. Moreover, in regulating insurance companies and deposit taking institutions, OSFI is to monitor and evaluate system wide events or issues that might impact on those institutions.⁶ Finally, the Act provides that the regulation should be carried out bearing in mind that the primary responsibility for financial institutions and pension plans lies with their management, and that financial failures will occur.⁷

In this recasting of its objectives, OSFI was not a passive recipient of legislation agreed elsewhere. Rather OSFI played a key role in shaping the Government's response.⁸ It was actively involved in proposing the legislative provisions and it was well on the way to making

them part of its own planning process by the time the legislation was passed. It had already formed a mission statement based on those objectives, and re-cast them into five strategic objectives which would form the basis of a new accountability framework.⁹ These are safeguarding depositors and policyholders from undue loss, public confidence, quality of people, processes and systems, cost effectiveness, and competitiveness.

Post 1995, two main initiatives occurred at OSFI with regards its supervisory practices. These were first, the introduction of Guides to Intervention in 1997, and second the introduction of the Supervisory Framework in 1999 and its subsequent development and implementation. The Guides set the framework for how OSFI should respond to institutions once a diagnosis has been made of their condition; the Supervisory Framework sets the approach for making that diagnosis should be made. In OSFI's case, the framework for treatment was reformed before that of diagnosis, for two main reasons. First, the main pressure on OSFI following the events of the mid 1990s was to become more proactive and more interventionist, and it had also been given new powers and a new mandate to that effect. OSFI therefore addressed this issue first both to assuage political pressure and to inform, and reassure, institutions about how its new powers would be used. Secondly, the task of identifying changes in its intervention policies could be achieved more quickly and more straightforwardly than reforming its assessment framework.¹⁰

Guides to Intervention

The 'early intervention mandate' contained in the revised OSFI Act was inspired by US legislation on federal deposit insurance.¹¹ The Federal Deposit Insurance Corporation Improvement Act (FDICIA) contains a provision for prompt corrective action. This stipulates the different types of action the Federal Deposit Insurance Corporation (FDIC) should take when capital levels in a deposit taking institution reach particular levels. Senior officials rejected the hardwiring of regulatory response to numerical thresholds, but felt that there was value in setting out for OSFI's own guidance and that of the marketplace what actions it would take when institutions fell into different categories of financial health.

The US FDICIA was therefore influential shaping OSFI's approach to intervention, but there was no direct importation. Rather, the framework was considered, rejected in its existing form, and modified in ways which those at the head of OSFI saw as improving the framework. Hard financial indicators were argued to be trailing rather than leading indicators of the financial health of an institution. They were thus not the best triggers for regulatory action, or certainly should not be privileged as being the only ones.¹² The Guides to Intervention therefore incorporate 'soft' indicators, such as the strength of internal controls, internal policies on risk management and whether or not these were being followed, as well as figures on business growth in assessing financial health.

The Guides sets out five different potential diagnoses or assessments of an institution, with corresponding responses. When they were first introduced, the methodology of assessment varied with the institution being considered. Deposit taking institutions were assessed using the CAMELS system (assessment of Capital, Assets, Management, Earnings, Liabilities and Sensitivity to market risk). This is the model used in US federal banking regulation by the Office of the Comptroller Currency (OCC),¹³ and which is adopted in a number of different countries. Life insurance companies were assessed under the CAMEL system (Capital, Assets, Reinsurance, Actuarial Reserves, Management, Earnings and Liquidity), which had been used for

sometime in Canadian insurance supervision. General insurance companies were assessed under a third model.

The Guides took the outcome of each set of assessments and stipulated what supervisory action should be considered with respect to each Stage. There are five potential assessments,¹⁴ and five corresponding sets of supervisory action. At Stage 0, there are no potential problems and monitoring continues as normal. If an institution is assessed to be at Stage 1, 'early warning', this means there are deficiencies in policies or practices, or other practices existing which if allowed to continue could lead to the problems identified at Stage 2, but those problems can still be remedied. The firm is notified of OSFI's concerns, monitoring is enhanced and the firm's auditor may be appointed to perform a particular investigation of the firm's financial position. At Stage 2 there is a risk to the viability or solvency of the institution. Here the firm is placed on a watchlist, restrictions on business may be imposed, and the minister is notified. At Stage 3 a firm's financial viability / solvency is in serious doubt. Monitoring should intensify, external inspectors may be appointed, business restrictions imposed, possible restructuring of the institution include seeking a buyer, and contingency plans should be formed. At Stage 4 the firm is financially non viable or insolvency is imminent. Here meetings and monitoring further intensifies, there may be further restrictions on business, and if the statutory conditions are met, control may be taken of the firm's assets.

Senior officials at OSFI argue that the Guides and the accompanying ratings of the effectiveness of intervention have proved important internal and external disciplines on OSFI.¹⁵ When they were introduced they were an important management tool, indicating clearly to officials within OSFI what the revised expectations were, and providing significant guidance in how to perform their supervisory functions in the future. The publication of the Guides meant that this internal management tool was reinforced by the expectations that regulated firms now had of how they and others would be treated. As a result of their introduction, the supervisory culture at OSFI changed significantly, though the change took two or three years to achieve. One senior official commented that whereas in the past OSFI officials would have analysed an institution, and then watched and worried, action would have been confined to meetings and recommendations, with no firm action being taken. As a result of the Guides 'we moved from analysis to action'.¹⁶ OSFI argue that based on the recovery rate on various liquidations, including the Confederation Life liquidation, it has been taking action on a timely basis. Recovery for policyholders in the Confederation Life liquidation (in fact commenced two years prior to the introduction of the Guides) was 100%, including interest, and recovery rates on other subsequent liquidations have been similar.¹⁷

Supervisory Framework

The Guides to Intervention were an important managerial tool in changing OSFI's culture of supervision. They were not, and were not meant to be, a leading tool for analysing risk. Rather, as one senior official commented, 'it was a way of putting together what we already knew and forcing us to put it into crude risk categories orientated to default risk - to force ourselves to say 'how worried are we about this', and to force us to say 'what action should we carry out''.¹⁸ Institutions continued to be analysed under the pre-existing analytical frameworks.

It was clear to those at the top of the organisation that these models would have to be revised, for two main reasons. First, they were inadequate to deal with the growing complexity of financial

institutions and financial activity. As one senior official commented, CAMELS enabled supervisors to write a nice essay about an institution, but without necessarily knowing much about it.¹⁹ Secondly, there was an organisational need to create a common culture within the organisation, and to create a common language of assessment. OSFI in 1995 was still functioning as three separate organisations, each with its own methodologies for assessing institutions. Integration had been achieved in the sense that all operated under one name and out of the same offices, but it had not been achieved at a deeper level within the organisation. The new Superintendent, John Palmer, was thus charged with this task.²⁰

Development of the new supervisory framework began in 1997, after the Guides had been introduced. There the process of reviewing the analytical framework was led by the chief internal auditor of one of the leading Canadian banks, Gordon Baker, who was recruited by OSFI.²¹ He headed the Supervisory Practices and Methods Group, a team of initially four people, rising to eight at its maximum. Members of the team were drawn from within the different divisions within OSFI, each with different backgrounds. Their first task was to examine the risk assessment frameworks of what were seen to be the other major banking supervisors: the Federal Reserve and the OCC in the US and the Bank of England in the UK. As in the UK, insurance supervision was seen to be too rudimentary in its analysis of risk both at home and overseas to be of much use.²² At the time (1997) the Bank of England was only in the very early stages of forming its own system, and so it was work at the Federal Reserve and the OCC was the most informative. The OCC in particular was developing a system which identified nine key risks within banks which it was proposing to use (although introduction was hampered by their legislative framework and close ties with the FDIC, which used CAMELS), which proved very helpful to OSFI in developing its own Framework.²³

The Group also spent some considerable time examining the risk assessment frameworks of banks and, to a lesser extent, insurance companies to see how they were analysing and managing risks. Learning from financial institutions was seen as relevant and important for three reasons. First, OSFI felt that in many cases the institutions, particularly banks, had a better understanding of risk and how it should be managed than OSFI did.²⁴ If it could leverage off that knowledge, it would do so. Secondly, those institutions were seen as sharing the same basic objectives as OSFI: their financial soundness. Both were orientated to the same end, thus it was appropriate that the analytical tools should be similar.²⁵ Third, it was felt that it was important for OSFI to have a way of analysing risks which was consistent with the way that institutions were managing their own risks to enable the regulator to have a dialogue with firms. As one senior official commented: 'it would be very difficult to have a dialogue with institutions and to talk about best practices if we weren't all in the same space'.²⁶

Work continued in 1998, and the Framework was published in the summer of 1999. There are two key elements to the Framework. First, it is described as a 'reliance-based supervision regime'.²⁷ In other words, supervision means using the work of an institution's board, senior management, internal audit, risk management, compliance and financial analysis functions and relying on the opinions of external auditors and actuaries. Second, it introduces a 'dynamic risk assessment process'.²⁸ This involves assessing the risks inherent in the firm's significant activities and the quality of its risk management, to arrive at an assessment of net risk for each of its significant activities. Net risks across all significant activities are then aggregated to an Overall Net Risk, using the relative materiality of the activities. This is then set against a firm's capital and earnings to arrive at a composite risk rating

(CR). The CR is then linked to the Guides to Intervention, and the regulatory response tailored accordingly.

The details of the framework are set out below, and there are five features which are worth noting. Firstly, the framework does not include an assessment of the impact that the realisation of the CR (ie financial failure) would have on Canadian financial markets. Secondly, and related to this, the risk assessment framework is seen as an important device for allocating resources to financial institutions, as it is for APRA or FSA. The level and frequency of supervisory scrutiny depends on the risk profile of the institution; i.e. its Composite Risk Rating. Thirdly, it is principally a qualitative model, based on subjective assessments of an institution by supervisory officials. Whilst those assessments may be based in part on numerical data, the framework itself does not rely on quantitative risk metrics.²⁹ Rather, assessments are supported by empirical evidence gathered from the assessor's knowledge of the environment, industry, the institution's activities, how those activities are managed and its experience on those activities. These assessments are synthesized in a risk matrix to develop an overall assessment of the risk profile of the institution, which, in turn, guides OSFI's supervisory / intervention strategy in respect of the institution.

Fourthly, the operation of the Framework is supported organisationally by the role of the 'relationship manager' (RM). The RM is responsible for maintaining a current assessment of a particular institution or institutions, and is the institution's point of contact within OSFI. It is the responsibility of the RM to know the institution intimately. That person performs or supervises the risk assessment, is responsible and accountable within the organisation for everything contained within it, and is seen as the key to making the process work dynamically and effectively.³⁰ The RM for a conglomerate is responsible for only one institution and is generally supported by 4-5 individuals dedicated to the institution. At the other end of the scale, one RM may be responsible for 6-8 smaller institutions.³¹ Finally, the operation of the Framework is linked strongly, as in FSA and APRA, to a philosophy of leveraging off the work of the firms' internal controls and oversight functions.³² Risk based supervision in all three institutions is tightly coupled to strategies of what in the regulation literature is termed 'meta-regulation': the regulation of firm's own internal regulation.

A Closer Look at the Supervisory Framework³³

The first element is the assessment of net risk, and was strongly influenced by the ways in which financial institutions themselves analysed their risks. This is expressed in the Framework as:

$\text{Inherent Risks mitigated by Quality of Risk Management} = \text{Net Risk}$

Table 1: OSFI's risk formula³⁴

The first stage in the assessment of net risk is the identification of 'significant activities' within the firm, in other words those activities which are assessed as being material to the institution. Identifying significant activities to an extent involves recasting the organisation's operations into OSFI's own assessment frame. Generally speaking, significant activities do try to parallel those considered significant by the institution in achieving its objectives, and include lines of

businesses, enterprise-wide processes, operating regions/units, etc. However, some re-casting does occur. So, for example, whilst a bank may understand its activities as organised along its business lines, OSFI will not always follow that understanding. This is largely because there may simply be too many business lines to monitor (70-100 for a major bank). Re-casting the institution's activities thus simplifies the assessment process.³⁵ Activities may therefore be grouped in order to achieve the desired level of granularity for an effective assessment, and groupings generally follow the lines of accountability and reporting within the institution, in order to ensure that the information necessary for assessing the activity is readily available. There are no detailed materiality criteria for this purpose, although there are some general criteria indicated in the Framework; rather the criteria are developed in the context of the individual institution, and reviewed by line management.³⁶ OSFI argue that the range of institutions supervised is too broad to devise any more detailed criteria;³⁷ rather it relies on the tacit knowledge of the RM acquired over long familiarity with an institution. In practice, informal criteria have developed: thus a business line which accounted for 10% of turnover, for example, would be likely to be considered significant in most cases.³⁸

Each significant activity is assessed for its inherent risk and its quality of risk management. The Framework that was published in 1999 set out these elements in very general terms. Work continued in developing criteria for assessing a firm's internal oversight functions, including consultations with trade associations and in-depth studies of around 40 different types and sizes of financial institutions to draw from their risk assessment and management processes.³⁹ These were published in 2002 and incorporated into the Framework.⁴⁰

Inherent risk is the risk intrinsic to that business activity arising from certain and uncertain exposure to potential future events and the potential impact of that risk materialising on an institution's capital or earnings.⁴¹ It is thus a measure of the degree of probability of an event and its relevance or materiality - how much would it affect the institution if that particular risk materialised. Environmental and industry-wide risk assessments are performed under the leadership of the Research Director or by specialist groups on specific topics, although there is at present no formal role within the analysis for the assessment of the impact of these macro-economic and industry wide risks on individual institutions, as there is in FSA's framework, though some would like to introduce one. RMs are expected to incorporate these assessments in their judgements on inherent risk.⁴²

Inherent risk is grouped into seven separate risk categories: credit, market, insurance, operational, liquidity, legal and regulatory and strategic risk. Assessing inherent risk is essentially a relative or comparative process: it involves looking at the way the market views a particular activity, for example commercial lending, and estimating where, in the conduct of that activity, the particular institution is compared with other institutions in the market overall.⁴³ For example, commercial lending might be seen as moderate risk within the market, but there are more and less risky ways of engaging in commercial lending. So an assessment of 'high' means the institution is engaging in a high risk segment of the market (eg lending to sub-prime creditors), rather than an assessment that commercial lending is itself high risk. In contrast to the assessment of the quality of management, no further detailed published criteria have been developed for inherent risks, as OSFI argues that given the range of institutions and activities regulated, it is not feasible to develop criteria that are common to all institutions.⁴⁴ Again, informal and unpublished criteria have developed to support these assessments, and OSFI has identified criteria/factors that need to be considered in assessing the level of inherent risk for

different activities, and it argues that application of these criteria/factors need to be tailored for each institution in view of the wide range of institutions and the range of activities involved.⁴⁵

The assessment of inherent risk is seen within OSFI as enabling the supervisor to develop particular expectations as to what risk management processes should be in place for that activity. Assessments of the quality of risk management are thus made, or meant to be made, against these expectations. Thus if an activity is assessed as having a high inherent risk, a high degree of management controls and oversight are expected to be in place.⁴⁶ In the Framework seven risk management control functions are identified: operational management, financial analysis, compliance, internal audit, risk management, senior management and board oversight, and assessed as strong, acceptable, needs improvement, or weak. It is not expected that every institution will have every control function, and where these are lacking OSFI looks to other functions within the institution that handle these functions, or those to whom they have been outsourced.⁴⁷

The assessment criteria for the quality of management are set out in general terms in the Framework, and OSFI has continued to develop these further in an attempt to improve the consistency and compatability of the risk assessments across the different financial institutions and industry sectors.⁴⁸ In July 2002 more detailed assessment criteria for quality of management were published. The assessment of quality of management is divided into two parts: operational management and oversight functions. Assessment against the criteria is a judgemental issue; it is also a relative assessment: how is this institution performing compared with other similar institutions. Thus the criteria for capital rating include an assessment of how its policies and practices measure up to generally accepted industry practices.⁴⁹ Further, the assessment of oversight functions is explicitly an assessment of the extent to which OSFI can rely on those functions to ensure that appropriate risk management controls are in place within the institution.⁵⁰

The assessment for each significant activity is recorded in the risk matrix. The following guide is set out in the Supervisory Framework and used to develop the net risk assessment for each activity. Net risk is assessed as low, moderate, above average or high:⁵¹

Table 2: OSFI's risk assessment matrix

Aggregate Quality of Risk Management for Significant Activity	Aggregate Level of Inherent Risk for Significant Activity		
	Low	Moderate	High
	Net Risk Assessment		
Strong	Low	Low	Moderate
Acceptable	Low	Moderate	High
Weak	Moderate	High	High

In practice, as part of the development of the Assessment Criteria, OSFI has moved to a four level ratings from the three indicated in the 1999 Framework. The additional levels are 'Above Average' for inherent risk assessments and 'Needs Improvement' for the quality of risk management.⁵²

The materiality, as described earlier, and net risks of the institution's activities are then considered to arrive at the overall net risk (ONR) for the institution. The assessment itself is not recast in numerical terms as an input into another calculation or assessment, in contrast with APRA's translation of the descriptive risk ratings into numerical scores, and their use to set the SOARS response level. Such an approach, OSFI argues, results in too high a degree of complexity and can detract from the overall picture: 'the forest gets lost for the trees'.⁵³

The quality, quantity and availability of externally and internally generated capital on a consolidated and unconsolidated basis is then considered, with earnings performance. The capital and earnings position is then offset against overall net risk to arrive at a composite risk rating (CR), and a direction of composite risk is included. There are four composite risk ratings: low, moderate, above average and high.⁵⁴ Of the 204 institutions assessed by March 2003, over 75% were assigned a low or moderate risk rating and only 1.5% of institutions were assessed as high risk.⁵⁵

The Supervisory Framework is the diagnostic part of the risk based approach. The 'treatment' is guided by the Guides to Intervention, discussed above. As the Supervisory Framework sets out, institutions ranked low are put at Stage 0: routine supervision and regulatory actions. Those ranked High are put at Stage 2 or above, and those ranked Moderate are put at Stage 0 or 1 depending on the direction in which it was assessed their CR was moving. Generally speaking, this pattern is followed, although it is proposed to revise the Guides and Framework in the light of experience.

The system was rolled out in 2002, and during 2002-3 CRs were provided to 204 institutions. By the end of 2004 it is anticipated that the CRs of all institutions will have been shared with them.

At present, only the CR is given, for although the Introduction to the Assessment Criteria that institutions will be given overall ratings on each of the oversight functions that exist within an institution (where these are separate from senior management),⁵⁶ this is not yet done, though it is anticipated it will be done in 2004-5.⁵⁷ As is the practice in APRA and FSA, more detailed information on the assessments is generally not shared in order to focus on what matters. Again similarly to FSA and APRA, the rating is non-negotiable and the institution is not allowed to disclose it except in prescribed circumstances.⁵⁸

The assessment of an institution is synthesized from the detailed supervisory file into an executive summary referred to as the Risk Assessment Summary (RAS). The RAS is an input into the production of OSFI's annual supervisory plan, that is the determination of priorities and resources. Individual supervisory plans for each institution are then finalised on a priority basis, according to the risk rankings.⁵⁹ Onsite reviews are conducted, and the individual RAS is updated. In contrast to FSA, every institution receives a risk assessment. Allocating resources to perform the risk assessment is linked to the size and complexity of the institution; thereafter the aim is that additional resources are invested dependent additionally on the institution's risk profile.

