



cutting through complexity

Risk & Regulatory Series

ORSA – Next Steps

Agenda

I. The first Canadian ORSAs

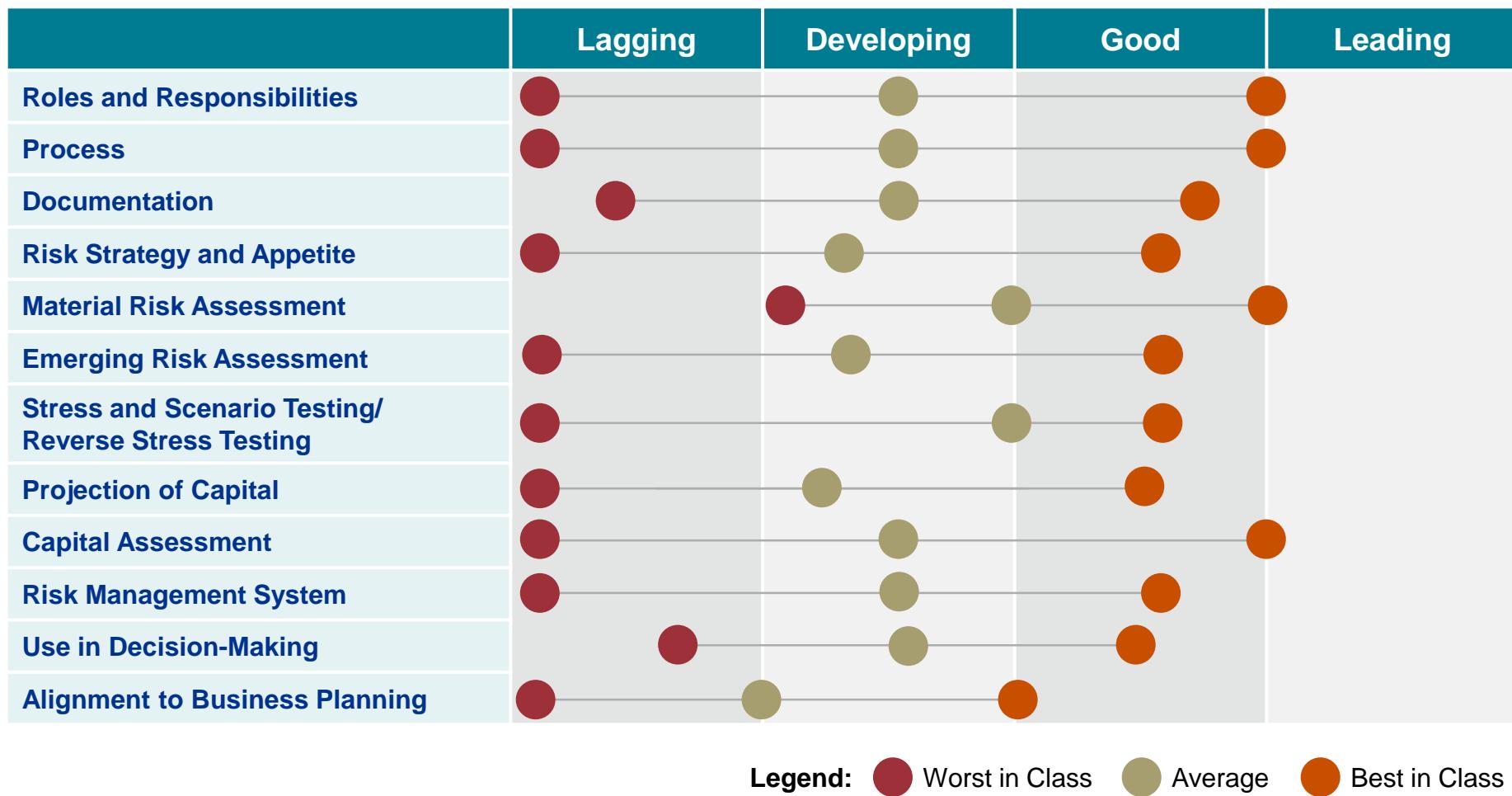
- Benchmarking ORSA maturity
- Challenges observed in completing and developing the first ORSAs

II. Detailed observations, and the way forward

- Maturity of the first ORSAs
- Development roadmap
- What does better look like?

ORSA Maturity Assessment

Canadian Insurers – 2014 reports



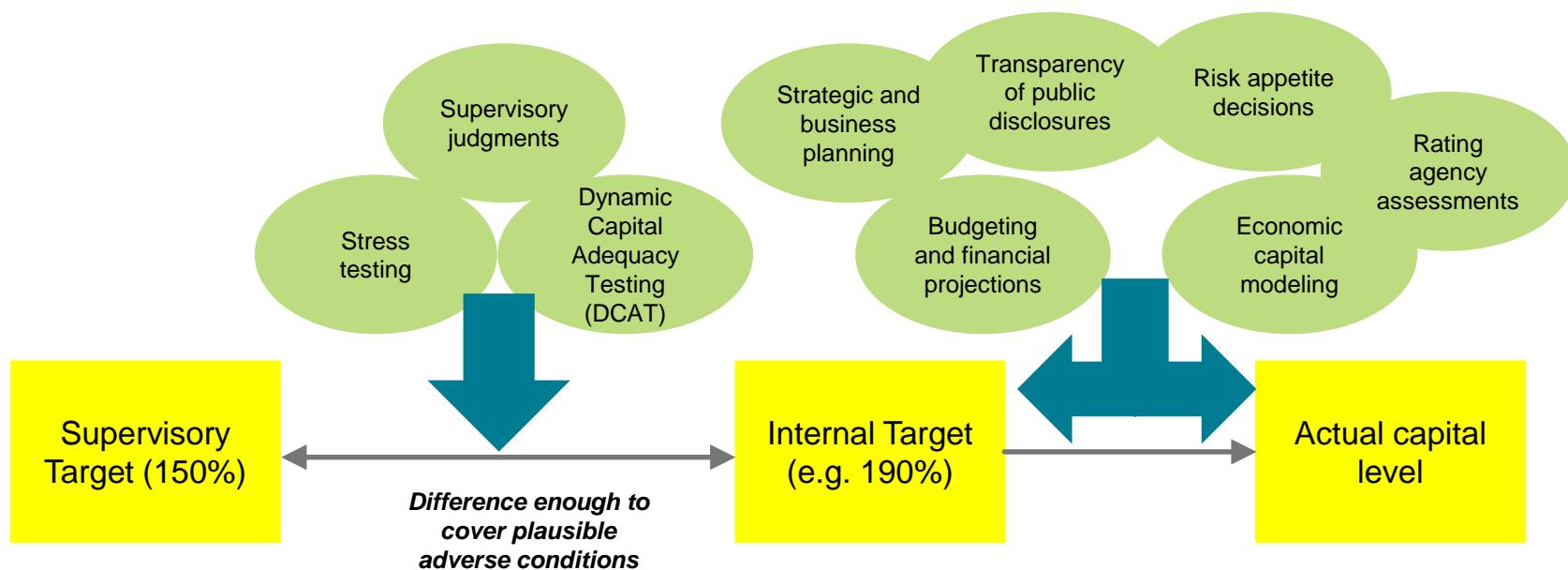
Challenges in completing and developing the first ORSAs

