RISK-BASED SUPERVISION OF PENSION FUNDS: Summary of First Four Case Studies

Richard Hinz and Roberto Rocha
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Objectives of the Project

- Provide Case Studies Across a Range of Settings and Systems
- Evaluate Common Elements and Relationship to Supervisory Priorities and Context
- Support Development of Supervision Principles and Standards
- Establish Models and Guidance for Development and Evolution of Supervisors

Selection of Countries

- Main Criteria:
  - Developed private pension system with meaningful coverage
  - Both DB and DC to provide initial comparison
  - Significant progress in implementing risk-based supervision
- Initial Group
  - Netherlands: Primarily DB, quasi-mandatory
  - Denmark: DC with benefit guarantees, quasi-mandatory
  - Australia: Mixed DB and DC, mandatory coverage, flexible design
  - Mexico: DC, mandatory

Factors Driving the Adoption of RBS
Financial Market Development

- Innovation in financial products that makes characteristics of asset categories less clear – leads to need for outcome oriented methods
- Emergence of risk management products and risk management techniques
- Improvement in information and efficiency of financial markets – capacity for reliance on market pricing of agency risks and total portfolio rather than individual assets evaluation of investment risks
- Increase financial market and interest rate volatility with emergence of global financial markets
- Sharp drop in equity prices in early 2000s, leading to large portfolio losses, under-funding/insolvency

Factors Driving the Adoption of RBS Structure of Regulation and Supervision

- Creation of integrated supervisory agency, facilitating transfer of risk-based approach
- Exemplary effects of development of Bank supervision
- Need for adaptation to "prudent person" investment regimes
- Large number of institutions and the need to effectively allocate scarce supervisory resources
- Perceived potential to generate efficiency gains (increasing net returns) by relaxing portfolio controls and replacing them by stronger risk management procedures
- Concerns about costs and regulatory burdens

RBS: The Main Building Blocks

Two Sides of the Same Coin

- Regulatory framework promotes/strengthens internal risk management capacity
  - Enhanced Board responsibility over risk management
  - Supervisory Guidelines for sound risk management
  - Risk-based capital rules, risk scores reward sound risk management
  - Enhanced role of actuary/auditor in risk assessment/monitoring
  - Disclosure of performance/risk profile of institution
- Supervisory approach more risk-based, preventive
  - Risk scoring system, based on risk-based capital rules (for DB) and qualitative measures of risk and risk management capacity
  - Supervision intensity and intervention according to risk scores
  - More diverse and sophisticated supervision, addressing management quality, HR issues in addition to legal compliance

Some Common Elements

- Requirements for formal risk management programs and procedures
- Risk based capital and reserve requirements – creation of buffers or funding cushions
- Use of "stress test" or "value at risk" measurements
- Application of mixed quantitative and qualitative scoring systems to establish supervisory intensity – "supervisory ladder" and "traffic lights" methods
- Reliance on third party monitoring
- Increased reporting and disclosure
- Matrix organization of integrated financial supervisor
- Outreach and educational programs for industry

Supervisory Guidelines for Sound Internal Risk Management

- Governance and administration required to have explicit risk management plan addressing:
  - Governance, operational, investment, counterparty, liquidity, outsourcing, agency, fraud, and insurance risks
- In order to address these risks, trustees should ensure:
  - Clearly defined responsibilities, segregation of duties, establishment of risk committee, risk controls for each department, training in risk management, external consultants to appraise risk management
- Supervisory risk-scoring system measures the extent to which institutions have made progress in implementing these elements and rewards progress (the other side of the coin)

Enhanced Role of Auditor, Actuary

- Generally, more supervisory powers to:
  - Set minimum criteria for auditors
  - Veto, dismiss badly performing auditors
  - Influence the scope of audit (e.g., to include assessment of risk management plan, risk management procedures and controls)
  - Access audit results, including working papers
  - Call auditors for explanations/clarifications
- Stricter reporting obligations to supervisor
  - But whistle-blowing still not observed in practice
- Independence of auditor
  - But rotation not required in most countries

Enhanced Disclosure Requirements

- Open pension systems typically have more intensive and frequent disclosure requirements than occupational systems.
- Market discipline in occupational pension systems does not have the same importance as in the banking system (pillar 3 of Basel II) or open pension system
- However, movements towards more disclosure driven from perceived gains: pressures on boards and management from members. Examples:
  - Denmark discloses performance indicators of individual companies, and results of traffic light stress test
  - Australia discloses risk management plan to members