Outcomes

There has been a change in the use to which the Framework has been put. Those involved in its initial design and development argue that the Guides and Framework were not intended to be used as a tool for resource allocation, and whilst they are useful for containing costs by focusing on the highest risks, there was been no significant shift in resource allocation as a result of their initial introduction.⁶⁰ Those currently involved argue that the recent reorganization of OSFI, and the implementation of the Framework and Intervention Guides are intended to optimise the use of resources and enhance effectiveness of the supervisory process.⁶¹

The organisation has indeed been restructured quite significantly to facilitate the Framework's introduction, and people with more specialist skills have been recruited. One of the main changes has been the establishment of specialist groups to facilitate deeper assessments of institutions in the more technical areas such as credit, capital markets, actuarial assessments and information technology.

However, the main change identified by those interviewed was the change in the expectations of the task of supervision, and the re-skilling of staff which has been necessary as a result. The new skills required are not technical skills so much as softer, 'cultural' ones. In implementing the Guides to Intervention, staff had to become much tougher, much more interventionist and proactive in their approach, and the change took some time to achieve. Implementing the supervisory framework is also seen as a multi-year project. The Framework, if used properly, has the potential to give a far more detailed picture of an institution than any of the previous supervisory assessment frameworks, and moreover is designed to be one which a chief executive would recognise. This requires quite different skills from those necessary to write out a CAMELS-type assessment: supervisors have to be more investigative, have to ask more probing questions, seek more detailed information and be more explicit in their assessments. They also then have to explain the rationale for their assessment to the chief executive and the board of the financial institution. This requires quite different skills from writing reports which, because of their high level of generality, were rarely challenged. One of the reasons OSFI is keen to collect

industry-wide data on firms' inherent risks and control mechanisms is so it can bring something to the table which firms will not have, in other words, a broader perspective on what other firms are doing. It is here, one senior official explained, that OSFI can 'add value' to firms in the supervisory process.⁶² Information on practices in other firms, it is hoped, can also be used strategically to prompt firms to take remedial action.⁶³ It is notable that in the UK, the Practitioner Panel are demanding that FSA also make such 'benchmarking' data available.⁶⁴

As to whether the introduction of the Guides and the Framework have had beneficial effects on performance, this is an issue with which all three regulators have been battling, and each admits that they have not yet managed to come up with clear and accurate performance measures. In 1996 three aggregative indexes were introduced in an attempt to demonstrate OSFI's performance in maintaining the soundness of the financial system. These are first, a risk exposure index (REI), an aggregate measure of the number of firms in different states of financial soundness and the potential impact on the financial system if they were to fail.⁶⁵ Secondly, an 'intervention effectiveness measure' which scored whether OSFI's recommendations were implemented within the given time frame and the results achieved, with the aim of indicating to OSFI whether or not supervisory practices needed to be improved. Thirdly, the loss recovery index: the amount of money that depositors and policyholders could expect to receive on liquidation.⁶⁶ Performance against these indices is not regularly reported in the annual reports or elsewhere, however, and thus is very hard to assess.⁶⁷

Conclusion

Having been one of the first integrated regulators to attempt to devise a risk based approach that could span more than one type of financial institutions (insurance, deposit taking and pension funds), OSFI's model is a simpler one than either FSA's or APRA's. For example, there is no role played by impact assessments. In both FSA and APRA formal impact assessments are a key part of the overall risk assessment of the firm and play a critical role in assigning regulatory priorities. Within OSFI's system, prioritisation is done principally on the likelihood of a financial institution failing, rather than the impact if it did. Senior officials at OSFI would argue that this is a sign of a differing legislative mandates rather than a weaker methodology.⁶⁸ As is the case with APRA and FSA, the risk based approach continues to develop, and in that process some of the developments made by FSA and APRA are being incorporated, for example the use of panels to review risk assessments. Thus OSFI itself is learning from those who have learnt from it.

Part 2 The UK Financial Services Authority

Introduction

The FSA was formed in 1997, and received its full statutory powers in 2001. It is the amalgamation of nine predecessor regulators, and it regulates those who engage in specified activities including deposit taking, dealing, managing or arranging investments or providing investment advice. Its scope is expanding: in 2004 it will take over the regulation of mortgage advice, and from 2005 the regulation of the sale of general insurance and insurance for long term care. It thus covers a wider range of institutions and activities than either APRA or OSFI, and unlike them it regulates the way that firms conduct their business as well as their financial soundness. It currently regulates over 10,000 financial institutions, and has a staff of 2,165.⁶⁹

Its formation was prompted by a number of factors, some of which influenced the adoption and shape of the risk based approach. Most important of these were the longstanding dissatisfaction with the operation of the existing regime of financial regulation, and changes in the structure of financial markets. The failure of BCCI and Barings had significantly dented the Bank of England's reputation as a banking supervisor, and the pensions misselling episode, amongst other things, had revealed the complexity and awkward nature of the institutional structure established for regulation of investment business, and was perceived, rightly or wrongly, as illustrating the failure of 'self' regulation. Furthermore, changes in the structure of financial markets were rendering the old pattern of functional regulation obsolete, as financial institutions merged to form complex groups straddling a range of previously distinct financial markets and regulatory regimes (eg bancassurance, banks undertaking investment business), and financial instruments were being developed which straddled regulatory boundaries. Finally, there was a strong, and longstanding desire by government and regulators to equip regulators with greater powers to combat financial crime.⁷⁰

In 1997 the FSA was one of only a handful of integrated financial regulators in the world, a factor which is important in understanding the development of its approach. Under the governing statute, the Financial Services and Markets Act 2000 (FSMA), the FSA was given four statutory objectives, and given seven further elements that it is required by statute to 'take into account' in performing its functions.⁷¹ The objectives are the maintenance of market confidence, the provision of the appropriate degree of protection for consumers, the reduction in the scope for financial crime, and promoting public understanding of the financial system. Its seven principles of good regulation are efficient use of its resources, proportionality, facilitating innovation in financial markets, facilitating and maintaining national and international competitiveness, and consideration of the responsibilities of senior management.

In its early documentation the FSA declared its commitment to a 'risk based approach' to regulation and supervision,⁷² and it spent the next four years developing it. The result is ARROW, a cognitive, procedural and organisational device which is still evolving and being refined. In seeking to understand how and why it was developed, we need to trace its development back to the formation of the FSA, and to the practices of its constitutive regulators.

Approaches of predecessor regulators

Adopting an approach to supervision which sought to prioritise which firms were in most need of supervisory attention was not a new strategy for financial services regulation. The principal models used by predecessors were the Bank of England's RATE system, the Securities and Futures Authority's (SFA's) FIBSPAM, the Investment Management Regulatory Organisation's Relative Risk Assessment Model, the Building Societies Commission model, and that being developed as part of the Personal Investment Authority's Evolution Project. However, each differed in significant respects, notably in the risk factors employed, the relative weightings of risks, the ratings systems used, and the supervisory responses to given risk profiles. There was also great variation in sophistication; none was very sophisticated, but some were barely risk based at all.⁷³

Of these various models, RATE was the most influential model in the development of FSA's new approach; indeed, in the very early stages, the nomenclature of RATE was retained to describe the integrated approach, though was quickly dropped for reasons discussed below.⁷⁴ RATE was being developed by the Bank of England in 1996-7 in the wake of the Barings collapse as a response to the criticism of its supervisory processes.⁷⁵ Some of those criticisms were contained in the Board of Banking Supervision's Report, which had been written with the assistance of the consultants Arthur Andersen. Following it the Bank appointed Arthur Andersen to review its supervisory systems. Led by John Tiner (in 2003 appointed Chief Executive of FSA) they recommended the development of a risk based system. RATE was developed building on those proposals, under the supervision of the new Deputy Governor of the Bank, Howard Davies.⁷⁶

In developing RATE, a significant driver was the need to defend itself against critics of its supervisory abilities. A systematic method for determining the allocation of resources and for structuring supervisory processes was seen to be essential if the Bank was to be able to defend its position as banking supervisor, and to define the limits of what it could be expected to achieve.⁷⁷ In the view of key senior officials, the problem the Bank faced from the Barings case was not that the Bank made the wrong decision to let Barings go under, it was that it could not give answers for the decisions it had taken in the course of the supervisory process leading up to the collapse. As one official commented, if the Bank had been asked what its view was of Barings' riskiness or the supervisory approach the Bank should have been adopting, it could not have answered. He argued 'bureaucracies need tidy processes', and RATE was being developed with that function in mind.⁷⁸

The motivation was not simply to set up a shield to critics; it was to try to take greater control of the strategic direction of regulation. As one senior official commented,

'our experience of financial regulation over the years was that regulators could easily be blown off course, and regulation could easily become disproportionate and over-intrusive, as a result of regulatory failure. This is what I sometimes call the 'dangerous dogs' theory of regulation, whereby an instant political reaction to failure introduces a costly and non-workable regulation. So ensuring that you have a systematic response to risk assessment and resource allocation is a protection for everyone against knee jerk response to failure.'⁷⁹

There were additional, organisational, motivations. The supervisory department was under huge physical pressure, arising from lack of resources combined with the failures of many small banks

during the recession in the early 1990s, which occupied a great deal of supervisory time and attention.⁸⁰ Even without Barings that pressure meant that changes had to occur, and the Bank had to find a way of sorting out which problems it should be focusing on, and which it could ignore. There was a strong feeling that regulators were being too reactive and needed to shift to a proactive stance in which they determined the relationship with firms and not the other way around. Regulators could easily be distracted by the need to respond to numerous enquiries from firms, and thus fail to take the lead in determining which issues should have priority.

Prior to the development of RATE, the Bank therefore started developing ‘yardsticks’, indicators which would enable supervisors to determine their priorities when dealing with each particular bank. These focused on matters such as the relative size of a subsidiary (not to focus on parts which accounted for eg less than 5% of profits or turnover), those parts which were experiencing rapid growth (as this could indicate either that something was being ‘cooked up’ or that control systems would be under pressure), and geographical location (the further away they were, it was assumed the harder they would be for the bank to control).⁸¹

The idea of yardsticks developed, in conjunction with consultants Arthur Andersen, into risk indicators, and gradually into RATE: Risk Assessment, Tools and Evaluation. RATE was still in a nascent stage of development, and indeed was out to consultation, when the incoming Labour Government announced that the Bank’s supervisory responsibilities were to be transferred to FSA.

In practice this meant a wholesale re-siting of the Bank’s supervisory department to new offices, under a new name. The motivations for developing a risk based approach were thus transferred across from the Bank to the new FSA along with its regulatory functions and personnel. Howard Davies was appointed chairman of FSA, and work on RATE continued largely because Davies and others at the top thought it was a good basis for supervisory practice to develop.⁸² In June 1998 the FSA published its own version of RATE to apply to the supervision of banks.⁸³

Motivations for Developing ARROW

It soon became clear that the continued use of several different risk models within FSA was not sustainable. The draft Bill published in July 1998 gave the FSA a complex remit, a wide set of statutory objectives, and a significant set of powers. Senior management recognized the organization needed some analytical framework for making sense of the task it was being given. The legislative framework has been described subsequently by one former official as *necessitating* a risk based approach.⁸⁴ In legal terms, it does not, in the sense that there is no legislative provision which requires the FSA to take a risk based approach. What is notable however the Act was *interpreted* by key officials within FSA as requiring this form of approach, or at least as providing a defence for its adoption.

The need to develop an integrated approach had several motivations. First, the imperative that drove RATE was carried over into FSA: the need to develop systems which would enable the organization to answer its critics: to say why it did what it did, and equally as important, why it did not do what it did not do.⁸⁵ As with the Bank, there was a recognition that there is, from politicians and others, an almost infinite demand for regulation to solve perceived problems. However, there is a limit to what regulators can, and should be expected to do. One of the main

motivations in developing ARROW was to indicate clearly what those limits were, and to provide a systematic and transparent basis for defining and explaining them.⁸⁶

Secondly, a unified set of supervisory practices had to be created if the organization was to function as a coherent unit. There needed to be a common framework for supervising an institution if officials within FSA were to be able to communicate with one another. The methods of assessment, supervisory responses and resource allocation of the constituent regulators were all quite divergent. Banking, building society and insurance supervisors, for example, had all focused on the financial soundness of an institution. However, a small building society would have been visited every six months, but a large insurance company only every three years, with banks somewhere in between.⁸⁷ These disparities were enhanced when other regulatory objectives were introduced. Thus an insurance company might be ranked as low risk by prudential regulators within FSA, who were interested in whether it had sufficient assets to meet liabilities. However, the conduct of business regulators might rank it high risk, because of its poor sales practices.

These differences were manifested most sharply in the supervision of complex groups. One of the well-recognised and often-stated advantages of the creation of a single financial services regulator was that integrated financial conglomerates should be subjected to an integrated regulatory regime. In 1998 a specialist division was formed for the supervision of groups (the Complex Groups Division), and it was the experience of this group which informed the need for and shape of the integrated risk model.⁸⁸ In short, the various risk models were shown to be quite incompatible when applied to the same financial institution. Even trying to gain an overall picture of financial soundness of a conglomerate was problematic, for there was no method of comparing, for example, the exposure of the banking arm with those of securities trading, investment management, and insurance. As a result, the FSA did not have a single view of the riskiness of any particular financial group. If it were asked 'what is your view on X', or indeed, 'why did you do y' it could not give a single coherent answer.⁸⁹

Thirdly, there had to be a coherent way of allocating resources, and of defending that allocation. One of the acclaimed benefits of the 'single peak' regulator was resource fungibility, ie that resources could be channelled to the areas where they were seen to be most needed and could be used most effectively.⁹⁰ Without a common way of measuring or assessing risks arising within the regulatory community, there would be no basis on which to compare across its different components, and thus no way to ascertain which areas merited greater resources than others.⁹¹ As one senior official expressed it, 'the issue is one of risk capture – how to compare apples, pears and Ford Cortinas'.⁹² How, in other words, to compare misselling of split capital trusts with 'wash trades' in the copper markets,⁹³ with inadequate reserves of life insurance companies. Developing an integrated framework would facilitate the allocation of resources, and enable that allocation to be justified both internally to staff and externally to regulated firms, politicians and the public.⁹⁴

Fourthly, the creation of ARROW was intended to play a critical role in creating and shaping the FSA's organisational culture.⁹⁵ FSA was the amalgamation of nine existing organizations. As they merged, it was apparent that not only did their practices and culture differ, they also had a completely different language for describing risk, and indeed that there was no commonly understood meaning of the terms 'regulation', 'supervision' or 'enforcement'.⁹⁶ It was clear to those at the top of the organization that FSA needed to forge a common language and a common culture.⁹⁷ Moreover, it was critical that the language and practices that were developed used

terminology which was completely distinct from that used by any of the predecessor organizations, to signal that no previous regulator was dominant.⁹⁸ No one was to have prior ownership of the language and thus of the culture, cognitive framework or practices that FSA was developing. As senior officials commented, ARROW has thus been hugely significant in acting as a 'release mechanism', a vehicle for the creation of a common culture: with ARROW 'we made a virtue out of a necessity'.⁹⁹ Whilst that cultural integration process is not complete, ARROW has at least provided a common operational framework.

Development Processes and Influences

In 1999 the Board commissioned McKinsey's to conduct a strategic review of the FSA. This looked in part at the approaches of other financial regulators, and at the lessons that could be learnt from events such as Barings and pensions misselling.¹⁰⁰ Work then began within FSA to develop an integrated risk based approach, and its early foundations were outlined in January 2000 in the paper, *New Regulator for the New Millenium*. In 2001, a small group was formed of seven to eight officials (numbers fluctuated over time) which was charged with the task of designing a risk based system, in which risk was defined in terms of probability and impact. Those who formed part of the team had a wide range of backgrounds (though little role was played by those in insurance regulation), but the main criteria for their involvement was that they had strong analytical skills and were capable of lateral and innovative thinking: 'people with vision'.¹⁰¹

Early and subsequent development work was based to some extent on standard risk management methodology. The group took as their starting point the four statutory objectives set out in FSMA. However, it was felt that their expression in the legislation made them too vague to be operationalised. Instead, in developing the risk based approach, they found it operationally more useful to focus on the risks that the objectives would not be met and the range of generic factors that would be instrumental in that outcome.¹⁰² In other words, not 'how might we succeed', but 'how might we fail'.

The statutory objectives thus became re-cast in terms of 'worries', or 'risks to objectives' (RTOs), discussed further below. The RTOs are critical: they are the central vehicle for integration within the framework. Everything is assessed against these objectives. Once this analytical step had been taken, the next was clearly to identify what might give rise to those risks. The aim here was to devise a complete set of risk elements. The term 'elements' was deliberate: they were meant to have an elemental quality in that they could not be reduced any further. The risk matrix was seen by its initial architects as being like a periodic table, comprised of core elements which are irreducible.¹⁰³ After a few months of initial work, in which the core analytical framework was devised, work continued with Arthur Andersen to operationalise the framework. In late 2000 the terminology of RATE was abandoned in favour of the organizationally neutral acronym ARROW (Advanced Regulatory Risk Operating Framework).¹⁰⁴ The framework continued to be developed, was piloted in a desk based review of 50 firms and visits to 13 firms in 2001-2, revised further, and its roll out commenced in 2003.

In the process of forming ARROW, there were a number of intellectual influences. The influence of the management models that had shaped RATE was imported in modified form to the extent that ARROW drew on RATE. ARROW could not be a clone of RATE as the regulatory tasks and objectives of the FSA were significantly wider than those of the Bank of England, for whom

it had been developed. As one commented, ‘the Bank wasn’t interested in customers, it didn’t know anything about them, and it didn’t care’.¹⁰⁵ RATE was also focused on individual firms. However, past experiences in non-banking sectors, particularly pensions misselling, pointed to the need to adopt a broader perspective in order to identify systematic failings across an industry or business sector.¹⁰⁶ As for the approaches used by the rest of its constituent regulators, these were regarded as too rudimentary to provide an adequate basis on which to proceed,¹⁰⁷ and as insufficiently comprehensive for FSA’s needs.¹⁰⁸

There was only limited policy learning from other non-financial or non-UK regulators. In particular, the influences from other UK regulators or government bodies were minimal. Despite the plethora of publications and advice emanating from the Treasury, Cabinet Office and the National Audit Office on the design of risk management systems, these did not influence the key officials involved in developing the framework.¹⁰⁹ Indeed, those documents propose quite distinct models of risk management, which are far more comparable to generic corporate risk management systems in the private sector. Nor did the FSA look to the practices of other UK regulatory bodies, or consult them extensively. There was, and remains, a strong sense that it does not need to look to other regulators in other domains, at least in this area of its work, because the distinctiveness of the tasks it is charged with and the dynamic nature of the environment in which it works make it unlikely it would learn much from them.¹¹⁰ Further, as one senior official stated, ‘the FSA did not need as much external influence as other organisations might because it was a fusion of ten regulators, all with different systems’.¹¹¹ There was enough variety of practices existing inside the FSA without having to look outside to find more.