Common observed weaknesses and gaps

- Considerable reliance on standard MCT/MCCSR model
 - Need to develop better challenge of standard MCT/MCCSR model
 - Limited modelling capabilities demonstrated – so far
 - Need to develop validation and verification of models and data
 - Operational risk poorly understood, with relatively immature measurements – same for aggregation and diversification
- How much work do you need to make ORSA capital your “own” view?

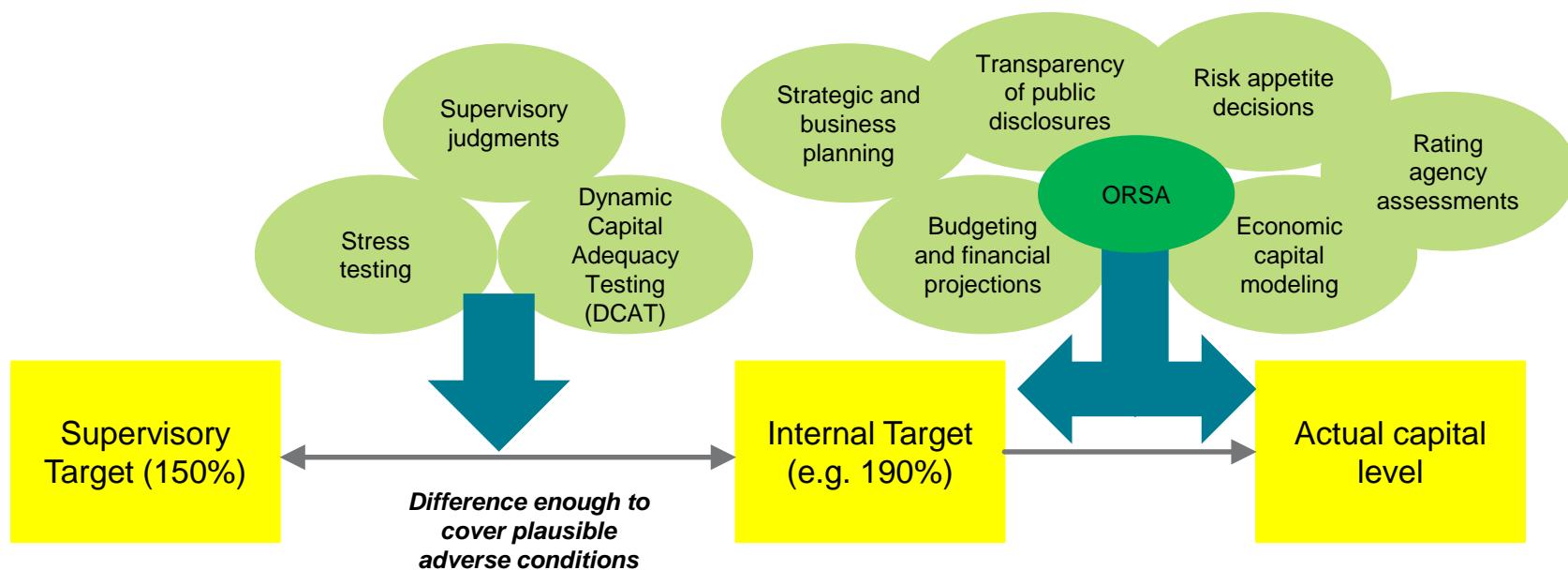
Regulatory capital minimums and internal target ratios

- Supervisory Target Capital Ratios are set above the minimum regulatory capital requirement (i.e. rather than just 100%, MCCSR - Tier 1 105%, Total 150%; MCT - Total 150%) to cover the risks specified in the capital tests as well as provide a margin for other types of risks not included in the tests
- Insurers are expected to set Internal Target Capital Ratios in excess of the Supervisory Target, and to operate above their internal targets



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- Insurers are expected to set Internal Target Capital Ratios in excess of the Supervisory Target, and to operate above their internal targets
- ORSA is now central to these discussions



Internal capital alternatives – maturity spectrum, in the context of ORSA

	Rudimentary	Average	Some leading practices	Most sophisticated
Capital measurement	<ul style="list-style-type: none"> Use of standard MCT/MCCSR, and DCAT to meet annual requirements 	<ul style="list-style-type: none"> Standard MCT/MCCSR model + DCAT Better use of stress testing 	<ul style="list-style-type: none"> Standard model supplemented by EC and “EC lite” methods Stress testing 	<ul style="list-style-type: none"> Full economic capital model Continuous monitoring EC used in capital allocation
Who might use?	<ul style="list-style-type: none"> Very small and simple insurers 	<ul style="list-style-type: none"> Small to medium insurers 	<ul style="list-style-type: none"> Medium to large insurers 	<ul style="list-style-type: none"> Some larger, more complex insurers
Pros and cons	<ul style="list-style-type: none"> Simple; “can’t go below regulatory test anyway” Is it “own view”? 	<ul style="list-style-type: none"> Simple; “can’t go below regulatory test anyway” Is it “own view”? 	<ul style="list-style-type: none"> Support for lower Internal Target with OSFI Public disclosure plus Meet expectations of analysts, rating agencies, regulators Better management info Greater effort and cost 	<ul style="list-style-type: none"> Support for lower Internal Target with OSFI Public disclosure plus Meet expectations of analysts, rating agencies, regulators Better management info Most effort and cost

Internal capital alternatives – can you support your choice?