Supervisory Risk Scoring Systems

- General approach: Assessment of gross risks and risk management capacity to determine net risk
- Combine quantitative risk-based capital rules or stress tests with qualitative measures of exposure to risk and risk management capacity
- Scores may trigger on site inspection or interventions
- DB systems put more weight on capital aspects
- On-site supervision and audit assessments provide critical inputs to assessment of qualitative aspects
- Development of algorithms, internal manuals to help supervisors build risk scores

Risk-Based Capital Rules (DB Systems)

- Movement towards more current market (fair) value of assets and liabilities
- Measurement of liabilities
  - Discounting through yield curve – conservative rates
  - Mortality table with longevity improvements and buffers (Netherlands)
  - Longevity risk considered in stress test (Denmark)
- Solvency buffers
  - Standardized risk parameters specific to each main asset class penalize mismatches of assets and liabilities due to equity holdings, different durations, currency, as well as other risks such as credit risk
- Flexibility in enforcing the rules
  - 15 years to rebuild buffers in Netherlands open room for price recovery due to, e.g., mean reversion

Adaptation of RBS to DC Systems

- Main objective of RBS in DC systems is to ensure that funds operate at the efficient frontier of risk and return and protect public guarantees
  - May allow relaxation of quantitative controls in exchange for enhanced risk management capacity
  - Promotes sound management of all the risks, including investment risks. Riskier institutions subject to more intensive supervision and more frequent intervention.
- Enables better allocation of supervisory resources, reduction of the regulatory burden and operating costs
- Ultimately generates efficiency gains, through higher risk-adjusted returns and lower costs
- Mexico recently introduced a more ambitious approach: Ceilings on absolute VaRs. Results cannot be assessed yet.

Internal Reorganization of Supervision in Integrated Supervisory Agencies:

- Divisions specialized in main segment of the financial sector (banks, insurance, pension funds)
  - "Frontline supervisors", leading supervision work, institutional relations
- Possibly one division dealing with financial conglomerates
- Divisions specialized in main classes of risk (e.g., market, insurance, credit, operational risks)
  - Experts providing technical support to frontline supervisors

Preliminary Assessment of the Effectiveness of the RBS Approach

- Too early to assess outcomes and achievement of final, long-run objectives – systems still developing:
  - In DB, greater linkage of funding standards to market conditions should improve security
  - In DC, primarily efficiency gains
  - Multiple market cycles and longer term behavioral response required to assess full set of outcomes
- Early indications of potential gains:
  - Greater awareness of risk on both sides (institutions and supervisors)
  - More analytical consistency and discipline in identifying, measuring, and managing risk, despite subjective judgments involved
  - Perception of more effective allocation of supervisory resources

Preliminary Assessment of the Effectiveness of RBS Approach

Fundamental technical challenges ahead (1)

- In DB systems, is it reasonable to implement techniques originally developed for banks on pension funds with very different liquidity requirements and longer time horizons?
  - Parameters used in standard rules not country-specific, possibly inaccurate
  - Will risk-based capital rules result in changes in portfolio allocation (equity sell-outs) resulting in lower benefits, or accentuate move from DB into DC?
  - Can flexibility in enforcement prevent these outcomes?
  - Possible secondary consequences of incentives to move to fully immunized portfolios
- In DC systems, are ceilings on absolute VaRs more efficient than quantitative controls?
  - Difficult methodological issues related to VaRs (frequency, time horizon, statistical significance, level of ceilings), possible unintended effects on portfolio allocation
- Cost of developing and maintaining viable models for risk measurement

Preliminary Assessment of the Effectiveness of RBS Approach

Fundamental management challenges ahead (2)

- More financially sophisticated type of supervision, requiring more supervisors trained in finance. Public institutions will need to attract and retain different type of staff
- The expected adoption of internal models by the institutions may strain supervision capacity further:
  - Internal models are more accurate in principle, but:
  - Will require individual/customized assessment by supervisors, and commensurate technical skills
- Can reliance on professional standards and risk management plans prevent failures in future – key agency issues at stake
- Degree of discretion afforded supervisory staff to deviate from standard parameters
- Competing priorities within integrated supervisory agency

Key Questions

- How much paternalism and security is optimal – What sacrifice of return will workers and employers accept – Incidence of costs is critical
- Can appropriate pension risk metrics be developed
- Can methods be implemented that are transparent, equitable and efficient
- Are warrants and rents on capital less expensive than the transaction cost of sophisticated risk management models
- What macro consequences are higher – security or rigidities or potential diversion of capital to public rather than private investments

Next Steps

- Completion of description and analysis of additional country cases
  - South Africa
  - Germany
  - Kenya
  - Croatia
- Development of overview paper compiling lessons learned
- Publication of volume of studies
- Continued World Bank support through partnership with IOPS