In contrast, the FSA did examine the practices of other financial regulators overseas quite closely, particularly the US Office of the Comptroller of the Currency (OCC) and handful of other integrated regulators which existed at the time. Of these, the practices of the OCC and OSFI were found to be of the most use. The OCC had developed a supervisory system for ranking banks and structuring its supervisory response in the late 1970s. The system (CAMELS) involves the assessment of various aspects of the bank’s business, the formation of a ranking, and a structured (and legislatively enshrined) supervisory response.¹¹² The OCC had also introduced a supplementary ‘risk based approach’ to supervision in 1996, which gave an enhanced risk assessment of a financial institution. Aspects of the OCC’s frameworks, particularly the enhanced risk assessment, Each of these elements found its way into ARROW in some form, but ARROW extends beyond it. OSFI’s framework was in a nascent stage, but did provide some examples of how risks could be disaggregated and identified. The practices of other integrated European financial regulators were looked at, but little was found to be of use, largely because the functions of prudential and conduct of business regulation were kept separate.¹¹³

The non-learning was largely justifiable. The FSA suffered from ‘first mover disadvantage’: it was one of the earliest integrated financial regulators to be formed which covered such a wide range of institutions and regulated both financial soundness and conduct of business.¹¹⁴ Other regulators, including integrated regulators, had far narrower remits, and so their models could only ever be partially useful. After the exercise of drawing up the *New Regulator for the New Millennium* document senior management was more than ever persuaded that it made sense to bring the two sides of regulation together and to have a risk framework that covered both. They also knew by then that they would have to design their own.¹¹⁵ However, there was also strong sense that the Bank and then the FSA should develop their own models: that they should be leaders, not followers. As one senior official commented, while he would have welcomed the adoption of CAMELS as it would have provided an early and simple solution to the Bank’s

supervisory problems, ‘never underestimate the arrogance of the Bank and the FSA... there was huge intellectual hostility to its adoption.. you had to grow your own, with your own names and your own jargon..’¹¹⁶

ARROW: the Key Elements

ARROW thus provides a common risk assessment framework for all firms regulated by FSA, and is aimed at promoting a regulatory approach that is proactive, integrated, and transparent.¹¹⁷ It is used to determine regulatory priorities and resource allocation, to assess firm specific risk for monitoring purposes; to assess market and industry wide risks to determine policy projects on an annual basis; to assess changes in regulatory scope (eg additional responsibilities) and integrate them into regulatory prioritisations.¹¹⁸

As noted above, risks are defined as the risks to FSA’s achievement of its statutory objectives.¹¹⁹ Three sources of risk are identified: the external environment, consumer and industry wide developments (CIW) and regulated institutions.¹²⁰ Each is perceived as a potential source of risk to the FSA to achieving its objectives. Together they form a ‘risk map’,¹²¹ supplemented by ‘watch lists’¹²² of particular firms. The environmental assessment and CIW assessments mark a critical difference between APRA and OSFI in that each is formally institutionalized within the system, and a separate division within the organization is responsible for them. There are six separate categories of environmental and CIW risk: political/legal, socio-democratic, technological, economic, competition and market structure.¹²³ Each year the FSA produces a general environmental risk report, the Financial Risk Outlook. Responsibility for the methodology of the CIW rests with a specialist unit within FSA, (currently the Finance, Strategy and Risk Division), although the projects or assessments can be led by staff in any department, and the CIWs are intended to promote cross-departmental work on cross-cutting themes.¹²⁴ The CIW focuses on developments in sectors and markets, the identification of risks and opportunities arising and their relationship with the statutory objectives. It also includes scenario analysis of when FSA should act in different scenarios, what events might give rise to those scenarios, the assessment of the impact of scenarios, and the development of regulatory action programmes in response.¹²⁵ Since January 2003 it has increased the sector specific detail it provides. This is meant to be integrated into the firm specific risk assessment, to assess how the broader risks posed by the environment might impact on the firm itself, though there is a danger that it is simply appended to the individual assessment without great notice being taken of it.¹²⁶

The Outlook is also used to determine strategic regulatory priorities and regulatory themes: issues that cut across an industry sector or sectors which might need attention (eg sales of particular financial products) and which would not be picked up in the firm specific risk assessment. This forms part of FSA’s move to ‘thematic regulation’¹²⁷ and the outcome will determine regulatory projects for the following year.¹²⁸ The development of ‘thematic regulation’ is an important element of ARROW, for it is the only trigger for performing individual risk assessments and for visiting firms who are otherwise subject to routine monitoring of their regulatory returns. The original conception of theme-based work drew directly on Howard Davies’s experience as Controller of the Audit Commission.¹²⁹ There, auditors would carry out a basic audit of each council each year, but would also look at particular themes from time to time as part of a process of overseeing value for money across the whole of the Council’s services. The original conception at FSA was that there would be a set of themes each year that would feed into supervision of individual institutions. However, in its implementation it has moved away from

this, and there has been some de-emphasising of this role for thematic work.¹³⁰ Thus recent themes have been more general, and included the implications of ecommerce, the impact of a low inflation environment, treating customers fairly after point of sale, harnessing market forces and the implications for the FSA of an ageing population. However, there are signs of a shift back to this original conception, and themed supervisory visits were conducted in 2003-4 in areas including treasury control functions in smaller banks and building societies, and risk management systems in insurance companies and independent financial advisors.¹³¹

The firm based risk assessment involves assessing the potential impact that the crystallization of any risk in a firm would have in terms of the FSA's objectives, together with the likelihood of such an outcome (probability). In assessing firm specific risk, the first stage is an impact assessment. At present this is based on quantitative indicators derived from the firm's financial position and levels of business activity. The impact indicators and thresholds vary with the activity of the firm. Thus for banks and building societies impact thresholds are based on total assets and sector weighted deposits; for life assurance companies total assets / liabilities, for securities firms on daily trade values and volume together with total assets / liabilities and regulatory resources requirement, and for those dealing in financial products, annual turnover.¹³² These are divided into impact bands or groups: low impact, medium low, medium high and high.¹³³ Where an institution conducts more than one function, the impact ratings are aggregated to produce a single rating.¹³⁴

Impact assessments are critical as, together with a very preliminary risk assessment of a firm, they determine its the 'relationship category', in other words the character of the relationship FSA will have with the firm, including the intensity of monitoring a firm will receive.¹³⁵ Low impact firms will receive baseline monitoring only. In other words, there will be no individual risk assessment done of those firms, and monitoring will be routine sampling of returns, or exceptionally an on-site visit as part of a thematic review. Significantly, there is also no practice of conducting random visits or inspections of Category D firms,¹³⁶ despite their recognized benefits as a regulatory device.¹³⁷

All other firms will have individual risk assessments. Arriving at the impact assessments was thus an important part of the process, for it expresses, in effect, the FSA's risk appetite: how 'low' does the impact of a firm's failure or misconduct have to be for FSA to feel it is safe, if not to ignore it, to spend very few resources on it. Determining impact thresholds is an art, not a science, however. In arriving at the thresholds, consideration was given to the extent to which the impact of the realization of a risk would be met by other parts of the system: the Ombudsman scheme or the compensation scheme, in particular. At the other end of the scale, there were a few, clearly large firms, whose failure or misconduct would have a significant systemic impact or would impact a significant number of consumers. In the middle was the bulge, and dealing with this was a line drawing exercise, validated by whether or not it accorded with officials' own perceptions of where they thought particular firms should lie, and what the overall distribution of firms should be between the impact categories. Over 80% of firms are in the low impact category, and only 1% are seen as high impact.¹³⁸

At present impact assessments are uniform across the RTOs – that is a single score is given for an institution with respect to each RTO. There are intentions to refine impact measures to arrive at different measures for each RTO,¹³⁹ but whatever form the disaggregation takes the measures are inevitably based on judgement, and fairly crude, even if couched in quantitative terms. For even if considerations of impact were confined to financial impact, it is very difficult to capture all of the

financial effects of a firm's failure. When the large insurance company HIH collapsed in Australia, for example, there was an unforeseen impact on the building industry: over half of all builders were insured by HIH and all their work had to stop when HIH went into liquidation, with significant implications for that sector of the economy. Capturing such 'macro-prudential' effects is notoriously hard. These difficulties are compounded once the FSA's other objectives are brought into consideration: how can one measure the impact on market confidence of endowment mortgage misselling, or events at Equitable Life?

In arriving at the impact measures there were also some political fudges: credit unions, for example, are rated as having a much higher impact than they merit: £1 in a credit union is seen as worth more than £1 deposited with a bank in terms of the impact of the institution's failure. The reason was that FSA knew it would have to spend significant resources on this sector to introduce them to the regulation, more resources than would have been merited under the ARROW framework strictly applied, but that the expenditure was necessitated and justified by their sense of having a social responsibility to ensure that credit unions did not cease to do business because of the new regulatory regime. As a result, credit unions were afforded a higher impact rating to justify the expenditure of resources FSA knew in advance it would have to spend.¹⁴⁰

Firm specific risk assessments are performed for all firms above 'low impact' rating. These are done either for the firm as a whole, or as it often the case in complex groups, on material business units (MBUs) that cut across the legal structure of the firm.¹⁴¹ Thus FSA, like OSFI and APRA, re-casts the firm into its own analytical framework, which can cut across legal or management divisions and business lines. MBUs are 'organisational units that have a discrete management structure, carry on a revenue generating activity and are individually significant to the overall risk of the group.' As a rule of thumb a 10% threshold is used, that is that revenue, pre-tax profits or capital represents 10% or more of the firm or group, though units below this may also be assessed if the supervisor thinks appropriate. Group wide-control risk and support functions, such as risk management, internal audit and IT are also assessed.

The aim in conducting the risk assessment is to develop a firm specific 'multidimensional risk picture'.¹⁴² The FSA have decomposed their four statutory objectives (promoting consumer understanding, ensuring the appropriate degree of consumer protection, reducing the scope for financial crime, and maintaining market confidence) into fifteen separate 'risks to objectives' (RTOs), which are in turn re-grouped into seven categories.¹⁴³ These are: financial failure, misconduct or mismanagement, consumer understanding, fraud or dishonesty, market abuse, money laundering, and market quality. Each risk element is scored against RTO. There are fifteen separate risk elements, which, as with OFSI and APRA, are grouped into business (inherent) risks and control risks.¹⁴⁴ Business risks comprise strategy risk; market, credit, insurance underwriting and operational risk; financial soundness; and nature of customers and products / services. Control risks comprise treatment of customers; organization; internal systems and controls; board, management and staff; and business and compliance culture. These are in turn disaggregated into a total of 45 risk elements.¹⁴⁵ Detailed criteria for assessing each risk have been produced for supervisors to use in their monitoring processes.¹⁴⁶

Each risk element of the firm is then scored against each RTO,¹⁴⁷ the scores are aggregated to produce risk score against each statutory objective, or a risk group,¹⁴⁸ resulting in a score of either high, medium high, medium low or low.¹⁴⁹ The aggregation is done by the IT system, which takes the highest score of the risk elements in that group, and that becomes the score for the group.¹⁵⁰ If any element has been scored as a 'don't know', then the aggregate score defaults to a

rating of medium / high.¹⁵¹ Within the matrix provision is made for the rankings produced by the IT system to be overridden by supervisors, with reasons attached (although the individual scores can simply be re-entered without creating an audit trail). In contrast with the risk based frameworks of OSFI and APRA, the risk elements are not weighted in the context of the particular institution being assessed.

To ensure consistency in the application of the framework, the risk assessment of each firm is reviewed by a panel of senior managers, and if a major firm is being reviewed, the panel is chaired by a director. The role of the panel is to challenge the scores produced to ensure that they represent an accurate assessment of the institution, and to look for industry trends across the firms assessed. Major firms will be assessed individually by a single panel; smaller firms will be reviewed by a line manager and batched for consideration by a panel.¹⁵²

A risk mitigation programme (RMP) is then developed for each firm.¹⁵³ The FSA has identified all the regulatory tools at its disposal, both formal and informal, and classified them into four types:¹⁵⁴ monitoring, diagnostic, preventative and remedial. Whilst the early stated aim was that there will be a broad alignment of the risk assessment with type of tool to be used,¹⁵⁵ this does not really happen in practice, and in principle any tool can be applied to any firm, and for smaller firms there is a much greater likelihood that the tools used will be cross-firm in nature.¹⁵⁶ The tools identified are not confined to those sanctioned under FSA's formal powers of enforcement, and include actions which are not specific to the individual firm, for example consumer education programmes. Where the actions relate to the firm specifically, each programme is internally validated within FSA;¹⁵⁷ and is non-negotiable in the sense that the risk rating is not open to debate.

The result of the risk assessment and the RMP are communicated to the chief executive and the board (or equivalent body) directly, to emphasize that it is the board's responsibility to ensure the RMP is implemented. This was introduced under RATE and is a marked change from previous practices by financial regulators, where the regulator would not normally have disclosed its assessment of the firm at all.¹⁵⁸ As with OSFI and APRA, the detailed assessments of the individual risk elements are not disclosed. Again, like OSFI and APRA, FSA require that both the score and the mitigation programme remain confidential, and the firm is not allowed to disclose it in whole or part to third parties. There is no specific rule to this effect in the Handbook; rather the provision is contained in policy statements only. There has been dissatisfaction with this aspect of the ARROW process, and the FSA Practitioner Panel has recommended that the FSA allow firms to view the 'risk mitigation letter' for factual accuracy before it is finalized (which FSA has now introduced),¹⁵⁹ and to indicate more clearly in that letter what the actions are that the firm should take, and their relative priority.¹⁶⁰

Finally, ARROW also introduced a watch list of firms in which problems were emerging that were not necessarily being picked up in the ARROW process, or which otherwise needed to be elevated to senior management. This is handled by the Finance, Strategy and Risk Division, and is looked at least monthly by senior management. The aim of the list is to provide a succinct statement of problems, and to ensure a strategy is devised for addressing those issues within a defined period of time which it then incorporated into the ARROW based work.¹⁶¹

Outcomes

As with all the regulators considered here, the new practices are in their infancy and so assessing outcomes is difficult. The most immediate impacts have been on the organisational structure, which has been overhauled several times, and on the allocation of resources. Under ARROW, resources should follow the risks. In reality, FSA is a large organization and it is difficult for changes in resource allocation to be as nimble as shifts in risk.¹⁶² Indeed, enhancing the correlation between risks and resource allocation is one of the aspects of ARROW which is currently under review.¹⁶³ There have however been some significant changes. The first is that far fewer resources are being spent on monitoring low impact, or 'category D', firms. Routine visits to independent financial advisers have been abandoned as 'too low value'.¹⁶⁴ Instead, as noted above, the CIW risk framework is used to determine 'themed' visits to such firms. Thus, for example, firms' business profiles are examined to see if they have a high number of sales of products that are identified in the CIW as posing particular risks to consumers, such as precipice bonds, and if they do they will be visited, and the inspection will focus specifically on that area of their business. Such 'themed' visits will cut across all relevant firms regardless of the relationship category in which they fall. This is a marked change from previous practices, in that aggregative, macro-level data is now used to frame the monitoring of low impact firms. Previously the main data used was individual, firm-level data which was often not aggregated and so patterns of misconduct were hard to observe (eg pensions misselling). As noted above, whilst issues that are noted in the course of a themed visit are not ignored, there are no random inspections of low impact firms to 'keep them on their toes'.¹⁶⁵

The second main shift of resources has been away from prudential regulation, particularly of groups, towards conduct of business regulation.¹⁶⁶ This switch stems in large part from the recognition that there is an important link between prudential and conduct regulation. For a retail bank, for example, the single biggest threat to its prudential position may derive from the reputational and misselling risks it runs if its conduct of business methods are in breach of regulatory requirements. Whereas previously significant supervisory resources would have been put into assessing the financial soundness of a bank and maintaining a relationship with it, now far more attention and resources are paid to its conduct of business. However, it is notable that even within FSA there are different views on whether this shift is attributable to ARROW or not, and moreover whether the result has been simply a bi-polar shift from prudential to conduct regulation, or whether there has instead been a better balancing of resources across all four statutory objectives.¹⁶⁷

The third shift in resources allocation has been away from banking regulation towards insurance regulation. On one estimate there has been a 30-40% reduction in staff dedicated to banking supervision and a corresponding increase in those dedicated to insurance supervision. As one senior official commented, 'when we did produced a single risk measure we realised our risk appetite in banking was far lower than in insurance. We'd be fiddling around with a small bank whilst leaving a large insurance company that was in much worse shape'.¹⁶⁸ Whether the shift would have happened in the absence of the framework is unclear. Whilst the introduction of ARROW probably hastened the shift, others argue that the shift would have happened anyway once the collapse in the equity markets revealed the parlous state of insurance companies' finances.¹⁶⁹

Implementation of ARROW has been a slow process, however, and is far from complete. Indeed, as noted above, it is currently under review. On one estimate, FSA is two-thirds of the way to making ARROW its complete operating framework;¹⁷⁰ for others, implementation is still patchy even in areas where it has been introduced. Conducting an assessment of a firm in

accordance with the ARROW matrix should be a very different task from that which any of the supervisors would have performed in their previous roles. Prudential regulators have to get used to dealing with conduct of business regulation, and actually caring about what happens to consumers; conduct of business regulators have to lose the 'tick the box' mentality and get used to assessing risk.¹⁷¹ There is a danger, however, that supervisors will continue to make their assessments as they have always done, and simply enter those on the new forms without any changes in supervisory approach or technique being adopted, or will simply make an initial assessment of the firm, and then fill in the scores to match that assessment rather than the other way around.¹⁷² There is a sense among some that the skills necessary to perform an ARROW assessment properly (as opposed to how to use the new IT system which accompanies it) still have not been either properly taught or learnt across the organization.¹⁷³ In recognition of this, FSA has stated that it will focus on enhancing training and information systems support for staff to ensure that the changes to a more risk based culture are achieved.¹⁷⁴

Moreover, because the framework requires a limitation on the resources that are spent on certain types of firms (low impact firms), or on firms in certain cases (eg medium / high impact but low risk), this means that officials are to leave certain issues aside, or limit the amount of time they spend on a firm. This can be unnerving: the safe thing to do in a bureaucracy is to act, or at least give the appearance of action, so you can show to others inside and outside the organization that you responded to a situation. Not to act is to expose oneself. For ARROW to work, staff within the organization have to feel that not doing something will be accepted by those further up the management chain. The commitment of senior management to ARROW is striking, and staff are not criticized for acting in a risk-based way. Moreover, whilst ARROW may make some feel exposed, it was sold within the organization as a defence mechanism: if you follow the book, then no-one will criticize you.¹⁷⁵ There are suggestions, however, that more could perhaps be done to instill the risk based culture at all levels, and for some the failure of senior management fully to articulate the extent to which they will 'buy in' to the process, and to accept that mistakes will be made and that things will be left undone, has hampered ARROW's implementation.¹⁷⁶ As one senior official expressed it: 'senior management have to expose their risk appetite. If they say to a person, only spend one day on a risk assessment of a firm when that person is used to spending four or five days, that person does not have time to look at all aspects of the firm, senior management have to accept that, and make it clear that they will accept that.'¹⁷⁷

Further, the classification of firms into different relationship categories, which is an integral part of ARROW, has had a significant impact on the nature of the relationship a firm now has with FSA. High impact or Category A firms have a 'close and continuous' relationship with FSA,¹⁷⁸ and individualized points of contact within it. Category D firms received baseline monitoring and are directed to a call centre. The categorization affects not only monitoring but enforcement, and there has been a shift in the deployment of enforcement resources.¹⁷⁹ Whereas the previous conduct of business regulators used to take many actions against individuals or small firms, attention is now directed at taking actions against the larger firms where such actions will have a significant deterrent effect on other similar firms. Enforcement cases are chosen for their strategic significance, and not for the moral culpability of the transgressors or any other firm-specific reason.¹⁸⁰ However, some modifications to the initial implementation of ARROW have had to be made: whereas at first enforcement actions were in effect abandoned for Category D firms, it was then realized that firms in this category would begin to see themselves as, in effect, an unregulated sector, with baseline monitoring and no enforcement. As a result the strategy has shifted somewhat, and actions are now taken against Category D firms, though again these are chosen principally for their strategic significance in providing a deterrence to others in the same

sector. Enforcement actions are also publicized far more, with the press office being closely involved.¹⁸¹

Despite these qualifications, ARROW has been credited by senior management as facilitating the implementation of FSA's extremely broad remit. Thus in identifying in such detail the different risk elements which have to be identified and their relationship to the statutory objectives, it has helped make the original sectoral supervisors 'operate outside their comfort zone' and to identify risks that they would not otherwise have identified.¹⁸² Thus banking regulators are forced under the framework to look at risks to consumers; asset management supervisors are forced to look at the whole financial group.¹⁸³ It is also seen to provide a valuable analytical framework which FSA can apply to new issues as they arise, or to new additions to its remit (eg general insurance, mortgage advice), and which can help to identify what the core issues are that should be addressed, in prioritizing them, and in framing the organisational response.¹⁸⁴ Thus, it was suggested, even if FSA's attention would have been drawn to insurance without ARROW, ARROW helped it determine how it should respond and move the issues forward,¹⁸⁵ and indeed the prudential supervision of insurance is being radically revised in lines with the ARROW framework.¹⁸⁶ ARROW is in fact fast becoming seen as an indispensable tool for some senior managers: when faced with a new issue, as one senior official stated: 'you can throw it all in the hopper, and out comes a score – you can then decide the allocation of resources between different risks'.¹⁸⁷

Although ARROW has only just been rolled out across the regulated firms, experience with its implementation is already being reviewed with a view to changes to its design and implementation. Key elements of the anticipated changes are to embed the 'risk based' approach more fully into all FSA's activities from strategic planning to the quotidian work of supervision and enforcement; to strengthen the links between risks and resources; improving the capability of staff; increasing the efficiency of the processes for FSA and for firms by making more effective use of the knowledge FSA already has; and involving firms more fully in the process.¹⁸⁸

Conclusion

The motivations for and influences on the development of FSA's integrated approach are thus a complex mix of bureaucratic defensiveness and a desire to provide an integrated regulatory approach across the whole of its regulatory constituency. In addition, there was an urgent need to find a cognitive framework which would enable the organization to determine its priorities and allocate resources accordingly. Further, as with OSFI and APRA, the development of a single decision making framework was necessary to facilitate organizational cohesion and the creation of a common culture across the nine predecessor organizations. Finally, as with APRA and OSFI, the past proved a good teacher: there was a determination that the same mistakes should not be made again.