	Rudimentary	Average	Some leading practices	Most sophisticated
<i>Capital measurement</i>	<ul style="list-style-type: none"> • Use of standard MCT/MCCSR, and DCAT to meet annual requirements 	<ul style="list-style-type: none"> • Standard MCT/MCCSR model + DCAT • Better use of stress testing 	<ul style="list-style-type: none"> • Standard model supplemented by EC and “EC lite” methods • Stress testing 	<ul style="list-style-type: none"> • Full economic capital model • Continuous monitoring • EC used in capital allocation
How would you support for use in an ORSA?	<ul style="list-style-type: none"> • Acceptance by regulators should be sought in advance • Internal target ratio reflects conservative judgmental assessment of the organization's risk profile • Retrospective analysis of past financial results indicates no surprises or problems • Qualitative analysis of whether there are indicators of higher risk or risk trending higher 	<ul style="list-style-type: none"> • Acceptance by regulators should be sought in advance • Internal target ratio reflects conservative judgmental assessment of the organization's risk profile • Retrospective analysis of past financial results indicates no surprises or problems • Qualitative analysis of whether there are indicators of higher risk or risk trending higher • Some quantitative challenge of standard model for key risks 	<ul style="list-style-type: none"> • EC approaches for key risks • Internal target ratio reflects assessment of the organization's risks • Key risk indicators are used to monitor key risks and risks trends – particularly for risks where the standard model is used • Model validation and governance where EC models are used 	<ul style="list-style-type: none"> • Model validation and governance, such as strong internal audit • Periodic independent reviews • Key risk indicators are used to monitor key risks and risks trends • Robust process for identifying and measuring new and emerging risks

Common observed weaknesses and gaps (cont'd)

- Risk appetite statements
 - Incomplete
 - Tend to be weak on strategic and reputational risks
 - Lack of measurement
- Poor connectivity to business and strategic planning
- Risks and internal control assessments
 - Too detailed, and too focused on financial reporting
 - Lack of linkage of net risks to capital needs

Common observed weaknesses and gaps (cont'd)

- Improvement in processes for emerging risks needed
 - Insurers generally behind other financial institutions
 - More sophisticated use of scenario and reverse stress testing
 - Consider operational/reputational scenarios
- Need to develop processes to sustain ORSA - management challenge, validation and verification, and independent reviews
- Need to develop depth and frequency of board oversight process

Experience Globally – Europe

EIOPA (European Insurance and Occupational Pensions Authority) issued Guidelines on the Forward Looking Assessment of Own Risks (“FLAOR”), based on ORSA principles, in October 2013 which details 25 guidelines providing greater context than previous guidance. The Guidelines on the ORSA / FLAOR apply from January 2014 and regulators throughout the EEA were required to report progress back to EIOPA on 28 February 2015. In summary these are as follows:

- To establish an ORSA/FLAOR policy.
- Ensure the administrative, management or supervisory body (AMSB) steers the ORSA/FLAOR process including setting of key assumptions as well as challenge and use of outputs.
- Perform in 2014 an ORSA/FLAOR assessment based on own view of all risks which reflects the current regulatory regime (i.e. ICA/ICA+ and Solvency I).

In 2015, the requirements move closer to Solvency II standards as follows:

- Perform an ORSA/FLAOR assessment based on own view of all risks which reflects the current regulatory regime as well as a comparison to the Solvency II requirements.
- Analysis of the deviation of the risk profile assessment from that implied by the SCR.

Experience Globally – Europe

Challenges being faced by insurers

The greater context provided by EIOPA's preparatory guidelines also presents challenges that may not have been considered previously, for example:

- What constitutes continuous compliance with regulatory capital requirements and how to go about evidencing this;
- How to facilitate the AMSB ("administrative, management or supervisory body") taking an active role in the development of the ORSA / FLAOR;
- Dealing with material risks that are not captured by the SCR calculation regardless of whether they are quantifiable or not; and
- The creation of an AMSB-approved ORSA / FLAOR policy.

Experience Globally – Other jurisdictions

Beyond Europe there has been notable progress around implementing similar ORSA / FLAOR requirements. This progress impacts Groups who need to respond to differing regulatory regimes, and increases supervisory knowledge and expectations on ORSA / FLAOR standards for example:

- Asia – Singapore, Taiwan and Malaysian regulators developing ORSA / FLAOR standards in line with Solvency II developments;
- United States – The NAIC ORSA (effective in 2015) is less prescriptive on the role of the Board and there is more flexibility on the capital basis that underpins the assessment – size test exempts smaller insurers, and may have more of a compliance focus;
- Bermuda – the CISSA and GSSA are broadly consistent with Solvency II requirements; and
- South Africa and Australia – have introduced ORSA / FLAOR type assessments into their regulatory regimes.

Comments by Area

- Maturity of the first ORSAs
- Development roadmap
- What does better look like?

ORSA summary results – Management

Area	UK Benchmarking Findings (2013)	Canadian Benchmarking Findings (2014)
Roles and responsibilities	<ul style="list-style-type: none">■ In all reports firms referenced the Board playing an active role in steering the ORSA. However, there appeared to be limited evidence of the role performed by Boards in practice. More advanced reports demonstrated the challenge the Board had provided and referenced decisions taken.■ There was limited discussion of the role of Committees / Senior Management within the ORSA process. More advanced reports reviewed noted the key people involved in the ORSA and their role.	<ul style="list-style-type: none">■ Initial reports often referred to planned board oversight and approvals, but the actual processes and responsibilities were not yet in operation.■ Limited, general discussion of management roles and oversight.

ORSA summary results – Management

Area	UK Benchmarking Findings (2013)	Canadian Benchmarking Findings (2014)
Process	<ul style="list-style-type: none"><li data-bbox="289 371 1109 836">■ The majority of reports documented the high-level components included within the ORSA process. There is clear development needed in terms of the timing, owners, detail and actual assessment undertaken. Given the ORSA may need to be run on an ad-hoc basis at short notice, the ORSA process needs to demonstrate clearly how the assessment will take place.<li data-bbox="289 875 1109 1105">■ Several reports aligned the Risk Appetite framework to the triggers for performance of an ad-hoc ORSA. This was considered to be stronger practice and an area of development for other firms.	<ul style="list-style-type: none"><li data-bbox="1142 371 1856 688">■ High level documentation of responsibilities and processes. Responsibilities and processes often were not fully thought out. ORSA process was generally not well defined as an operationalized process.<li data-bbox="1142 712 1856 894">■ In many cases, it is unclear how the planned ORSA processes will be integrated with business and strategic planning.<li data-bbox="1142 918 1856 1182">■ Process and timing expectations for revising or updating an ORSA were typically not well documented. The conditions that would trigger the revision or update were frequently not defined.

ORSA summary results – Management

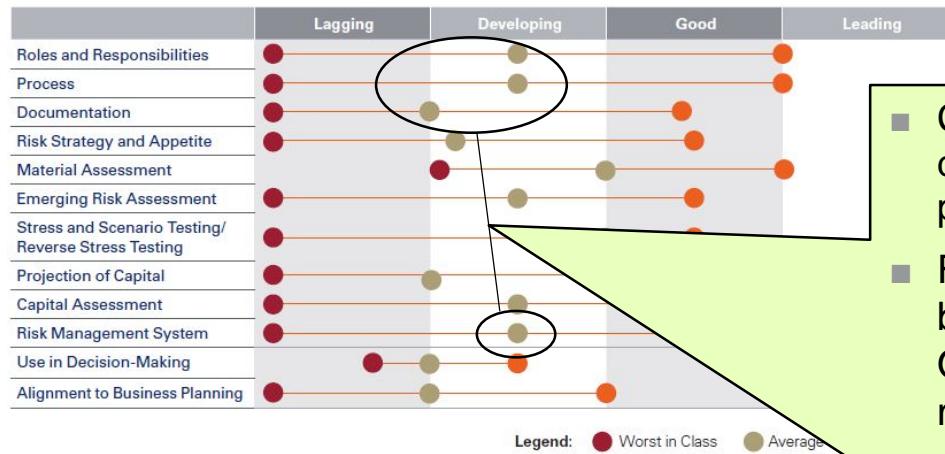
Area	UK Benchmarking Findings (2013)	Canadian Benchmarking Findings (2014)
Documentation	<ul style="list-style-type: none">■ Few reports contained executive summaries which highlighted clear areas for Board discussion and comment. Given the length of reports this ought to be an area of focus for the future to ensure the core points for decision and understanding are presented.■ Many reports appeared to have been developed as ‘desk-based’ exercises rather than as part of a broader process. As a result there was no clear ‘story’ of how the Risk, Capital and Business plan aligned and sections appeared siloed.	<ul style="list-style-type: none">■ Initial reports were incomplete in many respects and often did not show a clear overall assessment statement in the executive summary or the body of the report.■ Initial ORSAs typically did not show evidence that they are part of an operationalized process rather than a “desk based” exercise.■ Use of a multi year development roadmap is a leading practice.

ORSA summary results – Risk-based Decisions

Area	UK Benchmarking Findings (2013)	Canadian Benchmarking Findings (2014)
Risk Management System	<ul style="list-style-type: none">■ Many reports contained largely static information on the Risk Management System (RMS) explaining the processes followed and key components. Stronger reports indicated key areas of change within the RMS, whilst static information was consigned to the supporting documentation.■ Few reports demonstrated a review of the RMS taking place with consideration for changes needed as a result. More mature reports provided a summary of the weaknesses in the RMS which were being addressed.	<ul style="list-style-type: none">■ Commonly, the description of the risk management system is narrative and static, and does not describe monitoring, current state of controls and net risks. A leading practice would be to develop monitoring and reporting processes that are at a level that is usable in ORSA process and oversight.

ORSA Development Roadmap

Roles, Process, Documentation and System



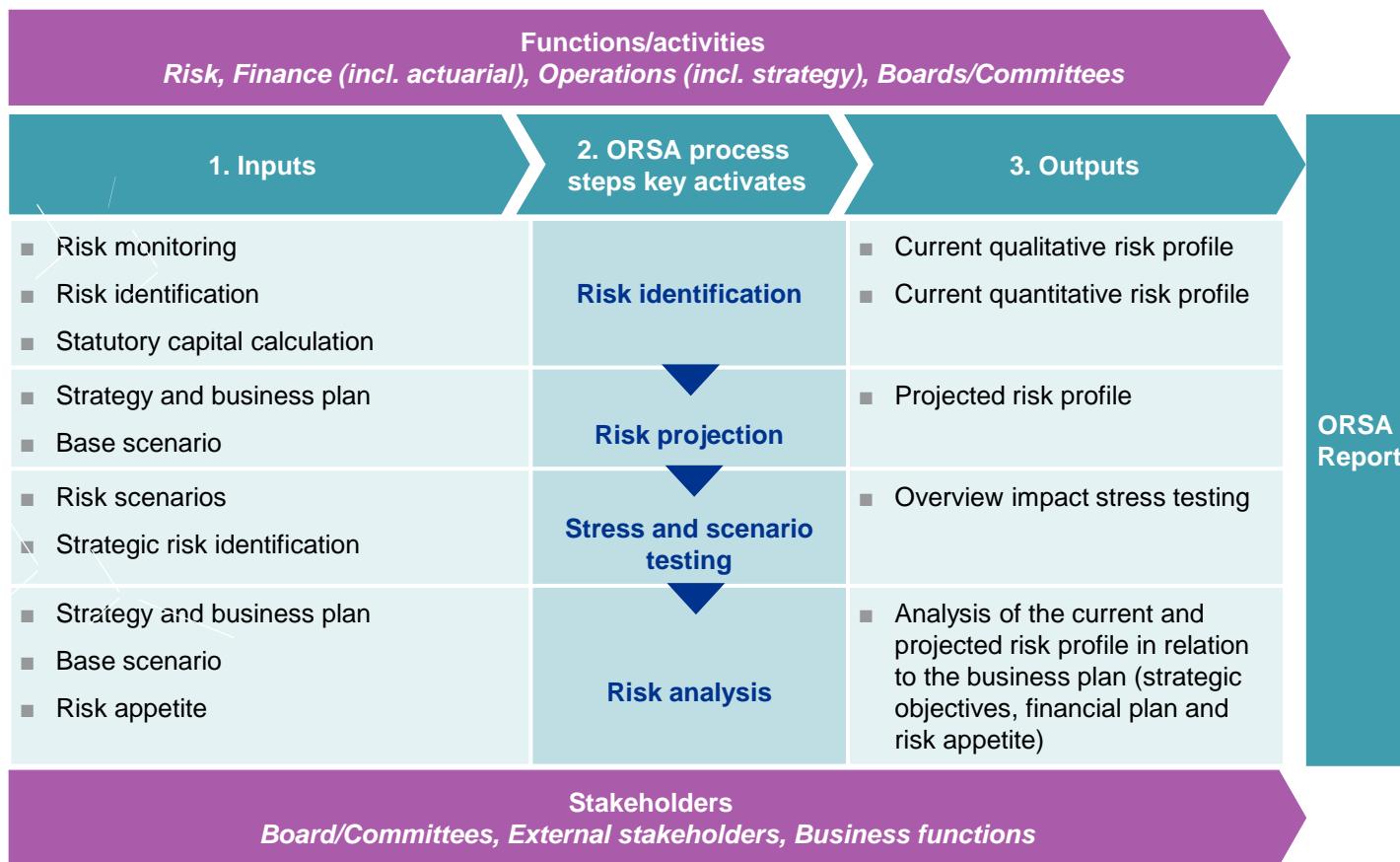
Source: "Own Risk and Solvency Assessment: Canadian current state observations" (KPMG in Canada, 2014)