The risk based approach that has been developed is also, like OSFI and APRA's, closely linked to a strategy of meta-regulation: to reliance on senior managers' responsibilities and internal controls. However ARROW is more complex than either APRA or OSFI's frameworks, arising mainly from FSA's broader statutory remit. ARROW encompasses a much wider set of risk elements which are independently scored against seven risks to objectives. Both the risks and the statutory objectives have been more disaggregated and the latter decomposed in a way that does

not occur in the OSFI and APRA approaches. The framework is also used to set the strategic direction of the regulator, not just to allocate supervisory resources, reflecting the FSA's broader scope for policy making than either OSFI or APRA. Finally, while there is an association between risk ranking and the supervisory response, this is less systematized than in the frameworks of either OSFI or APRA.

Whilst ARROW may have a much broader role in defining FSA's' regulatory strategies, in all three cases the risk based frameworks are closely linked to a strategy of meta-regulation, in other words reliance on and review of senior managers' responsibilities and internal controls, a strategy which is enshrined in the legislative mandates of both FSA and OSFI. Part of the aim in each assessment is to determine how much those at the top of the organization know about how the risks identified by the regulators are being managed within the organization, and to inform them directly of the regulator's view of the organization; in other words to give them information they may not already have. The aim is then to ensure that the firm's own system of regulation is enhanced to enable the regulator to spend fewer resources monitoring it in future. Meta-regulation is seen both as expedient and as philosophically 'right'. Responsibility is seen as resting primarily on firms to regulate themselves in such a way as to ensure that the regulatory objectives are being met. However, meta-regulation is also inevitable: regulators simply do not have the resources to do anything else. Reliance is a fact of life. What the risk based frameworks are intended to do is to help the regulator identify where it is well placed, where it is not, and how it can be made so.

Part 3 The Australian Prudential Regulation Authority

Introduction

The Australian Prudential Regulation Authority (APRA) was formed in 1998 following a Commission of Inquiry into the regulation of the financial system in Australia in 1997 (the Wallis Report).¹⁸⁹ APRA regulates deposit taking institutions, general and life insurers, and much of the superannuation (pension) industry, and is responsible for their financial soundness (prudential regulation). ASIC regulates securities business, superannuation funds (together with APRA and the Australian Tax Office) and insurance (together with APRA), and is responsible largely for regulating the manner in which those firms conduct their business (conduct of business regulation).

This paper explores the reasons why APRA developed a risk based approach to supervision, the process of its development, its two key elements of the framework: the Probability and Impact Ratings System (PAIRS) and the Supervisory Oversight and Response System (SOARS), and considers some of the impacts their introduction has had on APRA's operations.

Initial moves to risk based approaches

On its formation in 1998, APRA took over the responsibilities of eleven separate state and federal financial regulators.¹⁹⁰ Its creation was not accompanied by an overhaul in the legislative structure, however, though some subsequent legislative reform has occurred.¹⁹¹ Given the speed of its formation (only several months after the conclusion of the Wallis Report) and the scale of the institutional re-organisation involved, there was little time for any preparatory work to be done to create the new organisation, beyond the immediate demands of relocation and transfers of personnel. Operationally, APRA continued the practices of its predecessors, though critically there was a considerable attrition of staff, particularly those experienced in insurance regulation, due to the ministerial decision to relocate APRA from Canberra to Sydney.¹⁹²

In August 1999 the organization was restructured in an attempt to develop an integrated approach to supervision. Three divisions were created: the Diversified Institutions Division (DID), which was responsible for complex groups, and the Specialised Institutions Division (SID), which was responsible for the remainder firms, and the Policy, Research and Consulting Division (PRC), whose responsibilities included policy development, developmental work on supervision models, research and finance sector analysis, and the provision of 'specialized consulting services' to the front line DID and SID supervisory teams, for example, specialist risk management advice in areas such as market risk, credit risk, operational risk and insurance risk.¹⁹³

In 1999 both SID and DID began developing their own risk based frameworks for supervision. These developments were based on several motivations.¹⁹⁴ First, it was felt within APRA that risk based frameworks for supervision would achieve several of the goals of the creation of an integrated regulator, as expressed in the Wallis Report. Notably, it would enable APRA to have a supervisory approach which was consistent across different financial institutions. It would also enable APRA to have a 'less intrusive' regulatory approach, which it interpreted the Wallis

Report as advocating.¹⁹⁵ Secondly, APRA believed the development of a new approach or approaches would be the best way to create a new regulatory culture within the new organisation. A new, integrated approach to analyzing financial institutions would require the move away from institution-specific approaches of the previous regulatory framework, and thus help with the organisation's own integrative process. Thirdly, the introduction of an integrated risk based approach would bring prudential regulation up to date with the needs of the financial system. Risk management techniques, particularly in the banking industry, had become increasingly sophisticated. Moreover, financial institutions were entering into more complex and risky products, many of which transgressed the old institutional boundaries, and which therefore needed a different form of supervision than had been used thus far. Finally, developing a risk based framework would facilitate a more targeted use of APRA's resources. Resources are always an issue for a regulator, but APRA was particularly pressed as it was in receipt of fewer resources than had been given to its predecessor regulators. This again was consequent on the Wallis Report, which had argued that creation of a single regulator would eliminate the duplication of efforts by the eleven predecessor bodies, and thus would require fewer resources.

Although development of the frameworks began at the same time in SID and DID, work proceeded at different rates and, more significantly, with differences in methodology and approach.¹⁹⁶ As a result, the organisation's operations bifurcated, and from 1999-2001 APRA had two risk based models of supervision. Both had a common goal and shared some common threads, but in key respects they involved quite different supervisory methodologies and philosophies. They were based on the identification of slightly different risks, and the supervisory responses differed quite markedly.

The DID methodology was introduced in March 2000. It had similarities with that of the Insurance and Superannuation Commission (one of APRA's predecessors), though had modified it in a number of respects.¹⁹⁷ The DID model had five key elements: annual prudential reviews, risk ranking of institutions, a 'prudential consultation' following the review, quarterly reviews, and ad hoc visits.¹⁹⁸ Of this the prudential review was the most important for setting the subsequent supervisory stance. It was aimed at establishing a risk ranking for the institution, placing it in one of four categories: low, medium, high or extreme, with plus or minus signs used to show gradation and the direction in which it was felt the institution was moving. Ranking the firm involved assessing it under eight headings: strategy, legal structure/organization, capital/solvency, performance, asset and liability management, management and internal control, shareholder/head office strength, and unregulated subsidiaries and associates. Standard rating sheets were developed for individual entities providing summary information including the main issues requiring resolution. Rankings were produced both for the individual institution and for the conglomerate of which it formed a part (despite APRA's lack of any legal powers at that time to supervise on a conglomerate basis). Ratings meetings, attended by senior managers, were held every six months at which ratings and the necessary actions were discussed.¹⁹⁹ The idea was that the review would set the agenda for the meeting with senior management, and risk ranking would indicate the supervisory attention that needed to be paid to the quarterly reviews. Prudential consultations were envisaged to be high level meetings of one or two hours, and on-site visits to be relatively rare, and conducted by non-DID staff.

In a parallel process, APRA's other main division, SID, was developing its own supervisory methodology for regulating the smaller, non-diversified institutions, which was introduced in July 2000.²⁰⁰ It also involved the ranking of firms into risk categories, based on a list of risks to be assessed. The risks identified differed from those used within DID, as did the supervisory

response. There were fifteen separate risks,²⁰¹ though these were in broad terms similar to the types of risk identified in DID's system. The supervisory responses differed more markedly. In general terms, SID envisaged a greater and more flexible use of on-site visits, visits to be conducted principally by SID staff, greater scrutiny of internal documents such as actuarial reports and Board minutes, and the use of external parties to verify the information given by an institution, the quality of a firm's internal systems and controls and to gather more information if needed.

The consequence of the parallel and differential development of these approaches was that APRA was functioning in effect as two organizations. It was becoming apparent to senior management that this was not sustainable and that an integrated approach had to be developed. However events shifted the issue to the top of the agenda. In March 2001 the general insurance company HIH collapsed, with an estimated deficiency of approximately Aus \$5.5 billion. The collapse had significant implications throughout the economy, and attracted huge political and media attention. A Royal Commission was appointed to investigate and its Report, published in April 2003, was highly critical of APRA. It concluded that whilst APRA did not contribute to the collapse of HIH, 'the manner in which APRA exercised its powers and discharged its responsibilities under the Insurance Act fell short of that which the community was entitled to expect from the prudential regulator of the insurance industry.'²⁰² 'Throughout 2000 and 2001 APRA missed every opportunity to act upon the warning signs that HIH was heading towards statutory and commercial insolvency.'²⁰³

Both the Royal Commission's Report, and that presented by APRA as part of its evidence to the Commission (the Palmer Report)²⁰⁴ provide a good insight into the operation of APRA from its formation to March 2001. Whilst both Reports acknowledged that the staff of APRA did the best they could, given their lack of manpower and expertise, they criticised DID's risk based approach on several grounds. The most fundamental criticism was that the model expressly assumed a model of behaviour by firms that was simply flawed. DID's underlying premise was that institutions it supervised were sophisticated institutions with access to further capital or solvency support, either from the market or an overseas parent, and with well developed and well documented internal controls and regulatory compliance systems.²⁰⁵ As a result it assumed it could adopt a largely consultative, off-site approach to supervision. There was some recognition that some institutions would not fit this profile, but it was anticipated that this would be rare, and that the main response should be to require management to upgrade its controls and perhaps conduct a 'full scope visit', with enforcement action a very last resort.²⁰⁶ Palmer argued that while this might have been appropriate for some of the regulated institutions, it resulted in a supervisory approach that was inadequate to detect whether or not an institution did fit this premise, and to deal with it if it did.²⁰⁷ 'When institutions are experiencing serious difficulties, a series of visits to talk about upgrading practices and standards is unlikely to be effective.'²⁰⁸ Moreover, the methodology was expressed at too high a level of conceptualisation, and provided little practical guidance to officials on the ground, particularly given the relative lack of experience of many of the staff in the different areas now being supervised.²⁰⁹

The Royal Commission endorsed these conclusions, and added further criticisms about the general methodology adopted by DID, as well as its supervision of HIH in particular. It concluded there was a lack of critical analysis by DID of information in its possession,²¹⁰ there was a lack of guidance as to the appropriate supervisory responses to particular situations or events, for example errors in the statutory returns,²¹¹ and no guidance or triggers for senior management involvement.²¹² The methodology did not make provision for sufficient weight to

be given to assessments of specialist experts elsewhere in APRA, nor was there any mechanism for referring disputes between the teams of DID and the specialists higher up the organization.²¹³ In short the Royal Commission Report argued that the methodology ‘discouraged analytical thinking and independent investigation’²¹⁴ and concluded ‘weaknesses in the DID methodology contributed to APRA’s failure to identify the seriousness of the problems faced by HIH earlier and to take appropriate action.’²¹⁵

An internal report submitted to the Board in April 2001 following the collapse of HIH acknowledged that APRA had been insufficiently aggressive in pursuing its concerns about HIH’s financial condition. It stated that whilst one of the hallmarks of the supervisory model was the ‘consultative approach’, the HIH episode demonstrated the limitations of that approach with some institutions. The report concluded APRA needed clear triggers to move from a consultative relationship based on cooperation and trust to a tougher more inquisitorial approach. Training and experience were identified as being important in this regard. The internal report concluded that APRA needed to develop more disciplined and formal internal procedures. These included well-based systems to identify risks and to rate institutions; supervisory plans to ensure more intensive and intrusive oversight of higher risk institutions; and measures to involve the executive committee and possibly the APRA board in monitoring those action plans and in advising on further action where warranted.²¹⁶ The board agreed. APRA management should have had in place a mechanism for identifying earlier warnings of institutions at risk, enabling these issues to be escalated to more senior levels. The board should also require more explicit and timely information about high risk institutions, and review the systems, processes and culture of supervision prevailing throughout APRA.²¹⁷

Developing PAIRS and SOARS

The initial motivations for the development of the SID and DID models were still germane: organizational coherence, effective resource allocation and the adequate updating of financial supervision. Whilst the SID and DID models had narrowed the range of risk frameworks being used within APRA, they had failed to achieve these initial objectives. There was a significant bifurcation between the two divisions in the methodology they deployed and their supervisory approaches. There was no common language, and no common analytic approach to all regulated entities across APRA as a whole. Moreover, even though in theory within SID and DID there should have been such commonality, in practice how those models were implemented within the regional offices varied quite significantly.²¹⁸

The need to find an effective way of directing resources in the most effective also remained paramount. One of the key motivations in developing PAIRS and SOARS was to answer the question: “where should the supervisory dollar be spent in order to achieve the maximum possible reduction in the risk that the financial promises made to APRA’s beneficiaries will not be met?”²¹⁹ Ensuring ‘zero-failure’ of financial institutions is not a desirable option; some institutions will fail, and APRA is adamant that it is not its duty to prevent failures. Its duty, it argues, is to ensure that if an institution does fail it does so with minimum loss to deposit holders and beneficiaries. However, it needed a way of identifying which institutions needed its attention most.

Further, the failure of HII had put the weaknesses of the existing models, particularly that of DID, into sharp relief, and moreover had revealed the clear danger of reliance on a model of supervision which was in fact highly flawed. Risk management models introduce their own moral hazard, as HII made clear. Whilst APRA's own internal reports, noted above, had come up with broadly the same conclusions as the Palmer and Royal Commission reports, the trenchant and very public criticism that its models received in those Reports meant that APRA had to abandon them if it was to retain any credibility, almost regardless of its own view. Within APRA, it became a top priority for the organization to develop a single, integrated risk based framework that would improve the accuracy and consistency of APRA's risk and impact assessments and guide the allocation of resources in a more risk based fashion.²²⁰ Furthermore, senior figures in APRA were clear that APRA had to act in line with best global supervisory practice.²²¹ It had to be able to say its methods were up with the best in the world if it were to regain legitimacy and credibility as a regulator.

Finally, the failure of HII revealed that it was not sufficient to have framework for analyzing risks, there had to be a corresponding framework which would structure the supervisory response in line with the results of the risk assessment process, and which would ensure greater consistency and greater escalation of problems up the management hierarchy. Senior management needed a mechanism for ensuring greater control of individual supervisors to ensure that they responded more proactively and more consistently to the problems that they found.

HII did not initiate the development of PAIRS and SOARS, but it 'put the foot on the accelerator'²²² and made it clear which direction the car should go. HII had a fundamental affect on the design of PAIRS and SOARS. Post-HII, the aim of developing a less interventionist regulation had slipped from the agenda. Instead the revised supervisory philosophy became to intervene early, but in a more graduated way. No longer were large institutions to be subject to 'soft touch' regulation; rather, the consequences of their financial failure were so significant that the risks within them were to be deliberately magnified to ensure they received a higher degree of regulatory attention than smaller institutions with the same level of risk. Moreover, HII had made it clear that APRA needed a more consistent and prescriptive approach to supervision, driven by senior management rather than individual staff members.

In September 2001 a project was initiated to review what was being done within SID and DID with a view to coming up with a single approach for ranking institutions in accordance with their risk profiles. The approach was developed entirely in-house. Its development was led by a widely experienced international banker recruited from outside APRA, and was overseen by a group of 7-8 people who had significant analytical experience in each of the three areas of APRA's remit: deposit taking, insurance and superannuation, and also involved people with quantitative and statistical experience.²²³

The first task was to review the practices of other financial regulators, notably the evolution of CAMEL in the US, and then more particularly at the two most integrated regulators, the FSA in the UK and OSFI in Canada. The reference group was other overseas financial regulators; there was very little to learn either from APRA's predecessors, from other national financial regulators, or from other Australian state or federal regulators in other domains, either because they did not possess cognate models, or their models assessed materially different risks.²²⁴ External consultants played no role in developing a risk based framework, and financial institutions played only a very indirect role, in that those working on the development of PAIRS had extensive backgrounds in credit assessment models used in banks.²²⁵

The most direct influences on PAIRS’s development were the systems being developed by OSFI in Canada and the FSA in the UK.²²⁶ Of these, OSFI was the more influential, largely because its remit and objectives were closest to APRA’s, and therefore the risk assessment process that they used was that most suited to APRA’s needs.²²⁷ Decision making by analogy was thus possible, and more straightforward. Awareness of both models had been facilitated by the relatively open approach of each regulator to their developments, with both publishing documents detailing the approach, and through the annual conference of integrated financial supervisors which was hosted by OSFI in 1999, and by APRA in 2000. In these conferences there was a great deal of ‘show and tell’ by regulators, and discussion of risk based frameworks for supervision and regulation were key topics of discussion.²²⁸ APRA was also very aware of OSFI’s model through John Palmer, who had just retired as Superintendent of OSFI when he wrote his Report for the Royal Commission on HIH. He advocated the adoption of aspects of that model in his Report.²²⁹

PAIRS uses the same categories of risk assessment as OSFI, has the same methodology for arriving at a figure for the ‘net risk’ of an institution, and like OSFI compares it with the available capital of the financial institution. It differs from OSFI’s model in three key respects. First, it takes OSFI’s model one step further by formally deriving an ‘overall risk of failure’ and tying that in with APRA’s regulatory objectives. Secondly, it introduces a formalised system of weighting the component risk assessments in order to produce the overall rating. Finally, it incorporates an impact assessment, which is absent from OSFI’s framework, and the main influence for which was the FSA.²³⁰

The PAIRS and SOARS frameworks

PAIRS is based on two key questions: what is the likelihood that certain risks that are inherent within a financial institution will be contained by its management, and **if not**, what is the likelihood that the capital which the institution has available to it will be insufficient to prevent it from meeting its obligations to APRA’s beneficiaries. These are driven by APRA’s central statutory objective, which is that regulated entities will meet their obligations to their policy and deposit holders and superannuation fund beneficiaries within the context of an efficient and competitive financial system. As APRA makes clear, its aim is not to prevent all financial failure: ‘It is statistically certain that some APRA regulated entities will fail. Our job is to make these failures rare and through early intervention to minimize the amount lost.’²³¹

The PAIRS framework is built on the same building blocks as any standard risk management system: probability of the risk occurring and the impact if it does. Under PAIRS, financial institutions are thus ranked according to the probability that an institution will not be able to meet its financial commitments and the impact on the Australian financial system should the institution fail.²³² Under PAIRS, the risk assessment model is as follows:

Table 3: the PAIRS Risk Assessment Model

Inherent Risk	Net Risk
Minus	Minus

Management and Control	Capital Support
Equals	Equals
Net Risk	Overall Risk of Failure

Inherent risk refers to the risks to a firm's financial performance arising from the nature and scale of the firm's business activities. There are eight elements of inherent risk: counterparty default / credit risk; balance sheet and market risk; insurance risk; operational risk; liquidity risk; legal and regulatory risk; strategic risk; and contagion and related party risk. In assessing these risks, APRA draws on information gained from regulatory returns, on-site visits and other sources, including rating agencies,²³³ auditors and actuaries' reports, the media and information from whistleblowers. Analyzing this 'blizzard of data' is clearly not an insignificant task, and has been described as a 'core competency' for APRA.²³⁴

Inherent risks are rated in absolute terms, and scored from 0-4. Rating is inevitably an exercise of supervisory judgement, in which the assessments are not absolute, but are to an extent relative: how does this firm compare against industry benchmarks. In other words, in assessing, for example, an institution's residential property lending activities, the question would be, given that this activity is generally regarded by the industry as medium risk, at what end of the risk scale is this institution's practice of that activity in comparison with others engaging in that activity. As use of PAIRS develops, the aim is to move away from initial benchmarks of relative to more absolute assessments.²³⁵ APRA also assesses the inherent risk of the activity against the firm's own risk appetite: the risk appetite of an institution should represent the upper limit of its inherent risk; exceeding it is taken to indicate a serious failing in the institution's risk management.²³⁶

Within this assessment, APRA, like OSFI, has no formal role for environmental or industry-wide risks, rather it is assumed that individual supervisors will take these into account when assessing strategic risk. Like OSFI, however, APRA does have specialist support units in particular areas, such as market or credit risk, that supervisors can draw on to help them make their assessments. It also uses research from the Reserve Bank of Australia (the central bank) on financial stability issues, which are communicated to individual assessors, and the Applied Research team conducts work at the industry level, for example modelling the effect of a home loan market reverse on the 120 largest deposit takers, the results of which were in turn communicated to individual assessors and reflected in the relevant PAIRS ratings.