- Continue Board education and the development of detail, depth and frequency of the Board oversight process
- Firms need to develop the management and board routines around ongoing monitoring of ORSA, and a "production environment" risk management system:
 - Key metrics reporting
 - Relationship to ongoing stress testing
 - Risk monitoring, risk appetite, emerging risks
 - Development of supporting systems
 - Frequency, format and documentation
 - Responsibility for management and board oversight
 - Approach to validation and verification

Designing and embedding an ORSA within the business

ORSA and business planning are strongly aligned: The ORSA process needs input from the business planning process and vice versa

- The process should be embedded in business as usual (BAU)
- The process generates input from business as usual activities across operations, finance and risk management
- The outputs of the ORSA, together with a reference to or a summary of the inputs, are captured in the ORSA report



What does “better” look like?

Roles, Process, Documentation and System

“Better practices” observed:

Oversight

- Separate board risk committee with appropriate mandate, or mandate and operations for risk oversight clearly and separately documented (eg. In an “audit and risk committee”)
- Executive risk committee
- Improved BOD and senior management engagement – training, scheduling of focused attention to risk issues

Reporting and monitoring

- Continuous monitoring - quarterly at least
- Risk dashboard reporting
- Key metrics, drawing on KMR metrics as a starting point
- Trigger points for when you should consider refreshing ORSA ahead of the usual annual cycle

Policies for independent validation and verification

- Internal audit mandate reflects risk as an important focus area; policy for 3rd party reviews

ORSA summary results – Risk Strategy and Appetite

Area	UK Benchmarking Findings (2013)	Canadian Benchmarking Findings (2014)
Risk Strategy and Appetite	<ul style="list-style-type: none">■ Although most firms had Risk Appetite statements, there was typically less evidence of more granular limit frameworks with approved tolerances within which the business could manage risk.■ In several reports Risk Appetites were not clearly aligned to the material risk exposures, suggesting a lack of embedding within the business. This meant the report did not evidence a clear comparison between the Appetite and Risk Profile.	<ul style="list-style-type: none">■ Risk appetite statements were fairly rudimentary in most cases, stopping at total enterprise measures, focusing on capital preservation and income volatility. Many elements expressed only in qualitative terms.■ RAS frequently incomplete and tended to be weak on strategic and operational risks■ RAS typically not disaggregated and linked to how risk would be managed at the business unit level, e.g. RAS at a BU level, with linkages to business limits that could be communicated to and acted on by individual managers.

ORSA Development Roadmap

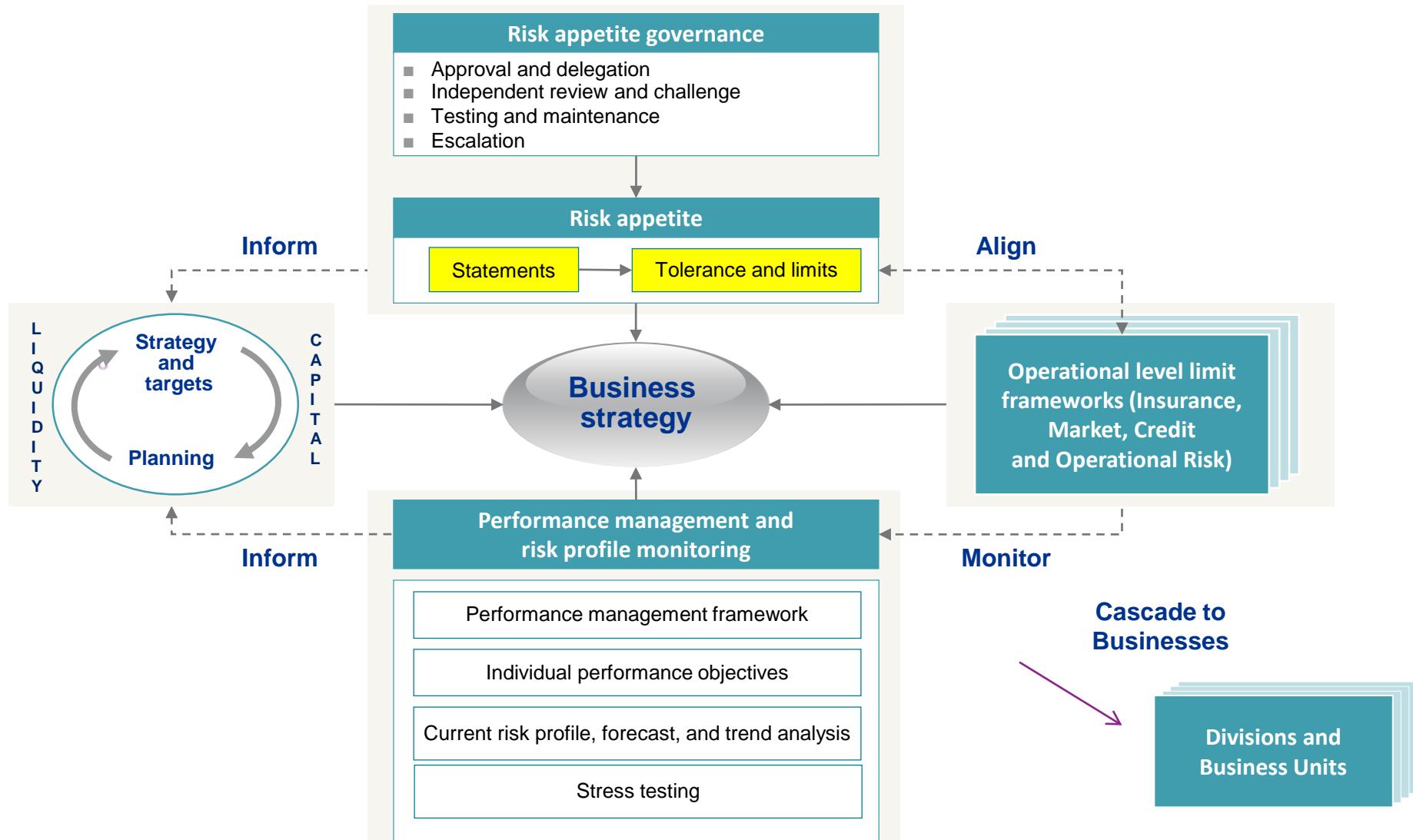
Improving Risk Strategy and Appetite



Source: "Own Risk and Solvency Assessment: Canadian current state observations" (KPMG in Canada, 2014)

- Risk appetite statements generally need some work!
 - More quantitative measures/limits
 - For “zero tolerance” statements, relate to how you would monitor compliance
 - Consider how you would describe your risk profile – should correspond to RAS
- Risk appetite needs to relevant to how the business is managed and how it is governed
 - Requires the RAS to be specific to the business units, with business limits that can be communicated to and acted on by BU managers.
 - RAS should be integral part of both the ORSA and the strategic plan

What does “better” look like? How risk appetite fits into ORSA



What does “better” look like?

Improving Risk Strategy and Appetite

Example risk appetite statements and structure:

	Risk appetite statement	Risk tolerance limit	Key risk indicators	Business unit level
Total enterprise	<u>Capital</u> - The company will maintain equity at a level sufficient to provide a high level of confidence of meeting customer obligations while targeting an acceptable return to shareholders over time.	Regulatory capital ratio will be maintained at a target ratio of xx% or higher.	<ul style="list-style-type: none">• Monitor capital ratios and trending• DCAT and stress testing	[Allocation of capital (\$ amount or capital ratio) to business units] • BU A xxx% • BU B xxx% • Etc.
		Capital will be maintained at a margin of xxx% over ORSA required capital	<ul style="list-style-type: none">• Monitor capital ratios and trending• DCAT and stress testing	[Allocation of capital (\$ amount or capital ratio) to business units]
Total enterprise	<u>Earnings</u> – The company will accept moderate short term variability of income in order to achieve superior rates of return on equity over time.	Quarterly earnings of at least 25% of plan, and fiscal year earnings of at least 75% of plan.		[Allocate to business units with separate P&Ls]

What does “better” look like?

Improving Risk Strategy and Appetite

Example risk appetite statements and structure:

	Risk appetite statement	Risk tolerance limit	Key risk indicators	Business unit level
Operational	<u>Outsourcing</u> - Outsourced processes will be subject to outsourcing best practices such as those set out in OSFI Outsourcing Guideline B-10.	Compliance with outsourcer service level agreements is to be monitored and any gaps remediated on a timely basis.	<ul style="list-style-type: none"> Trending in reported exceptions Service level metrics vs. SLA standards 	
Operational	<u>IT security</u> – The company will mitigate information security risks to achieve a high level of protection of customer personal information, and of proprietary information.	(commonly n/a, a “zero tolerance” item)	<ul style="list-style-type: none"> Attempted penetrations, security breaches 	
Insurance	<u>Underwriting</u> – The company will accept new business risks of market average quality, priced for a ROC in line with the strategic plan.	New policies written will have an average portfolio rating of x. New products and product repricing will require a minimum ROC of x%.	<ul style="list-style-type: none"> Mix of standard vs sub-standard applications Close to quote ratio 	<ul style="list-style-type: none"> Use of either group or BU tolerance limits Monitor KRIIs in business units

ORSA summary results – Risk Assessment

Area	UK Benchmarking Findings (2013)	Canadian Benchmarking Findings (2014)
Material Risk Assessment	<ul style="list-style-type: none">■ When considering the current risk profile, firms tended to focus on financial risks (core ICA risk components), which led to them overlooking other non-financial risks required under the ORSA e.g. conduct and strategic risks.■ In many reports the risk assessment process did not appear to align to the setting of the overall business plan.	<ul style="list-style-type: none">■ High level risk assessments typically focus on capital preservation and income volatility, together with some “zero tolerance” limits for reputational and compliance risks.■ Discussion of strategic risks is limited in most cases.■ Risks and internal control assessments<ul style="list-style-type: none">- Often not done by smaller companies- Can be too detailed, and/or too focused on financial reporting- Lack of linkage of net risks to capital needs

ORSA Development Roadmap

Improving Risk Assessment



Source: "Own Risk and Solvency Assessment: Canadian current state observations" (KPMG in Canada, 2014)

- Material risk assessments are typically too focused on financial reporting, ignore unmodelled risks
- Operational risk understanding and data is generally minimal; framework should include elements of:
 - Internal loss data collection
 - Key Risk Indicators as a monitoring tool
 - Operational risk taxonomy
 - Business environment internal control factors
 - Risk and control self assessments

What does “better” look like?