An attempt is then made to capture both the expected and unexpected losses that might arise and to weight them. Each element is then weighted as to its overall significance in the institution's portfolio. For inherent risk, this is the expected percentage income contribution from each risk factor.²³⁷ Its quality is then assessed. In other words, a judgement is made on the likelihood of unexpected losses arising due to each risk factor, and the potential positive or negative impact of each element.²³⁸ The weighted elements are then aggregated to generate an overall risk assessment. Each aspect of this process: assessing the risk, weighting it, assessing its quality, and arriving at an aggregate score, are all exercises of supervisory judgement. As one senior official explained: 'PAIRS is a structured framework for expert judgement.'²³⁹

The firm's management and controls are then assessed in terms of how well they contain inherent risk.²⁴⁰ In other words, how the institution sets its risk appetite, how it articulates it, how it ensures that all risks are identified and measured, what documentation of risk management policies there is and whether it is followed, and systems of feedback and reporting. There are six 'building blocks' of management and control risk: the board of directors or trustees; senior management; operational management; management information systems / financial control; risk management, compliance and independent review (internal and external audit functions). These are rated individually from 0-4, again taking into account industry benchmarks, and then weighted and aggregated. Less discretion is given in assigning weightings for management and controls than for inherent risk, however. The overall scores for management and control and inherent risk are then combined to arrive at a figure for net risk, that is the residual inherent risk that is not contained by management and controls. Both components are given equal weighting in the calculation.

The third stage is an evaluation of the institution's capital support.²⁴¹ Capital support refers to the financial support an institution has to cover its losses, and still be able to meet its commitments to consumers. The greater the institution's net risk, the greater the capital support buffer required to bring the overall risk of failure down to what APRA considers to be an acceptable level. Capital support is comprised of current coverage / surplus, earnings and access to additional capital. As with the other components, each is assessed in absolute terms taking account of industry benchmarks, then weighted and aggregated to arrive at an overall rating. The weightings for capital support are fixed for all institutions. In general, weightings are fixed at 50% for current balance sheet amount and quality of capital; 25% for earnings strength and 25% for access to new capital.²⁴²

APRA then combines the capital support and net risk scores to assess the overall risk of failure. In contrast to the models of FSA or OSFI, for example, all the scoring is based on fourth power averaging; scores are assigned from 0-4, and there is then a non-linear relationship between the score and the probability indices. The probability of failure increases exponentially through the risk scores. A rating of two, for example, carries sixteen times the risk of a one rating. The probability index runs from 1 to 256. Once a probability figure is obtained, the figures are assigned to one of five risk categories: low, low medium, high medium, high and extreme.

The reason for the adoption of the exponential rather than linear relationship between risk score and probability rating is to capture things that are unquestionably a concern and to emphasise them.²⁴³ It was influenced by the historical default experience of ratings agencies such as Moody's and Standard and Poors. The main reasons for its adoption, however, was to correct for the misperception that risks are lower than they in fact are.²⁴⁴ The exponential measure is thus deliberately designed to highlight concerns so as to force a rating up the SOARS scale, and thus compel a more aggressive supervisory response than an official might otherwise have wanted, or thought it necessary, to adopt.²⁴⁵

Moreover, the final risk assessment is not left to supervisory judgement; rather the model aggregates the scores and the exponential nature of the weighting automatically gives more influence to high risk rather than low risk areas. Thus if, for example, there were ten aspects of a firm's inherent risks rated, of which nine were rated low and one was rated high, the system would not default to high, but would rate higher than the lowest ranking (bearing in mind the exponential relationship between the rankings). Again the reason is that the model is deliberately designed to result in a more accurate risk assessment than might result were it to be left to

supervisors themselves. As one senior official commented, ‘for example, if you have 16 out of 18 [risk elements] rated as low risk the supervisor would say “that’s OK”, but it’s not’.²⁴⁶

Finally, both in making the risk assessments, and once they are made, analysts look to media reports and, for those institutions that are externally rated, at the reports of four external ratings agencies, described by one senior official as ‘competitors’ to PAIRS.²⁴⁷ If these are qualitatively worse than the PAIRS assessments, that disparity is investigated. However, whilst ratings are seen as useful in that they tend to over signal problems,²⁴⁸ they are not blindly followed. As those interviewed indicated, there may be a range of reasons why APRA’s rating justifiably differs, including the fact that APRA has access to different information than the agencies.²⁴⁹ Moreover, as one cautioned, ‘ratings agencies are useful as a benchmark, but they are not infallible – right up to its collapse HIH was a single A rated institution. Ratings can be a statistical distraction which is not that useful for an entity’.²⁵⁰ Thus APRA will not investigate if a rating agency produces a rating higher than APRA’s. The aim is to err on the side of caution, of assuming there is a problem where there is not. As one senior official commented, ‘it’s cheap and easy for APRA to look more closely at an entity producing mild problem signals, and determine that the problem isn’t real. It is very hard indeed on our beneficiaries for APRA to conclude that an entity is sound, when in fact it has problems’.²⁵¹

The second principal component is the impact assessment, which as noted above is absent from OSFI’s model, and with respect to which FSA was the main influence. However, despite its critical role in determining the supervisory response to an institution, impact assessment is at present relatively under-developed technique. It is intended to measure the overall economic cost arising from the failure of each institution, taking into account both direct costs to creditors (including consumers) and the indirect systemic effects. However, at present the impact is determined solely with reference to each institution’s total Australian resident assets, subject to a management override which can raise or lower the impact depending on senior management’s assessment.²⁵² The impact index is divided into four risk ratings, low, medium, high and extreme. There was little science involved in determining the dividing lines between the ratings, it was more a question of whether the overall result seemed to make sense: there are relatively few firms in the high and extreme categories, but they control the bulk of the regulated money. Of deposit taking and insurance institutions, approximately 100 of the 300 regulated are rated as high impact; of pension funds, about 50 are rated as high impact and 1,500 as low impact, and then there are 8,500 superannuation funds which are administered by trustees and which have few members; for these the rating ascribed to the fund is determined by the rating which has been ascribed to the financial institution which is its trustee. All larger institutions are subject to PAIRS in its full form; smaller pension funds have a more streamlined version tailored specifically to them, and for the small superannuation funds, only the trustee is rated. As a result of the concentration of money in relatively few institutions, whilst over 99% of the money regulated is subject to PAIRS, it is applied to only about half of the non-superannuation fund entities.

As with any risk model, whilst it contains quantitative elements, the PAIRS methodology is based on qualitative assessments. APRA explicitly recognises this, and sees it as a virtue.²⁵³ As the principal architect of PAIRS explains, PAIRS ‘formalises the mental process involved in distilling judgements on a wide range of influencing factors down into a single overall assessment of risk: which factors are more or less important, and of those, which have a more or less positive or negative impact’.²⁵⁴ ‘PAIRS is all human brain stuff: nothing gets into a PAIRS score without a judgement of its relative input, significance and output’.²⁵⁵ Within this process, the weighting

process is seen as most significant in providing a structured framework for expert judgement. It both formalises the assessment process by requiring the individual supervisor to make explicit what would normally be implicit assessments as to the relative importance of a risk factor, and it gives it transparency, enabling another supervisor to see how the overall result was derived.

Given that the scores are based on qualitative assessments, PAIRS clearly raises issues of consistency and reliability, though it is questionable whether these are any different to those that arise in any supervisory process. The assessments are done by the individual supervisors within the divisions of SID and DID. That assessment is then reviewed by a reviewer and the individual's line manager. The line managers 'own' the PAIRS rating, it is their judgements, in other words, on which all subsequent action is based. They can call on the assistance of the specialist risk teams within the PRC, but the latter cannot override their assessments. Specialist risk teams can however escalate a disagreement up the management chain, and if need be to Members, which gives them considerable influence over PAIRS outcomes.

All PAIRS assessments must be signed off by at least one level of management, often by two.²⁵⁶ Furthermore, the probability assessment for any institution ranked as extreme or high impact is reviewed by a PAIRS panel. This is composed of the line manager, all relevant specialist risk experts, an industry specialist and representatives from the cross-divisional committees for each industry sector to ensure consistency, a representative from quality assurance, and is chaired by a PAIRS specialist.²⁵⁷ All PAIRS assessments are placed on a central database accessible by most professional staff within APRA, and APRA Members (its governance group, equivalent to its Board) receive a monthly summary report, with references to substantial individual entity issues.²⁵⁸

A supervisor can appeal against supervisory stance that PAIRS determines up the management chain, but appeals are only upheld if it is found the PAIRS rating was faulty. Further, a PAIRS output which sets a SOARS rating of either 'mandated improvement' and 'restructure' can only be overridden at Board level.²⁵⁹ It is here that the incentives to 'reverse engineer' the initial PAIRS rating become most apparent; and as noted above, it was in order to address these incentives that the methodology for the calculation of the impact and probability indices on a non-linear basis was adopted.

SOARS

As noted above, the development of SOARS was shaped by the experience of HIH. The failure of HIH revealed the weaknesses in APRA's existing risk based frameworks for assessing financial institutions, but it also revealed the absence of an effective culture or practices of supervision and intervention. SOARS was devised to address that failure, and is deliberately intended to create a more pre-emptive and effective supervisory intervention culture within APRA, and to improve consistency in its supervisory interventions.²⁶⁰

SOARS is derived directly from the PAIRS process, as the table below indicates. SOARS has two components: a supervisory attention index and a supervisory stance. The supervisory attention index computed as the geometric average of the probability (risk) index and the impact

index. This index provides a guide to the amount of supervisory resources each institution is likely to require, taking both the level of supervisory concern and the scale of the particular institution into account. The supervisory stance is determined by the PAIRS descriptive impact and probability ratings, and is an indication of the qualitative nature of the supervisory relationship in terms of the relative intrusiveness, intensity and directiveness.

The intervention settings for the supervisory attention index and the supervisory stance are set by APRA’s senior executive and Members. They are currently torqued towards earlier and more interventionist action for larger firms (roughly, those with over Aus \$2.5 billion in assets), again a direct consequence of HIH. Once the PAIRS score is set, there is thus no supervisory judgement in arriving at the SOARS stance; as one senior official commented, ‘now they [the staff] have to do mandated improvement even if they don’t want to’.²⁶¹ Supervisors do have discretion to decide what types of action they will require the firm to take, and which supervisory tools they will use (eg raising capital requirements, seeking independent actuary reports), but they are meant to follow SOARS in determining the level of resources applied to the firm, and the supervisory attitude they adopt.

Table 4: The SOARS grid²⁶²

Probability Rating	Low		Medium		High	
	Extreme		Low		High	
Extreme impact	Normal	Oversight	Mandated Improvement	Restructure	Restructure	Restructure
High impact	Normal	Oversight	Oversight	Mandated Improvement	Restructure	Restructure
Medium impact	Normal	Normal	Oversight	Mandated Improvement	Restructure	Restructure
Low impact	Normal	Normal	Oversight	Mandated Improvement	Restructure	Restructure

Essentially the SOARS grid is a statement of APRA’s own risk appetite. It is a statement of the extent to which APRA considers it tolerable to let a situation of potential or actual risk of failure exist without stepping up its supervisory efforts to reduce that risk, given the constraints on its resources. Risk of failure cannot, and arguably should not be eliminated; however some levels of risk are more acceptable than others. The SOARS grid is APRA’s answer to the question: ‘what failures can we risk?’ The answer, in effect, is that APRA cannot risk the failure of a high risk, high impact institution; but it can risk the failure of a low impact, low risk institution; and it is moderately comfortable with the failure of a medium risk, medium impact one.

There are four supervisory stances: normal, oversight, mandated improvement and restructure.²⁶³ Once a supervisory stance is determined, the individual supervisor has a range of actions she can adopt. Normal entities are subjected to information gathering from regulatory returns and onsite visits. Oversight entities are those which are not considered to pose a material risk of failure, but some aspect of their risk position is regarded by APRA as requiring monitoring, for example how

a firm manages its risks. Typical supervisory responses for oversight entities include more frequent and more searching onsite visits, additional reporting requirements, independent reports from auditors or actuaries, a tougher stance taken in communications with the entity and its board, and possibly adjustments to minimal capital ratios. An 'oversight' entity is not one which is necessarily at risk of failure; APRA comments that some entities will always be in 'oversight' because of the level of risk that they choose to run in their business. Such entities in effect elect to accept more intensive APRA supervision in order to pursue higher risk in the hope of higher returns.²⁶⁴ For those institutions categorized as 'normal', the approach may be softer. As one senior official commented, 'for normal entities, if we 'recommend' that they do something, that means you do it or we will review your risk rating; if we issue a 'requirement' that means you do it or we will take enforcement action.'²⁶⁵

For firms in 'mandated improvement', in contrast, the attitude is intended to be much more directive than for those in 'normal' or 'oversight'. Such firms lie outside APRA's tolerable risk range, although they are unlikely to fail. Intervention is intended to be more vigorous: increases of capital requirements are routine, and in addition to the strategies adopted for 'oversight' firms APRA typically provides a general message as to the nature of risks posed by the firm, and a list of specific requirements of actions together with a time limit, typically of 90 days, for the institution to show how it will respond. It may also issue directions or accept enforceable undertakings on some aspects of the entity's risk position, and require independent verification that a firm's remediation plan has been implemented. Finally, for those firms in 'restructure', APRA considers that these entities are no longer competent to conduct business within the risk parameters that APRA has set, and it takes active steps to urge the firm to seek a merger partner or buyer for the business, and takes additional steps to protect beneficiaries from any potential losses by, for example, raising capital requirements or using statutory powers to require the removal of senior officers or the cessation of particular business activities.²⁶⁶

The introduction of SOARS has thus changed the basis on which APRA interacts with firms. There is a greater transparency in APRA's dealing with firms in that a draft of the risk assessment is sent to the firm together with a statement of the action that APRA recommends or requires. The firm may make factual corrections to the assessment, but APRA is clear that they will not allow the firm to debate APRA's assessments of those facts. This information has normally been sent to the chairman of the board and members of senior management, on the assumption that the chairman would reveal it to the rest of the Board. However, following events at the National Australia Bank, in which it was revealed that the chairman of the Board failed to disclose the report to the Board, APRA is considering whether it would be preferable to send the assessment directly to individual Board members.²⁶⁷

APRA requires firms to respond to supervisory requirements by formulating their own remediation plans within a specified period of time, usually 90 days. These are submitted to APRA who determines whether or not it will accept them. PAIRS assessments that lead to the more serious SOARS categories, mandated improvement and restructure, require supervisory intervention plans. The levels at which these are reviewed within APRA is based on the risk and impact levels involved, but generally flow at least to General Manager level. Thus, for example, a firm which is low impact but whose SOARS stance is mandated improvement will be reviewed by one or two General Managers, whereas a firm whose stance is also mandated improvement but which is a high impact firm will be reviewed by more senior management or by a panel.²⁶⁸ Implementation of firm's remediation plans is monitored by the supervisor themselves, and in particularly complex cases a specific project team is formed for this purpose.²⁶⁹

Outcomes

PAIRS is applied to approximately 3,000 of the 11,000 institutions that APRA regulates. The remainder are small superannuation funds (Small APRA Funds) which are assessed by the rating of their approved trustees. By June 2003 825 entities had been rated; these included the 100 or so high or extreme impact firms, which combined control 80% of the regulated assets.²⁷⁰ Given that the frameworks have only just been introduced, assessing their outcomes is problematic. Nonetheless, senior officials are clear in their view that whilst PAIRS and SOARS are not perfect, they are better than what APRA had before. 'There are no cases where we have made mistakes through using PAIRS and SOARS in situations where we would have handled matters better under the old regime, and there are a significant number of cases where we have taken action which has been more interventionist, and taken far earlier, than would have occurred prior to the introduction of the risk based approaches.'²⁷¹ As one commented, 'if we'd had PAIRS and SOARS when HIH happened, then HIH would still have failed, but earlier, with less loss, and we would have seen it coming.'²⁷²

More specifically, there have been some direct organizational consequences. Whilst SID and DID still exist, APRA now functions more as one organization than two. The introduction of a single integrated risk based framework provides the organization with a common language and a common culture, and is credited with giving the organization greater coherence, facilitating movement of staff between the divisions and enabling better resource allocation.²⁷³

There has also been a shift in the deployment of resources away from smaller, low impact (albeit high probability) firms, and towards the larger, high impact firms, or in organizational terms, from SID to DID. Indeed it is envisaged that a further shift in this direction will occur, facilitated by the development of a streamlined version of PAIRS for small pension funds.²⁷⁴ Small pension funds comprise 60% of all the entities regulated, but only 0.75% of the supervised assets, and at present command more resources than is justified by their potential impact if they were to fail. The tailored PAIRS for small pension funds would enable some resources to be moved away from them to higher impact institutions.²⁷⁵

APRA is also clearly seeking to learn from the experience of HIH by institutionalizing formal structures and processes for the review of PAIRS assessments and supervisory intervention plans, using these to refer significant cases up the management hierarchy, ensure consistency in assessments and approach, and to provide a more structured framework for the involvement of members of the specialist support units. PAIRS and SOARS are thus important tools of internal management, facilitating control of individual supervisors by senior management within the organization.