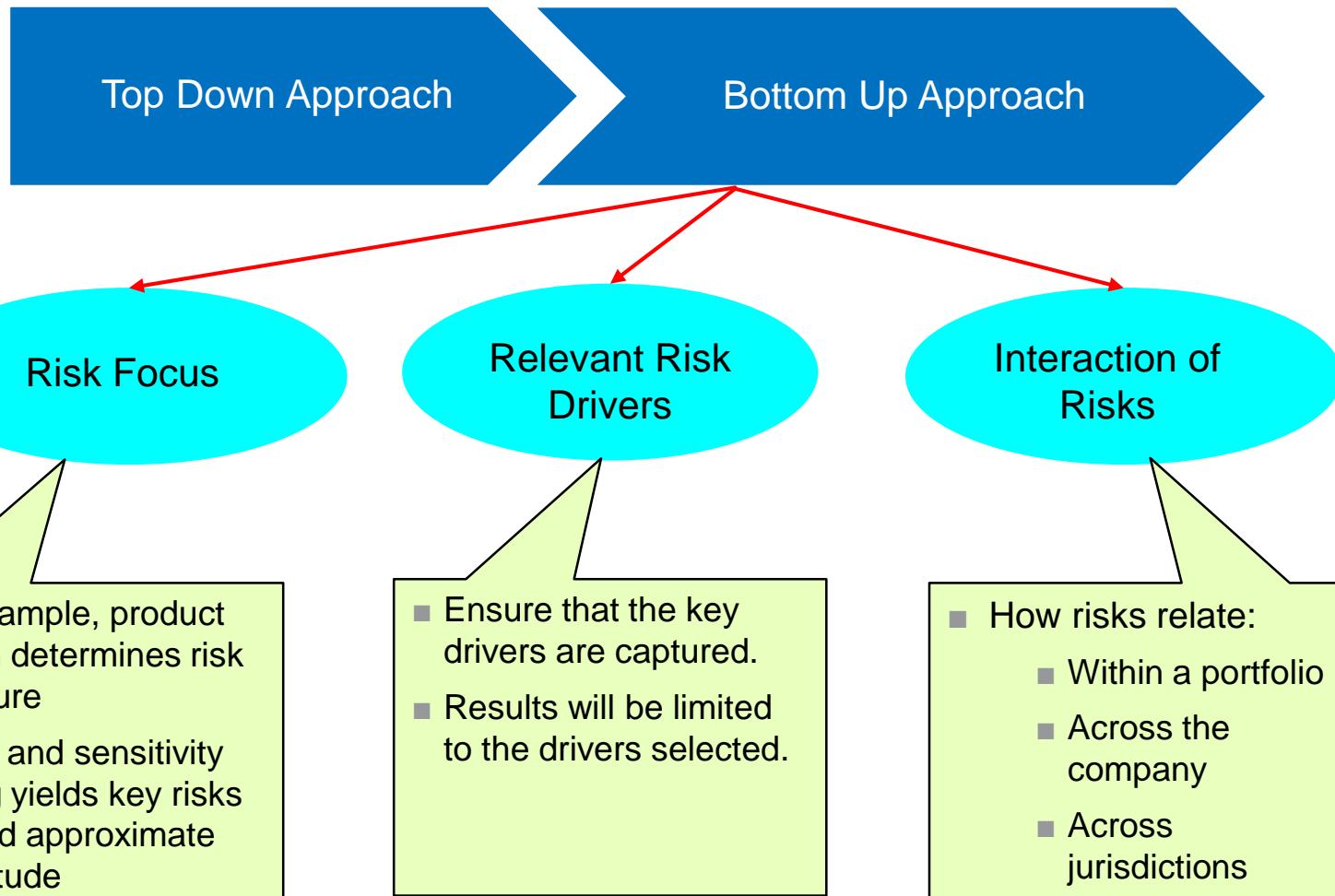
Improving Risk Assessment

“Better practices” observed:

- Taking a qualitative assessment of net risks and linking to a quantitative determination of capital needs requires both “art” and “science”
 - Many first ORSAs used a “top down” or total enterprise approach to identifying key risks, but a “bottom up” view can create a fuller picture
 - Expert judgment required
 - Intelligent use of scenario analysis
 - Challenge MCT/MCCSR with scenarios
 - Analyze and cost out specific scenarios for unmodelled risks – e.g. data loss or security breaches
 - Consider risk of failure of controls/mitigants
- Approaches to operational risk
 - Modelling without loss data?
 - Monitoring qualitative assessments of op risks with KRIs

What does “better” look like?

Improving Risk Assessment



Operational Risk – Regulatory Guidance

DATE	SOURCE	PUBLICATION
Superceded	OSFI	Sound business and financial practices framework for life insurers. Proposed but not introduced for P&C insurance.
May 2006	OSFI	Corporate Governance at TSA (The Standardized Approach) & AMA (Advanced Measurement Approach) Institutions
Ongoing development	Solvency II	QIS models for measuring capital required, including specific amounts for operational risk
June 2011	BCBS	Principles for the Sound Management of Operational Risk
June 2011	BCBS	Operational Risk - Supervisory Guidelines for the Advanced Measurement Approaches
August 2011	OSFI	Memo to Banks referencing BCBS - Principles for the Sound Management of Operational Risk: " <i>OSFI believes that the principles outlined in the 2011 paper establish sound practices that are relevant to all deposit-taking institutions, and expects institutions to take account of the nature, size, complexity and risk profile of their activities when assessing their practices against the updated principles in the Principles paper in the course of normal compliance reviews. Institutions should develop a plan to remedy any deficiencies that come to light during their assessments.</i> "
September 2012	OSFI	OSFI issued Life Insurance Regulatory Framework, indicating that future life insurance capital requirements will be introduced that include specific margins for operational risk.
Summer 2015	OSFI	Draft guidance expected

Some Examples of Common, But Usually Unreported Operational Risk Events

LOSS CATEGORY	DESCRIPTION
Theft and Fraud	<ul style="list-style-type: none">Fraudulent claims – fabricated events by fraud rings; exaggerated claims.Unreported deaths for annuities and pensions.Jumbo commissions on fraudulent life policies.
Unauthorised Activity	<ul style="list-style-type: none">Internal collusion with external claims or other service providers.
Suitability, Disclosure and Fiduciary	<ul style="list-style-type: none">Failure to comply with training and sales practices requirements by sales force.Failure to provide adequate selection and oversight of sales force.
Clients, Products and Business Practices	<ul style="list-style-type: none">Failure to apply underwriting or claims settlement standards.Over-rides of underwriting or claims settlement standards.
Clients, Products and Business Practices	<ul style="list-style-type: none">Errors in product design or pricing.
System Failures	<ul style="list-style-type: none">Interface errors between billing and receivable systems.System configuration errors affecting complex computations.Loss of data.