There have also been consequences for APRA's internal culture, and for its training and support systems. Supervisors have had to develop new skills to implement PAIRS and SOARS which are in addition to the specialist industry knowledge which every regulator needs. This development has several dimensions. In seeking to assess the risk an institution poses to APRA's objectives, supervisors need to be able to measure some of the risks the firm is taking, for example in assessing its credit risk, balance sheet and market risk, or operational risk. Financial institutions, particularly banks, are developing highly sophisticated models of risk measurement, and APRA needs to develop its own expertise in order both to monitor those of its supervisees, and to

perform its own risk assessment of the institutions. To this end it has established a new risk modelling unit within the PRC division.²⁷⁶ Whilst any risk assessment may be a matter of judgement, increasingly those judgements are encased in complex financial models which APRA supervisors have to be able to understand.

Changes in skill sets also have a 'softer', cultural component. In making its supervisory stance directly and expressly an outcome of the PAIRS indices and ratings, APRA is clearly attempting to structure the discretion of supervisors, and in particular to force them out of a co-operative approach where they might otherwise be reluctant to be more intrusive. As one senior official commented, supervisors are not being allowed to opt for the 'easy life' of low intervention and low confrontation.²⁷⁷ They have to act when they see a problem. As a result, a process of 'acclimatisation' has been required as supervisors become aware that they are being forced under the PAIRS and SOARS systems to commit themselves to making judgments. In many respects the task of assessment remains the same, but officials have had to be made to recognise that the subconscious assessment process that they have previously undertaken now has to be explicit, 'they have to commit to it and give it consequences'.²⁷⁸ To support and promote this cultural shift, training programmes in core personality and supervisory techniques have altered. Staff are now encouraged in no uncertain terms to be proactive, firm, and to adopt a skeptical and questioning attitude to the information they receive from firms. As one senior official commented, 'we're not anymore in the business of looking after the industry and being nice'.²⁷⁹

The intention of PAIRS and SOARS was to structure the way the average analyst looks at an institution, and senior management argue that the consistency of analysis has increased. 'Before we had a checklist approach, but everyone really did their own thing. Now we have a system which says that every entity has to have the following risk areas analysed – there's much more consistency and its more effective... now it's more systematic and professional.'²⁸⁰ Any system is only as good as the supervisors implementing it, however. In this respect, there are two key dangers of which APRA officials note the need to be aware. First, the risk that supervisors will be too focused on PAIRS, and will not look enough to competing sources of risk information, such as debt ratings, equity prices, reports of auditors or actuaries or media reports,²⁸¹ or will miss something within the firm that is not caught by the PAIRS framework. PAIRS may throw the spotlight on most risks, but it may in some cases mean others remain in the shadows. Secondly, there is a risk that supervisors will 'reverse engineer' the PAIRS rating if they do not like the supervisory stance which it generates. This is seen by senior managers as 'an inevitable moral hazard' which the internal review structures are intended to manage.²⁸²

A change in APRA's risk appetite and in supervisory culture again both supports and is required by the change in APRA's supervisory responses. It now adopts a deliberate policy of being more proactive, intervening early, and focusing on senior people within the financial institutions, again particularly in the case of larger firms. As one senior official explained, 'Before PAIRS we were in the javelin catching business – you can only make one mistake.'²⁸³ APRA's direct contact with institutions (on-site visits, meetings and so on) has increased over 20% since the new frameworks were introduced.²⁸⁴ It is not just the frequency of visits which has changed, but their character. APRA is far more prepared to intervene in the management strategy of a financial institution than it was before. The strategies used for firms in 'restructure', for example proposals to either sell off a part of its business, or seek a merger partner, would have been almost unthinkable prior to PAIRS unless the firm was on the brink of insolvency. As one senior official commented, 'previously we would have said, "we can't do this, it's running the company's business for it"; no-one says that anymore'.²⁸⁵ Whereas before the introduction of SOARS there was a strategy for

large firms of relying on their internal boards, on market discipline and on actuaries, this has now gone.²⁸⁶ As one senior official estimated, 'we commonly intervene in large institutions when they go through a 97% probability of being able to repay their beneficiaries over five years, compared to a rate of intervention of roughly 3-1 odds that the firm was about to go under.' Intervention in larger firms is now more aggressive, occurs earlier, and is more graduated.²⁸⁷ There is a greater use of formal powers, and whilst they only ever give a partial picture of enforcement activity, it is notable that enforcement actions as a whole almost doubled between 2001 and 2003.²⁸⁸

This move to a more proactive strategy marks a significant shift not just in its attitude to large institutions but in APRA's interpretation of its statutory powers. As noted in the Royal Commission report, in dealing with HIH, APRA's internal documents reveal that it felt prevented by its legal framework from using its formal legal powers unless an institution was on the brink of failing, and the Commission criticized APRA for taking too narrow a view of its powers.²⁸⁹ Now the attitude is more robust. As one senior official commented, 'You could have a literal reading of the legislation that says unless it's more likely than not that an institution will not be able to pay beneficiaries we can't intervene, but that would be ridiculous - it's the ultimate in javelin catching. We've moved from a 50-50 risk of failure to a 97% - I cannot really see someone taking us to court as to whether there has been a 50-50 risk or whether it can be lower - I can't really see that conversation happening'.²⁹⁰

Whether or not the introduction of PAIRS and SOARS has led to lower losses to beneficiaries is hard to gauge at this stage, however. APRA has introduced new systems for measuring its own performance. The performing entity ratio (PER) is a measurement of all those institutions paying in failure divided by all those supervised, which is aimed to be 99.9% annualized over a five year cycle. It also has a money protected ratio (MPR): dollars going to beneficiaries divided by dollars supervised, which is aimed to be 99.95% annualized over a five year cycle, ideally 99.98%.²⁹¹ These are reported in the annual reports, and average 99.95% and 99.89% since APRA's inception.²⁹² However, whilst most of the regulated money has been subject to a PAIRS assessment, senior officials recognize that there has been insufficient time, and insufficient macro-economic variance, to be able to test its effectiveness in this respect in any substantial way, although there have been no substantial failures since the frameworks were introduced.²⁹³

Finally, simply introducing PAIRS and SOARS has not of itself solved APRA's credibility problem. The Royal Commission was certainly of the view that the jury was still out. Whilst it noted that PAIRS and SOARS were a marked improvement on the system that was in place during the life of HIH, '[i]f it is to engender in the public confidence that it is well placed to rectify the shortcomings that were identified during the inquiry, APRA will have to demonstrate that the requisite change has occurred in its operational structures, its understanding of its powers under the legislation, and its basic approach to prudential supervision.'²⁹⁴ APRA came under further fire recently as a result of the discovery of rogue trading at the National Australia Bank, which resulted in losses of Aus\$360 million. However, whilst it has not solved APRA's legitimacy problem, PAIRS and SOARS provides APRA with a good defence mechanism. Thus the efficient use of the inevitable time-lag between the failure of HIH and the final publication of the Reports to develop PAIRS (though not at that stage SOARS) meant that APRA could respond to the criticisms with the response that systems had already changed, and PAIRS was already being implemented.²⁹⁵ When criticized by the House of Representatives Committee for its response to rogue trading at the National Australia Bank, the chairman of APRA pointed to PAIRS and SOARS to argue that it has a systematic basis for determining which institutions it should focus on, and a consistent set of regulatory responses.²⁹⁶

Conclusion

The development of the risk based framework was thus based on a range of motivations, including the need to develop a more sophisticated way of assessing financial institutions to match developments in their own operations; the need to develop an integrated approach that was common across institutions; the need for better systems for internal control within the organization to ensure consistency in supervision and escalation of issues up the hierarchy, and the need to develop a common organizational culture and language. Its development was informed by the risk based frameworks of banking regulation in the US, and more directly by those of OSFI and FSA. The recent development of these approaches provided templates from which APRA could selectively borrow and modify to develop its own framework. Nonetheless, the frameworks were still informed by APRA's own understandings of how banks, in particular, managed their own risks. They were also significantly affected by the failure of HIH. As a result, PAIRS and SOARS, whilst sharing elements with OSFI's and FSA's frameworks, have aspects which are unique to it, the origins of which can be traced back to HIH. Whilst the frameworks have only recently been introduced, some outcomes are already visible. They have resulted in a greater structuring of supervisor's assessment of financial institutions and the supervisory response given. PAIRS, in particular, has resulted in a shift in resources towards larger institutions. APRA's supervisory responses have shifted to being more proactive, and in certain cases, more robust. Finally, the frameworks provide APRA with an instrument with which to attempt to shape public and political expectations of what regulators can and should achieve.

Part 4 Conclusion

Introduction

The frameworks developed by each regulator differ substantially from previous regulatory practices in financial services. As we have seen, OSFI was the first of the regulators to begin work devising a framework, in 1997; FSA began its work in 1999, and APRA in 2000. This conclusion compares the motivations for the development of risk based regulation, the main aspects of the risk based frameworks adopted, and the key outcomes identified by participants to date. It concludes with five reflections on risk based regulation.

Comparing motivations

The motivations for developing the frameworks were strikingly similar. The agenda for each was set in part by political and public pressure following a series of financial disasters: the crisis in the early-1990s in Canada following the collapse of two banks, the collapse of Barings Bank in the UK in 1996 and the collapse of the insurance company, HIH in Australia in 1999. These created a perceived need by those at the top of the organizations to demonstrate to the public and politicians that they could be effective regulators.

It would be misleading to see political pressures as the sole motivation, however. Internal pressures arising within their own organizations and deriving from their statutory remits also played an important role in motivating and shaping the risk based frameworks.

These internal pressures took several forms. First, each regulator was a new creation, the result of a merger of several regulatory bodies into one or two agencies which regulated more than one type of financial institution. The process largely shadowed changes in market structures and practices: integrated financial regulation was seen as the necessary response to the development of integrated financial institutions and markets. Institutional restructuring, in practice, meant the relocation of personnel from several agencies to a single site (in Australia's case with a significant loss of personnel from the critical area of insurance regulation, due to the ministerial decision to locate APRA's head office in Sydney rather than the capital, Canberra). Each set of personnel inevitably came with the norms and practices which had characterized their previous agency. Senior management at the head of each newly formed agency recognized the need to create a new and common organizational culture if the organization was to function effectively as an integrated unit. The introduction of a new cognitive and procedural framework for assessing regulated institutions and for making decisions which was not associated with any one of the predecessor regulators, and which was common across the organization, was in all three cases seen as a powerful vehicle for creating organizational cohesion and coherence.

Secondly, senior officials recognized that the way in which regulation had been practiced to date was simply out of step with the developing practices of financial institutions. Not only were these practices increasingly integrated, but institutions were developing and utilising sophisticated risk management techniques which meant that modes of individual appraisal had to alter if they were

accurately to capture the types and scale of risks that firms were taking on, and how they were addressed. Quite simply, it was felt within all three regulators that the tools which they had been using were just not suited to the task that they now faced: financial institutions and practices had grown more complex, and regulators needed to develop new approaches to supervise them effectively.

Thirdly, the regulators shared a concern that they had to take control of the political agenda. Whilst each regulator was born of a crisis, there was a demand from within the organization to make it clear to politicians, and to an extent the wider public, that financial regulators could not, and should not, be expected to prevent all financial failures. Each financial loss should not therefore be met with more regulation; rather regulatory agencies had to prioritise between failures, and where failure was likely, to manage that in such a way that minimized loss. In order to make this case credible, each needed a systematic basis for making regulatory assessments that it could produce to defend its actions and decisions, particularly decisions *not* to act.

Fourthly, senior officials in each regulator wanted to address key operational concerns, and in particular to shift regulation to a more proactive stance. Regulators can easily be swamped by the day to day demands, requests, notifications and so on that come in from individual regulated firms. It can be very difficult to stand back from these quotidian demands to see which require attention and which do not. Resource constraints compound the need to prioritise: regulators simply do not have the resources to thoroughly inspect and monitor each regulated institution to an equal extent; inevitably some will, and should, receive more attention than others. Within each of the predecessor organizations there had, again to varying degrees, been little systematization of how individual supervisors made these types of decisions, and supervisory practices could be quite inconsistent even within one agency. The various crises which stimulated the development of the models had highlighted two organizational failings in particular: the lack of senior management knowledge about key supervisory decisions, and the extreme reluctance of supervisors to move out of a negotiative, co-operative and non-assertive mode of regulation. Devising a framework which would prioritize resources, enhance management control and instill a greater degree of consistency and assertiveness by individual supervisors were thus key motivations in each regulatory body.

Comparing the frameworks

The frameworks share the same basic approach: to identify and assess the risks to the regulator's objectives that are posed by the financial firms being regulated, and to address those using the various regulatory tools, formal and informal, that they possess. Each framework identifies two main categories of risk which individual supervisors are required to assess: inherent risk arising in the business itself, and risks arising in the management and control of those inherent risks by the financial institution itself, which are then further disaggregated into individual risks. For example, the business or inherent risk category includes counter-party or credit risk, market risk and legal risk. The management and control risk category includes internal control systems, and governance structures. Individual risk scores are then aggregated to arrive at a composite assessment, which may or may not then be set against the firm's available capital, and firms marked on a spectrum ranging from low to high risk. The risk rating is then coupled to varying degrees to the supervisory response: in very general terms, low risk firms receive much less supervisory attention than high risk ones.

There are, however, key differences in design and methodology between the frameworks. Five differences in particular may be noted.

The first key difference between the frameworks is the criteria for assessing risks. In each case this is provided by the statutory objectives. APRA and OSFI's objectives are relatively focused: ensuring, to a reasonable degree, the financial soundness of financial institutions in a competitive market place. However in FSA's case, the statutory objectives are wider. As well as ensuring financial soundness, its objectives are consumer protection, promoting consumer understanding and reducing the scope for financial crime. The statutory objectives have been re-framed in their risk based framework into seven 'risks to objectives' (RTOs) against which risks are assessed. These are: financial failure, misconduct / mismanagement, consumer understanding; fraud / dishonesty; market abuse; money laundering; and market quality. This broader set of objectives inevitably provides a greater degree of complexity to FSA's risk based framework in comparison with the other two.

The second main difference is in the formula and methods used for arriving at a final risk score for an institution. In the FSA's model (ARROW), risk is a function of probability multiplied by impact: the standard matrix for any risk management model. Risks are scored by assigning them to one of five categories, and then aggregated automatically by the IT system. This produces a final aggregate score which is the same as the highest score given to any one of the separate risks. In OSFI's Supervisory Framework, impact assessments play no role and the aggregate risk score is the result of a judgement made by the supervisor, for which there are no detailed guidelines or formulas. The final risk score is rather arrived at by offsetting the aggregate risk scores against the capital available to an institution. APRA's framework (the Probability and Impact Rating System: PAIRS) has the same basic formula as OSFI's Supervisory Framework, but incorporates impact assessments and furthermore translates the score into a probability index, and there is a non-linear relationship between the score and the index rating (extreme, high, high medium, low medium and low), which has the result of deliberately emphasizing higher risks. Risks are assigned a numerical score from 0-4 (with 4 as the highest), and in aggregation of individual scores is arrived at using an exponential measure which automatically gives more influence to high risk rather than low risk assessments. The differences in method produce different results. Thus, broadly speaking, if the same institution were to receive these scores for its inherent risk (bearing in mind slight differences in categorizations): low, medium, medium, high, low, APRA's system would rank it medium, FSA's high, and OSFI's would leave it to the supervisor to assess.

The third and fourth differences are related, and they are the role played by impact assessments in the frameworks, and the extent to which the risk assessment is coupled to the supervisory response. In OSFI's framework, as noted, there is no role for impact assessments, and officials within OSFI dispute that there should be one. To give substantially differential supervisory treatment to firms on this basis, it argues, is in effect discriminating against the consumers of those firms and contrary to their legal mandate: all consumers should expect equal regulatory attention. In marked contrast, within FSA and APRA's frameworks impact assessments play a key role in setting the nature of the supervisory relationship with the firm and the amount of resources that will be applied to it. There are differences between the regulators' statutory mandates, notably that the FSA and APRA are required in their legal mandates, in effect, to balance concerns of efficiency with their other statutory objectives. Nonetheless, the difference in approach in this respect is marked.

The final difference is the use to which the frameworks are put within the regulatory bodies, and stems perhaps more clearly from their differing legislative mandates. OSFI and APRA's statutory objectives are restricted to those of ensuring prudential soundness, and they have no, or only very attenuated, policy and rule making powers. For those regulators, the frameworks are used to allocate supervisory resources and, to varying degrees, structure the supervisory response. The FSA, in contrast, has a much wider set of statutory objectives and far greater rule making powers, and hence a significantly broader policy making role. Within FSA, the framework is used to set the strategic direction of the regulator, not just to allocate supervisory resources. Thus ARROW is used to assess how the FSA should address any new policy issue that arises, and the resources it should give it, as well as to structure its monitoring and enforcement functions.

Comparing Outcomes

The frameworks have only just been implemented across the whole of the regulated constituencies in all three jurisdictions; it is thus too early to assess their outcomes in full. Moreover, the research focused only on the regulatory agency's own perspectives on the development of risk based regulation, and not on those of outside observers or regulated institutions. However, those within the regulatory agencies noted some immediate effects.

In both OSFI and FSA there has been extensive and continuous organizational restructuring to try and implement the framework. In both APRA and FSA there has been a clear shift in the deployment of resources away from low impact firms towards higher impact firms, and, in the case of FSA, between different areas of its responsibilities (away from banking to insurance, away from prudential regulation to conduct of business regulation). Modes of interaction with firms have changed in all organizations, and the FSA in particular has changed the basis on which its enforcement decisions are made.

Implementation remains patchy within the organizations: as many admit, the frameworks require officials to operate 'outside their comfort zones': they require officials to commit to assessments, to look at areas of the business they are unfamiliar with, to have face to face, detailed meetings with the boards and chief executives of firms, and in many cases to be more interventionist than they might otherwise want to be. Because of their novelty, in using the frameworks individual supervisors run the risks of making mistakes. The extent to which these are perceived as tolerated within the organization is widely recognized as affecting the framework's implementation. Supervisors need new skills, which were described by all participants as not necessarily technical skills, but cultural ones: changes in attitude and approach, which are far harder to achieve.

Measuring outcomes is notoriously difficult, particularly since full implementation has only recently or not yet fully occurred. Although each organization has made attempts to measure their performance overall, and the performance of the frameworks in particular, none has yet devised a clear and conclusive measurement, though some are further on than others.

Assessed against narrower benchmarks of the initial aims and motivations for devising the frameworks, in particular the need for a defence against charges of incompetence, and a need to devise a way of allocating resources and forging a common organisational culture, the frameworks are assessed by senior officials within the organization as having been successful. The frameworks at least provide a shield to wave at attackers, even if the political reality is that

blame cannot so easily be diverted; there is a framework for allocating resources, even if that allocation cannot always be changed as easily and as seamlessly as the risk assessments would demand; and the organizations are functioning more cohesively than they were before the frameworks became the main operating procedures, even if the full changes in skills and culture that are needed to implement the frameworks have not yet been completely developed.

Reflections on risk based regulation

This report examines the development and design of risk based frameworks; it does not consist of a detailed study of their implementation, which will have to be the subject of further research. Nevertheless, some reflections on the operation and potential implications of risk based regulation may be made. Many within the regulatory agencies are aware of these implications, and some are taking active steps to address them. They are worth enumerating, nonetheless.

First reflection: danger of focusing more on diagnosis than cure

Risk based approaches have the potential weakness to focus more on diagnosis than on cure. There is a danger that a disproportionate amount of regulatory energy will be spent on assessing the institution rather than on the corresponding regulatory response. In other words, in ensuring, that the financial institution actually responds in the way the regulator requires: that CEO letters are followed up, that the necessary degree of regulatory assertiveness is maintained. Furthermore, it is essential that regulators monitor not just how the organisation responds in terms of changing its processes, but what outcomes are produced as a result.

Second reflection: the importance of organizational culture in implementing risk based regulation

Any risk based framework is only as good as those who implement it, and risk based frameworks may not be implemented in such a way as to deliver on their promise of producing dynamic, risk sensitive regulation. Whilst senior management in each regulatory agency are clearly committed to the principles of risk based regulation, in any organisation, bridging the gap between senior management and those at the front line is a core challenge, and regulators are no exception. Re-skilling is always hard to achieve. It is particularly hard in the case of risk based approaches because, as senior officials in each regulatory agency recognised, the frameworks are requiring officials to operate 'outside their comfort zones'. Ensuring that front line officials move from a compliance or comparatively passive supervisory mentality to the more reflective and dynamic approach that risk based regulation is meant to introduce will take time, and some organisations and some parts of an organisation will move faster than others. Changing the organizational culture to one that supports a risk based approach will also require senior management to cultivate a culture of openness and an acceptance of mistakes, for these will be made, and this support and acceptance has to be communicated throughout the organisation.

Third reflection: risk based frameworks can create risks

Risk based frameworks entail their own risks. It is important, therefore, that regulators have mechanisms for monitoring and assessing the potential risks that the frameworks themselves can create, and for adjusting the frameworks and processes accordingly. Two risks in particular may be noted. First, risk based frameworks create the risk of what may be termed 'process-induced

myopia'. They have the danger of becoming simply another set of procedures to be followed, another set of boxes to be ticked. As a result, the process may blind regulatory officials from seeing risks which were not anticipated by the designers of the framework, and so are not included in it. Alternatively, or in addition, it may fail to provide officials with the facility for alerting the organisation to something which falls outside the assessment framework but which nevertheless causes them concern.

Risk based regulation thus runs the risk of fulfilling a paradox: it may prevent the regulator doing what the framework aims to enable the regulator to do, to respond to an uncertain and unpredictable future, because the future that materializes was unpredicted by the framework. This danger is enhanced if the culture within the organization is not one which supports mistakes. If the safest thing for an official to do is to follow the framework, the safest thing to do is not to respond to any circumstances or events which are not anticipated by that framework. But if little scope is given in practice for those engaged in working within the framework to work outside it where they see the need, the framework will always be prey to events that those working within it were not given the room to say they had seen.

The second risk that risk based frameworks can create is that they alter the incentives of firms, with the potential result that some firms may act in ways which create greater risks to the regulator's objectives. Risk based regulation is a dynamic process, and going forward firms will learn what type of supervisory response and relationship they can expect from the regulator. If the clear message is that firms of a certain profile (eg low impact) will get less supervision, that has poor incentive properties for that firm. The signal which is in effect being sent is that such a firm can have poor compliance and get away with it. This may be a price worth paying when looked at overall, and that is the assessment the risk based frameworks make. However, two issues arise. First, from a consumer protection point of view, the argument is likely to be made that different groups of consumers are receiving differing regulatory treatment in a way that is unacceptable: customers of large institutions are more protected, in terms of ex ante regulatory protection (ensuring compliance with the rules), than those of small firms. Secondly, from a regulatory point of view, whilst the non-compliance of one small firm is clearly not significant from an industry-wide point of view, the non-compliance of many small firms clearly is, as the various misselling episodes in the UK have illustrated. It is imperative therefore that this cumulative non-compliance risk is addressed. The FSA seek to address this through their policy on 'themed visits'. However, neither they nor the other regulators have a policy of random visits to firms that are otherwise deemed to be low risk, which is recognized in other regulatory areas to be an effective compliance strategy.

Fourth reflection: danger of inappropriate reliance on firms' internal controls

Risk based regulation in all three regulators is closely linked to a strategy of review of and reliance on senior managers' responsibilities and internal controls, but there clearly have to be limits to this reliance. Part of the aim in each risk assessment is to determine how much those at the top of the organization know about how the risks identified by the regulators are being managed within the organization, and to inform them directly of the regulator's view of the organization; in other words to give them information they may not already have. The aim is then to ensure that the firm's own system of regulation is enhanced to enable the regulator to spend fewer resources monitoring it in future. This strategy can be productive. Responsibility should rest primarily on firms to regulate themselves in such a way as to ensure that the regulatory objectives are being met.

However, even large, apparently sophisticated financial institutions can have weak controls, as APRA was reminded by HIH, and all of us have been by Enron, Barings, Equitable Life, WorldCom – the list goes on. Regulators need to be as skilled as firms themselves in assessing risks, and as risk models and risk management techniques are constantly evolving in ever-more sophisticated ways this presents a significant challenge to regulators. Regulators can never compete with the salary levels offered by financial institutions, and so recruiting staff with the necessary expertise will always be a problem, particularly when there is no economic recession. This is not a problem unique to risk based regulation, but it still applies to it.

Even where those controls are strong, there is a limit to the extent that regulators can rely on them because their objectives differ. A firm's internal controls will be directed at ensuring that the firm achieves the objectives it sets for itself: namely profits and market share. In contrast, the regulators' statutory objectives can be quite distinct, no matter how often the mantra, 'compliance is good for business', is chanted by regulators and compliance officers alike. Where the regulator's legal mandate is focused purely on financial soundness, there is likely to be a greater degree of overlap between the financial institution's objectives and those of the regulator, though it may be by no means identical. As those objectives broaden, so does the potential distance between the objectives of the firm and those of the regulator. This difference in objectives means that regulators can never, and arguably should never, rely on firm's own systems without some modification. Some leverage is necessary and practical: the problem which risk based regulation should ensure it continues to address is locating those differences, and ensuring both regulator and regulated understand them.

Fifth reflection: risk based regulation can be an unpalatable political message

Finally, one of the motivations of developing risk based regulation, as noted above, was to avoid what one participant called the 'dangerous dogs' problem: the problem of the knee-jerk political reaction to any financial 'failure' or 'scandal' that comes along, which is more regulation. All three regulators are attempting to make it clear to politicians and the wider public that regulators cannot do everything, and they should not be expected to. The FSA has made this point the most explicitly in its 'non-zero failure' statement, but the sentiment is widely shared by the others. Risk based regulation makes it clear what the regulatory priorities are, and by implication, what they are not. This is bold, laudable, and brave. It forces politicians and the wider public to recognize what is always known, but rarely recognized: that financial regulators cannot and should not do everything. They cannot and should not prevent every financial failure or personal financial loss. Which they should prevent and which they should not will always be a contentious political choice, however. The risk based frameworks may provide regulators with ostensibly rational and systematic ways of making those choices, but whether they will enable them to weather the next political storm remains to be seen.

Annex: Comparing the Risk Based Frameworks

Table 1: Comparison of the risk based frameworks of FSA, OSFI and APRA

Organisation Element	FSA: ARROW (Advanced Regulatory Risk Operating Framework)	OSFI: Supervisory Framework and Guides to Intervention	APRA: PAIRS (Probability and Impact Rating System) and Supervisory Oversight and Response System (SOARS)
Sources of risk	External environment and Consumer and Industry Wide (CIW) risks Firm specific risks	Firm specific risks	Firm specific risks
Outline of Risk Assessment Framework	Impact of risk x Probability of Risk Occurring = Risk	Inherent Risk minus Quality of Risk Management = Net Risk Net Risk considered against capital support = Composite Risk Rating	Inherent Risk minus Management and Control = Net Risk Net Risk minus Capital Support = Overall Risk of Failure
Impact thresholds – role in frameworks	Determine whether a risk assessment performed at all, and supervisory relationship with firm; four categories (A-D)	No formal role; organizationally more people allocated to larger firms	Risk assessments performed for all firms; impact thresholds determine resources subsequently applied to firm
Impact thresholds	Quantative measures based on financial position and turnover; vary with type of institution Same impact measure used across all RTOs at present Unit of assessment: individual firm or material business unit (MBU), defined as unit which is approx 10% of business	No formal thresholds	Quantative measures based on total resident assets; impact assessed is impact of failure Each institution given an Impact Index score depending on asset levels. Formula is Total Assets/200,000,000 for all but General Insurers where this number is multiplied by 3. There is a ‘floor’ asset level of A\$50 million. Unit of Assessment: individual firm
Impact threshold rankings	Linear relationship between quantative measure and ranking	Not used	Non linear relationship between Impact Index and impact index rating

Organisation Element	FSA: ARROW (Advanced Regulatory Risk Operating Framework)	OSFI: Supervisory Framework and Guides to Intervention	APRA: PAIRS (Probability and Impact Rating System) and Supervisory Oversight and Response System (SOARS)
	4 rankings: <ul style="list-style-type: none"> • High • Medium High • Medium Low • Low 		4 rankings: <ul style="list-style-type: none"> • Extreme • High • Medium • Low
Risk Identification: environment and CIW risk categories	Risk categories <ul style="list-style-type: none"> • Political / legal • Social / demographic • Technological • Economic • Competition • Market Structure Separately identified and assessed by dedicated organisational division; meant to feed into firm specific assessments; sets strategic themes for policy and supervision	No categories specified; identification and incorporation depends on judgement of individual supervisor	No categories specified; identification and incorporation depends on judgement of individual supervisor
Risk Identification – Categories of Firm Specific Risks	Business Risks <ul style="list-style-type: none"> • Financial Soundness • Market • Insurance underwriting and Credit Risk • Strategy • Nature of Customers / Products • Further disaggregated into 15 risk elements Control Risks <ul style="list-style-type: none"> • Treatment of customers • Organisation • Internal Controls • Board Management and Staff • Business and Compliance Culture 	Inherent risks <ul style="list-style-type: none"> • Credit Risk • Market Risk • Insurance Risk • Operational risk • Liquidity Risk • Legal and Regulatory Risk • Strategic Risk Management and Control <ul style="list-style-type: none"> • Operational Management • Financial Analysis • Compliance • Internal Audit • Risk Management • Senior Management 	Inherent Risks <ul style="list-style-type: none"> • Counterparty Default Risk • Balance Sheet and Market Risk • Insurance Risk • Operational risk • Liquidity Risk • Legal and Regulatory Risk • Strategic Risk • Contagion & Related Party Risk Management and Control <ul style="list-style-type: none"> • Board of Directors / Trustees • Senior Management • Operational management • Management information systems / financial control

Organisation Element	FSA: ARROW (Advanced Regulatory Risk Operating Framework)	OSFI: Supervisory Framework and Guides to Intervention	APRA: PAIRS (Probability and Impact Rating System) and Supervisory Oversight and Response System (SOARS)
	<ul style="list-style-type: none"> (further disaggregated into 20 risk elements) 	<ul style="list-style-type: none"> Board Oversight 	<ul style="list-style-type: none"> Risk Management Compliance Independent Review
Risk assessment against regulatory objectives	Each risk assessed against each of seven ‘risks to objectives’ (RTOs): <ul style="list-style-type: none"> Financial failure Misconduct / mismanagement Consumer Understanding Fraud / dishonesty Market Abuse Money Laundering Market Quality 	Assessed against single objective: <ul style="list-style-type: none"> Financial failure 	Assessed against single objective: <ul style="list-style-type: none"> Financial failure
Risk weighting and risk scoring	Qualitative assessment & descriptive categories: <ul style="list-style-type: none"> High Medium High Medium Low Don’t know Not applicable No weighting risks against objectives	Qualitative assessment and descriptive categories: <ul style="list-style-type: none"> High Moderate Low Risk measured incorporates assessment of probability and its materiality: ie impact on the institution; no formal system of weighting	Inherent risks and Management and Control scored on scale 0-4; Each risk element weighted for significance (ie % contribution to failure); weighting discretionary for inherent risks, less so for management and control; weighting assigned for capital support assessments
Method for arriving at final probability assessment (risk ranking)	Aggregation of scores: IT system designed so that score for each risk element automatically becomes the score for the group, subject to supervisory override Management and Control can either reduce or increase business risks Assignment of group scores to overall risk	Aggregation of inherent and control risks separately based on judgement of supervisor Inherent risk for each significant activity is offset by quality of risk management using risk matrix to arrive at Net Risk. Net risk is offset against	Aggregation of scores for inherent and control risks based on judgement of supervisor Score for Management and Control averaged with Inherent Risk score to arrive at Net Risk Capital Support score averaged with Net Risk score to assess Overall

Organisation Element	FSA: ARROW (Advanced Regulatory Risk Operating Framework)	OSFI: Supervisory Framework and Guides to Intervention	APRA: PAIRS (Probability and Impact Rating System) and Supervisory Oversight and Response System (SOARS)
	ratings based on supervisory judgement Ratings: <ul style="list-style-type: none"> • High • Medium High • Medium Low • Low 	available capital to arrive at Composite Risk Rating Ratings: <ul style="list-style-type: none"> • High • Above Average • Moderate • Low 	Risk of Failure Score for ORF translated into a probability index; non-linear relationship between the score and the index Index Ratings <ul style="list-style-type: none"> • Extreme • High • High Medium • Low Medium • Low
Regulatory Response	Development of Risk Mitigation Programme (RMP) Loose correlation of risk measure and type of regulatory tool likely to be used: <ul style="list-style-type: none"> • High risk – preventative and remedial tools • Medium High - preventative and remedial tools • Medium Low - monitoring • Low – no further action • Diagnostic where need more information Use of non-specific firm responses to address industry wide issues	Guides to Intervention: Intervention is based on assessments of financial soundness: 5 assessments and corresponding supervisory responses (Stages 0-5) Relationship between CRR and intervention ‘stages’: <ul style="list-style-type: none"> • Low Risk = Stage 0-1 • Moderate Risk = Stage 1-2 • Above Average = Stage 2-4 • High Risk = Stage 2-4 	SOARS (Supervisory Oversight And Response System): Systematised correlation of risk rating and response Geometric average of probability and impact ratings = supervisory attention index, ie a guide to the amount of resources allocated to institution, and supervisory stance, ie attitude to be adopted Four stances: <ul style="list-style-type: none"> • Normal • Oversight • Mandated Improvement • Restructure
Internal Validation	Higher impact firms: risk assessment and RMP reviewed by ARROW panel including senior management Lower impact: review by departmental manager or committee	Larger firms: risk assessment and response reviewed by panel including senior management Smaller firms: review by line manager	Higher impact firms: risk assessment and response reviewed by PAIRS panel including senior management Lower impact: review by line manager

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Organisation Element	FSA: ARROW (Advanced Regulatory Risk Operating Framework)	OSFI: Supervisory Framework and Guides to Intervention	APRA: PAIRS (Probability and Impact Rating System) and Supervisory Oversight and Response System (SOARS)
Communication to Firm	Aggregate scores only communicated direct to Board and Chief Executive Ratings are non-negotiable and non-disclosable	Aggregate scores only communicated direct to Board and Chief Executive Ratings are non-negotiable and non-disclosable	Aggregate scores only communicated direct to Board and Chief Executive Ratings are non-negotiable and non-disclosable

Endnotes

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- ² Bank Act; Trust and Loans Companies Act; Cooperative Credit Associations Act; Insurance Companies Act and Pension Benefits Standards Act 1985;
- ³ OSFI, *Annual Report 2002-3*.
- ⁴ Senate Committee on Banking, Trade and Commerce, *Regulation and Consumer Protection in the Federally Regulated Financial Services Industry: Striking a Balance*, November 22nd 1994, chair Hon Michael Kirby.
- ⁵ OSFI Act ss 3-4.
- ⁶ OSFI Act s.4 (2)(b) and 4(2.1)(b).
- ⁷ OSFI Act s.4(4) and 4(5).
- ⁸ Interview, OSFI 30304.
- ⁹ OSFI Annual Report 1995-6, p.2.
- ¹⁰ Interview, OSFI 30304.
- ¹¹ Interview, OSFI 30304.
- ¹² Interview, OSFI 30304.
- ¹³ OCC, Bank Supervision Process: Comptroller's Handbook; Uniform Interagency Rating System, Examining Circular 159, Supplement 1 and 2 (OCC, 1982); and OCC, 'Uniform Financial Institutions Rating System' November 1979 (available at www.occ.treas.gov/ftp/ec/ec-159a.doc (accessed 20.1.04)).
- ¹⁴ OSFI Annual Report 1999-2000, p.13.
- ¹⁵ Interview, OSFI 30304.
- ¹⁶ Interview, OSFI 30304.
- ¹⁷ OSFI 31304, personal correspondence with author.
- ¹⁸ Interview, OSFI 30304.
- ¹⁹ Interview, OSFI 30304.
- ²⁰ Interview, OSFI 31304.
- ²¹ Interview, OSFI 30304.
- ²² Interview, OSFI 30304 and OSFI 31304.
- ²³ Interview, OSFI 30304.
- ²⁴ Interview, OSFI, 30304 and OSFI 310304.
- ²⁵ Interview, OSFI 31304.
- ²⁶ Interview, OSFI 30304.
- ²⁷ OSFI Annual Report 1997-8 p.9; OSFI Annual Report 2000-01, p.2.
- ²⁸ Supervisory Framework 1999 and beyond (OSFI 1999), para 4, available at www.osfi-bsif.gc.ca.
- ²⁹ Interview, OSFI 31304.
- ³⁰ Interview, OSFI 31304.
- ³¹ Interview, OSFI 31304.
- ³² Interview, OSFI 31034.
- ³³ See further OSFI, *Supervisory Framework: 1999 and beyond*.
- ³⁴ Ibid.
- ³⁵ Interview, OSFI, 30304.
- ³⁶ Interview, OSFI 31304.
- ³⁷ Interview, OSFI 31304.
- ³⁸ Interview, OSFI 31304.
- ³⁹ OSFI, *Annual Report 2002-3*.
- ⁴⁰ OSFI, *Supervisory Framework Ratings Assessment Criteria* (Toronto: OSFI, July 2002).
- ⁴¹ Supervisory Framework, para 4.2.
- ⁴² Interview, OSFI 31304.
- ⁴³ Interview, OSFI 31304.

- ⁴⁴ OSFI, Assessment Criteria: Commonly Asked Questions and Answers, p.3.
- ⁴⁵ OSFI 31304, personal correspondence with author.
- ⁴⁶ Interview, OSFI 31304.
- ⁴⁷ OSFI, Supervisory Framework.
- ⁴⁸ OSFI, Assessment Criteria, July 2002; OSFI Annual Report 2001-2, p.15.
- ⁴⁹ FAQ p.5.
- ⁵⁰ OSFI, Introduction to the Supervisory Framework Ratings Assessment Criteria, p.3.
- ⁵¹ OSFI, Supervisory Framework, para 4.4.
- ⁵² Interview, OSFI 31304.
- ⁵³ Interview, OSFI 31304.
- ⁵⁴ This is a development from the Supervisory Framework, where there were only three. The reason for the addition was to provide greater discrimination, or 'granularity' in ratings: FAQ p.5.
- ⁵⁵ OSFI, *Annual Report 2002-3*, p. 18.
- ⁵⁶ OSFI, *Introduction to Supervisory Ratings Assessment Criteria*, p.4.
- ⁵⁷ Interview, OSFI 31304.
- ⁵⁸ OSFI, Supervisory Information Regulations (2002).
- ⁵⁹ Supervisory Framework, section 6.
- ⁶⁰ Interview, OSFI 30304.
- ⁶¹ Interview, OSFI 31304.
- ⁶² Interview, OSFI 31304.
- ⁶³ Interview, OSFI 31304.
- ⁶⁴ Practitioner Panel, *Annual Report 2004*, p.7-8.
- ⁶⁵ Annual Report 1997-8 p.9.
- ⁶⁶ OSFI Annual Report 1997-8 p.9.
- ⁶⁷ For the Annual Reports (ARs) 1997-2003, no reports were given on the risk exposure index; reports on the loss recovery index were given in 1999-2000; and on the interventionist effectiveness measure general statements as to the improvement of firms were given in 1999-2000 (p.14-15); a figure of 23 improved firms was given in AR 2000-1 (p.16), no details were given in AR 2001-2, and a figure of nine improved firms was given in AR 2002-3, but in neither case was an indication given of the number of firms who did not improve or whose stage ranking worsened (as opposed to firms being staged for the first time). At the time of writing the Annual Report for 2003-4 had not yet been published.
- ⁶⁸ Interview, OSFI 31304.
- ⁶⁹ FSA, *Business Plan 2004/5* (London: FSA, 2004), p.32.
- ⁷⁰ On the FSA's formation see C. Briault, *The Rationale for a Single National Financial Services Regulator* Occasional Paper No 2 (London: FSA, 1999); M. Taylor, 'The Policy Background' in M. Blair QC et al, *Financial Services and Markets Act 2000* (London: Blackstone Press, 2001); HM Treasury, *Financial Services and Markets Bill: A Consultation Document Part One: Overview of Regulatory Reform* (London: HM Treasury, July 1998).
- ⁷¹ FSMA s.2.
- ⁷² FSA, *Financial Services Authority: An Outline* (October 1997), p.31.
- ⁷³ FSA 17204, personal correspondence with the author.
- ⁷⁴ See eg FSA/PN/003/1999, 13th January 1999, 'International Regulatory Co-operation: Anglo-Japanese Supervisory Meeting'.
- ⁷⁵ *Report of the Board of Banking Supervision into the Collapse of Barings*, (London: 1995), paras 13.58-13.68
- ⁷⁶ Interview FSA 121103.
- ⁷⁷ Interview, FSA 17204.
- ⁷⁸ Interview FSA 251103.
- ⁷⁹ Personal correspondence, 18.6.04.
- ⁸⁰ Interview FSA 102041.
- ⁸¹ Interview, FSA 102041.
- ⁸² Interview, FSA 251103.

- ⁸³ The approach had already been prototyped on 17 UK incorporated banks and 5 non-EEA incorporated banks: FSA, *Risk Based Approach to the Supervision of Banks* June 1998 (foreward).
- ⁸⁴ C. Sergeant, 2002 'Risk Based Regulation in the Financial Services Authority' *Jnl of Financial Regulation and Compliance* 10(4): 329-335.
- ⁸⁵ Interview FSA 251103, 17204.
- ⁸⁶ FSA 17204 (personal correspondence with author).
- ⁸⁷ Interview FSA 102041, FSA 251103.
- ⁸⁸ FSA Meeting Our Responsibilities paras 132-138.
- ⁸⁹ Interview FSA 251103.
- ⁹⁰ Briault 1999; C. Briault, *The Rationale for a Single National Financial Services Regulator Revisited* Occasional Paper No 15 (London: FSA, 2002).
- ⁹¹ Briault 1999.
- ⁹² Interview, FSA 17204.
- ⁹³ Wash trades are trades between counterparties which are performed to give an appearance of activity in a market.
- ⁹⁴ Interview, FSA 17204.
- ⁹⁵ Interview, FSA 17204.
- ⁹⁶ Interview FSA 102041.
- ⁹⁷ Interview, FSA 17204.
- ⁹⁸ Interview FSA 102041.
- ⁹⁹ Interview, FSA 102041; FSA 251103.
- ¹⁰⁰ FSA, *A New Regulator for a New Millenium* (London: FSA, 2000) (NRNM), Introduction.
- ¹⁰¹ Interview, FSA 17204.
- ¹⁰² Interview, FSA 17204.
- ¹⁰³ Interview, FSA 17204.
- ¹⁰⁴ Interview, FSA 102041.
- ¹⁰⁵ Interview FSA 102041.
- ¹⁰⁶ On pensions misselling see J. Black and R. Nobles, 'Personal Pensions Misselling: The Causes and Lessons of Regulatory Failure' (1998) 62 *Modern Law Review* 789.
- ¹⁰⁷ Interview FSA 251103.
- ¹⁰⁸ Interview, FSA 121103.
- ¹⁰⁹ Interview FSA 251103.
- ¹¹⁰ Interview FSA 121103.
- ¹¹¹ Interview FSA 251103.
- ¹¹² CAMELS is an acronym for Capital, Assets, Management, Earnings, Liquidity and Sensitivity to Market Risk (the S was added in 1996 post -Barings): OCC, Supervisory Handbook, available at www.OCC.treas.gov/handbook/ss.htm.
- ¹¹³ Interview FSA 121103 and FSA 251103.
- ¹¹⁴ Briault 1999.
- ¹¹⁵ Interview FSA 251103.
- ¹¹⁶ Interview FSA 102041.
- ¹¹⁷ NRNM.
- ¹¹⁸ FSA, *Building the New Regulator: Progress Report 1* (London: FSA, December 2000) (PR 1); FSA, *Building the New Regulator: Progress Report 2* (London: FSA, February 2002) (PR 2); FSA, *The Future Regulation of Insurance: A Progress Report* (London: FSA, October 2002) (PR 3); FSA, *The Firm Risk Assessment Framework* (London: FSA, February 2003) (FRAF).
- ¹¹⁹ NRNM, para 22.
- ¹²⁰ Identified in PR 1
- ¹²¹ See PR 1 for the introduction of analysis on RTOs, and PR 2 for the introduction of the notion of a 'risk map'.

- ¹²² PR 2, see also PR 3 para 4.41 - list of firms that display characteristics that historically have been leading indicators of potential problems, eg unconventional business models, governance arrangements or dominant individuals.
- ¹²³ FRAF para 2.19.
- ¹²⁴ Interview, FSA 121103.
- ¹²⁵ FSA, Financial Risk Outlook Reports.
- ¹²⁶ Interview, FSA 121103. Note that there are processes in place which are intended to address this issue, notably the ARROW Panels (discussed below), and review by senior management and the Finance, Strategy and Risk Division (interview, FSA 121103).
- ¹²⁷ NRNM, para 39
- ¹²⁸ Though note that current themes (mortgages and insurance and 'ageing' are in fact defined by changes in regulatory scope proposed by Treasury in Dec 2001 and due to come into effect in 2004 and 2005).
- ¹²⁹ Interview, FSA 17204 and FSA 251103.
- ¹³⁰ Interview, FSA 251103.
- ¹³¹ FSA, *Annual Report 2003-4* (London: FSA, 2003), p.16.
- ¹³² FRAF Annex 2.
- ¹³³ FRAF para 2.2.
- ¹³⁴ FRAF para 2.4.
- ¹³⁵ PR2, para 37; FRAF Annex 2.
- ¹³⁶ FSA 102042, personal correspondence with author.
- ¹³⁷ C. Hood et al, *Regulation Inside Government* (Oxford: OUP, 2000).
- ¹³⁸ PR 2 para 38.
- ¹³⁹ FRAF para 2.2.
- ¹⁴⁰ Interview, FSA 202041.
- ¹⁴¹ FRAF paras 2.6-2.10.
- ¹⁴² PR 2, para 44.
- ¹⁴³ PR 2.
- ¹⁴⁴ First appears in PR 2, note that in PR 2 mention 40 risk elements; by FRAF grown to 45.
- ¹⁴⁵ Details are in FRAF.
- ¹⁴⁶ FRAF Annex 3.
- ¹⁴⁷ FRAF paras 2.26-2.30; see PR 2 Appendix B and FRAF Annex 5 for probability matrix scoring sheets.
- ¹⁴⁸ FRAF para 2.28; see PR 2 Appendix C and FRAF Annex 5 for scoring summary.
- ¹⁴⁹ This is a refinement from PR 1 where only 3 scores (para 36); refinement detailed in PR 2.
- ¹⁵⁰ Interview, FSA 17204.
- ¹⁵¹ Interview, FSA 17204.
- ¹⁵² Interview, FSA 17204.
- ¹⁵³ FRAF Annex 6 for example
- ¹⁵⁴ Again first appears in PR 2 Appendix C - prior to this grouped into tools to use against firm and tools to use against industry as a whole; PR 1 uses mortgage regulation proposals as an example; PR 3 uses insurance regulation proposals as illustration of use of regulatory tools.
- ¹⁵⁵ PR 2 para 53 states that for firms scored as high risk preventative or remedial tools will be used. For those scoring medium high, preventative tools; for those scoring medium low, monitoring tools, and for those scoring low risk no action will be taken. Diagnostic tools will be used where more information is needed.
- ¹⁵⁶ FSA 17204, personal correspondence with author.
- ¹⁵⁷ PR 3.
- ¹⁵⁸ Interview, FSA 17204.
- ¹⁵⁹ FSA, *Annual Report 2003-4* (London: FSA 2004), p. 116.
- ¹⁶⁰ FSA Practitioner Panel, *Practitioner Panel, Annual Report 2003-4* (London: FSA, 2004), pp.7-8.
- ¹⁶¹ Interview, FSA 251103.
- ¹⁶² Interview, FSA 17204.
- ¹⁶³ FSA, *Business Plan 2004-5* (London: FSA), p.28.

- ¹⁶⁴ Interview, FSA 251103.
- ¹⁶⁵ Interview, FSA [MF]
- ¹⁶⁶ Interview, FSA 251103.
- ¹⁶⁷ Interview FSA 102042 and personal correspondence with author; interview FSA 17204 and personal correspondence with author.
- ¹⁶⁸ Interview FSA 251103.
- ¹⁶⁹ Interview FSA 17204.
- ¹⁷⁰ Interview, FSA 102041.
- ¹⁷¹ Interview, FSA 102041; FSA 17204.
- ¹⁷² Interview, FSA 17204.
- ¹⁷³ Interview, FSA 17204.
- ¹⁷⁴ FSA, *Business Plan 2004-5* (London: FSA), p.28.
- ¹⁷⁵ Interview, FSA 121103; FSA 102041.
- ¹⁷⁶ Interview, FSA 102042; FSA 17204.
- ¹⁷⁷ Interview, FSA 17204.
- ¹⁷⁸ PR2, para 36.
- ¹⁷⁹ Interview, FSA 102041.
- ¹⁸⁰ Interview, FSA 102042; contrast the reasons why prosecutions are brought in the health and safety field: K. Hawkins, *Law as Last Resort* (Oxford: OUP, 2003).
- ¹⁸¹ Interview FSA 102043.
- ¹⁸² Interview, FSA 17204.
- ¹⁸³ Interview, FSA 102041.
- ¹⁸⁴ Interview, FSA 102041; FSA 17204.
- ¹⁸⁵ Interview, FSA 17204.
- ¹⁸⁶ FSA, PR 3, though room for manoeuvre is limited by EU Directives and the requirements of international accounting bodies.
- ¹⁸⁷ Interview, FSA 102041.
- ¹⁸⁸ FSA, *Business Plan 2004-5* p.28.
- ¹⁸⁹ *Financial System Inquiry Final Report* (Canberra: AGPS, 1997). For a history of APRA see D. Thomson and M. Abbott, 2000 'Australian Financial Prudential Supervision: An Historical View' *Australian Jnl of Public Administration* 59(2): 75-88; B. Goldsworthy, D. Lewis and G. Shuetrim, *APRA and the Financial System Inquiry* (Sydney: APRA, 2000).
- ¹⁹⁰ Accounts of APRA's formation and early operation can be found in J. Palmer, *Review of the Role Played by the Australian Prudential Regulatory Authority and the Insurance and Superannuation Commission in the Collapse of HIH Insurance Group of Companies* (July 2002) (the Palmer Report), and in HIH Royal Commission, *A Report on the Failure of HIH insurance* (Canberra, 2003), by Ld Justice Owen, (Royal Commission), ch 4. The Palmer Report was commissioned by APRA's lawyers and submitted as part of APRA's evidence to the Royal Commission on HIH. The Report was written between October-December 2001, and published in 2002.
- ¹⁹¹ Including the General Insurance Reform Act 2001; Public Sector (Collection of Data) Act 2001.
- ¹⁹² Palmer Report, 5.3.
- ¹⁹³ Royal Commission, para 24.1.1.
- ¹⁹⁴ Royal Commission, para 24.1.6 and para 24.1.7.
- ¹⁹⁵ The Royal Commission disputed this interpretation of the Wallis Report, para 24.1.
- ¹⁹⁶ See eg Palmer Report paras 8.5.1 -8.5.19 on the DID methodology, and paras 8.5.20 - 8.5.27 on that of SID, commenting that aspects of the SID approach would have been beneficial for DID to have adopted.
- ¹⁹⁷ *ibid.*, para 8.5.10.
- ¹⁹⁸ Palmer Report, paras 8.5.9-8.5.19.
- ¹⁹⁹ Palmer Report, para 15.2.3.
- ²⁰⁰ Palmer Report, paras 8.5.20-8.5.27.
- ²⁰¹ For details see Palmer Report para 8.5.24.
- ²⁰² Royal Commission, para 24.1.13.

- ²⁰³ *ibid.*
- ²⁰⁴ Commissioned by APRA's lawyers and submitted as part of APRA's evidence to the Royal Commission on HIH set up in 2001 to investigate the causes of the collapse. The Report was written between October-December 2001, and published in 2002.
- ²⁰⁵ Palmer Report, para 8.5.2; Royal Commission Report para 24.1.7.
- ²⁰⁶ Palmer Report, para 8.5.5; internal memos of APRA to this effect are reprinted at Royal Commission para 24.1.7.
- ²⁰⁷ Palmer Report, para 8.5.6-8.5.8.
- ²⁰⁸ *Ibid.*, para 8.5.8.
- ²⁰⁹ *Ibid.*, para 8.5.18, Royal Commission, para 24.1.6-7.
- ²¹⁰ *Ibid.*, para 24.1.7.
- ²¹¹ *Ibid.*, para 24.1.9.
- ²¹² *Ibid.*, para 24.1.10-11.
- ²¹³ *Ibid.*, para 24.1.9.
- ²¹⁴ *Ibid.*, para 24.1.12.
- ²¹⁵ *Ibid.*, para 24.1.13.
- ²¹⁶ *Ibid.*, para 24.1.12.
- ²¹⁷ *Ibid.*, para 24.1.12.
- ²¹⁸ Interview, APRA 270404.
- ²¹⁹ R. Jones, 'Speech to Risk Finance Conference' 23rd March 2004.
- ²²⁰ Interview, APRA 270404.
- ²²¹ Interview, APRA 021203.
- ²²² Interview, APRA, 021203.
- ²²³ Interview, APRA, 021203.
- ²²⁴ Interview, APRA 270404.
- ²²⁵ Interview, APRA 270404.
- ²²⁶ Interview, APRA 021203; APRA 270404.
- ²²⁷ Interview, APRA, 021203.
- ²²⁸ Interview, OSFI 30304; FSA 251103.
- ²²⁹ Palmer Report, eg paras 15.2.10-12; 15.2.18-20; 15.2.26-30; 15.2.36-42.
- ²³⁰ Interview, APRA 021203.
- ²³¹ C. Littrell, 'The APRA Approach to Insurance Supervision' speech delivered 16th May 2003.
- ²³² APRA, *PAIRS Explained*, www.apra.gov.au, undated; APRA, *How PAIRS Ratings are Determined*, www.apra.gov.au, 26th November 2002.
- ²³³ It subscribes to four credit rating agencies, a corporate governance service and a superannuation industry information service: interview, APRA 270404; C. Littrell, 'APRA's role and approach to regulation (under FSR)', speech delivered 8th April 2003, available at www.apra.gov.au/Speeches/03_07.cfm.
- ²³⁴ C. Littrell, 'Prudential Risk Management: the APRA Approach', speech delivered 8th March 2003, available at www.apra.gov.au/Speeches/03_04.cfm.
- ²³⁵ Interview, APRA 270404.
- ²³⁶ R. Jones, 'Speech to Risk Finance Conference', 23rd March 2004.
- ²³⁷ Bob Allen, presentation, 'PAIRS: Probability and Impact Rating System', copy on file with the author.
- ²³⁸ *Ibid.*
- ²³⁹ Interview, APRA 021203.
- ²⁴⁰ APRA, *How Ratings are Determined*.
- ²⁴¹ *Ibid.*
- ²⁴² Charles Littrell, 'Prudential Risk Management: The APRA Approach', speech delivered 6th March 2003; available at www.apra.gov.au.
- ²⁴³ Interview, APRA 021203.
- ²⁴⁴ Interview, APRA 270404.
- ²⁴⁵ Interview, APRA 021203.
- ²⁴⁶ Interview, APRA 270404.

- ²⁴⁷ Interview, APRA 270404.
- ²⁴⁸ Interview, APRA 270404.
- ²⁴⁹ Interview, APRA 021203; APRA 270404.
- ²⁵⁰ Interview, APRA 270404.
- ²⁵¹ APRA 270404, personal correspondence with the author.
- ²⁵² APRA, *How PAIRS Ratings are Determined*.
- ²⁵³ 'PAIRS: Probability and Impact Rating System', copy on file with the author.
- ²⁵⁴ Ibid.
- ²⁵⁵ Interview, APRA 021203.
- ²⁵⁶ Interview, APRA 270404.
- ²⁵⁷ Interview, APRA 021203; APRA 270404.
- ²⁵⁸ Interview, APRA 270404.
- ²⁵⁹ Interview, APRA 021203.
- ²⁶⁰ Interview, APRA 270404.
- ²⁶¹ Interview, APRA 021203.
- ²⁶² The grid is published widely in APRA documents; see for example, APRA's Risk Rating of Superannuation Funds (Insight, May 2004); APRA, Annual Report, 2003.
- ²⁶³ APRA, 'Applying PAIRS' www.apra.gov.au, undated.
- ²⁶⁴ C. Littrell, 'The APRA approach to insurance supervision', speech delivered 16th May 2003.
- ²⁶⁵ Interview 270404.
- ²⁶⁶ Interview APRA 270404; *APRA's risk rating of superannuation funds – PAIRS*, p.30.
- ²⁶⁷ Senate Committee hearing, May 2004.
- ²⁶⁸ Interview, APRA 270404.
- ²⁶⁹ Interview, APRA 270404.
- ²⁷⁰ APRA, Annual Report 2003, p.9.
- ²⁷¹ Interview, APRA 270404.
- ²⁷² Interview, APRA 270404.
- ²⁷³ Interview, APRA 021203.
- ²⁷⁴ For details see APRA, *APRA's Risk Rating of Superannuation Funds - PAIRS*, Insight, First Quarter 2004 (available at www.apra.gov.au/insight).
- ²⁷⁵ Interview, APRA 021203.
- ²⁷⁶ R. Jones, Speech to Risk Finance Conference, 23rd March 2004.
- ²⁷⁷ Interview, APRA 021203.
- ²⁷⁸ Interview, APRA 021203.
- ²⁷⁹ Interview, APRA 270404.
- ²⁸⁰ Interview, APRA 270404.
- ²⁸¹ Interview, APRA 270404.
- ²⁸² Interview, APRA 270404; APRA 021203.
- ²⁸³ Interview, APRA 270404.
- ²⁸⁴ APRA, Annual Report 2003, p.13.
- ²⁸⁵ Interview, APRA 270404.
- ²⁸⁶ See the Royal Commission and Palmer Reports, above, for evidence of this.
- ²⁸⁷ Interview, APRA 270404.
- ²⁸⁸ APRA, Annual Report 2003, p.14.
- ²⁸⁹ Royal Commission, paras 24.1.5; 24.1.9; 24.1.12.
- ²⁹⁰ Interview, APRA 270404.
- ²⁹¹ Interview, APRA 270404.
- ²⁹² APRA, Annual Reprt 2003, p.33.
- ²⁹³ Interview, APRA 270404.
- ²⁹⁴ Royal Commission, Summary.
- ²⁹⁵ APRA, Response to Recommendations in the Palmer Report, September 2002, pp.3-5.

²⁹⁶ House of Representatives Standing Committee on Economics, Finance and Administration, Review of the Australian Prudential Regulatory Authority, 10th May 2004, EFPA.