Monitoring Operational Risk Indicators



Purpose of Key Risk Indicators

- Factors that may provide early warning signals on systems, processes, products, people and the broader environment.
- Scorecard format facilitates easy identification of areas potentially posing increased levels of risk.
- Can be structured to provide forward looking and historic based metrics.
- Relies upon observable data as opposed to estimates of future activities (as is normally used in risk assessments) to produce a timely representation of the level of risk.
- When combined with risk assessment and loss data gathering results, the cumulative information can provide a comprehensive profile of operational risk.

Application of Key Risk Indicators

- Risk areas to be monitored selected and relevant KRIs identified. (Identification of KRIs with close correlation to actual exposure can only be determined over time.)
- Initially, normally a generic series of indicators developed that are applicable across the organization.
- Thresholds for each KRI developed to allow priority areas to be identified.
- Thresholds can be set at business line and organizational level.
- Comparison to loss data increases transparency.
- The collection and collation of KRIs will require the design and implementation of supporting processes.

Monitoring Operational Risk Indicators – Examples

Some Examples of insurance KRIs

- New business application – acceptance and rejection rates ; mix of standard vs. substandard risks submitted and accepted
- Claims adjuster statistics – number of claims handled, average costs
- Open claims inventory/backlog/new claims opened statistics
- Claims experience vs. expected
- Reopened claims files
- Customer complaint statistics

Effectiveness of Key Risk Indicators

- Distinction between predictive, preventive and detective indicators – you need all, but...
- Recent example – public scandal over retiree benefits fraud at Long Island Railroad; for several years, a very high percentage of retirees retired, often early, claiming disability benefits – long after these statistics were observed, losses had accumulated to \$1B

ORSA summary results – Emerging Risk Assessment

Area	UK Benchmarking Findings (2013)	Canadian Benchmarking Findings (2014)
Emerging Risk Assessment	<ul style="list-style-type: none">■ When considering emerging risks, firms tended to concentrate on upcoming regulatory changes e.g. FCA/PRA and EMIR. Reports which evidenced a process for assessing emerging risks often considered these in isolation to other risks and hence did not manage to evidence relevance to the risks faced by the firm. Few reports evidenced well developed processes for the identification and management of emerging risk.	<ul style="list-style-type: none">■ Limited treatment of emerging risks, or processes and responsibilities for identifying and monitoring emerging risks.■ Insurers generally behind other financial institutions.

ORSA Development Roadmap

Improving Emerging Risk Assessment



Source: "Own Risk and Solvency Assessment: Canadian current state observations" (KPMG in Canada, 2014)

- Emerging risk processes are mostly “ad hoc” and without quantitative analysis; other parts of the financial services industry seem to be more developed
 - More board challenge and leadership
 - Quantify possible exposures through scenario analysis and stress testing
 - Enable and expand on the use of scenario and reverse stress testing to assess emerging/evolving risks
 - Scenario analysis can help develop the capability to respond to unexpected stress events - including events different from the scenarios

What does “better” look like?

Improving Emerging Risk Assessment

“Better practices” observed:

- Broad involvement
 - Board and board risk committee can play a key role in constructive challenge
 - Broad management involvement – risk function, senior management and business level execs
- Process and monitoring
 - Use of outside facilitation, but not always the same source, and a variety of outside inputs
 - ‘Making it real’ – incorporating case studies, dry runs, war games
 - Continuous monitoring – quarterly written reporting of emergent risks and changes in their status
 - Most emerging risk processes were observed to be qualitative
 - quantitative stress and scenario testing promotes understanding of stress events and planning for resilience
 - reverse stress testing may help identify emerging risks, or re-evaluate their likelihood

ORSA summary results – Capital

Area	UK Benchmarking Findings (2013)	Canadian Benchmarking Findings (2014)
Stress and Scenario Testing (SST), Reverse Stress Testing (RST)	<ul style="list-style-type: none">■ Few reports demonstrated consideration of Reverse Stress Testing. In those instances where Reverse Stress Testing was considered, focus was given to the scenarios that caused the business to fail rather than the management actions to prevent it. Furthermore, the metrics and calibrations used to define business model failure from those firms that had conducted Reverse Stress Testing exercises varied significantly.■ Whilst several reports evidenced useful results around stress testing there was limited consideration of management actions and unclear alignment of stresses to the business plan.	<ul style="list-style-type: none">■ Common to reference “enhanced” use of SST in the ORSA, particularly where no EC model is in place, although nature of enhancements are often unclear. In some cases, ORSA plans include more severe stress scenarios, more rigorous use of stochastic modelling for some scenarios.■ Little or no use or planned use of reverse stress testing observed.

ORSA Development Roadmap

Improving Stress Testing



Source: "Own Risk and Solvency Assessment: Canadian current state observations" (KPMG in Canada, 2014)

- Stress testing should go far enough to test the parameters that would breach capital requirements and management actions should be specific to the firm, not generic
- Ensure alignment of stresses to development of the business plan, and development of management actions.
- Consider expanded use of reverse stress tests including additional definition of metrics and calibrations used in creating the tests along with management mitigating management actions to prevent business failure.
- Expect greater use of stochastic approaches vs. deterministic stress testing.

ORSA summary results – Capital

Area	UK Benchmarking Findings (2013)	Canadian Benchmarking Findings (2014)
Projection of capital	<ul style="list-style-type: none">Overall Stress and Scenario Testing and Projection of Capital were noted areas of weakness for firms. Several firms referenced developments ongoing and cited a lack of production capability as the rationale.	<ul style="list-style-type: none">DCAT and stress testing conducted under previous regulatory requirements provide a reasonable starting point for capital projection.Existence of a working EC model is a minority practice (approx15-20% of larger companies). Currently, cycle time limits its use in a production environment.In addition, there is some partial use of EC-like models as a challenge for aspects of the standard capital model. Some described their EC or “ORSA capital” model as the standard model reflecting target ratios with some add-ons, but not a truly separate model.Limited understanding of operational risk and diversification; common practice was to use proposed OSFI QIS models as a proxy.

ORSA Development Roadmap

Improving Projection of Capital

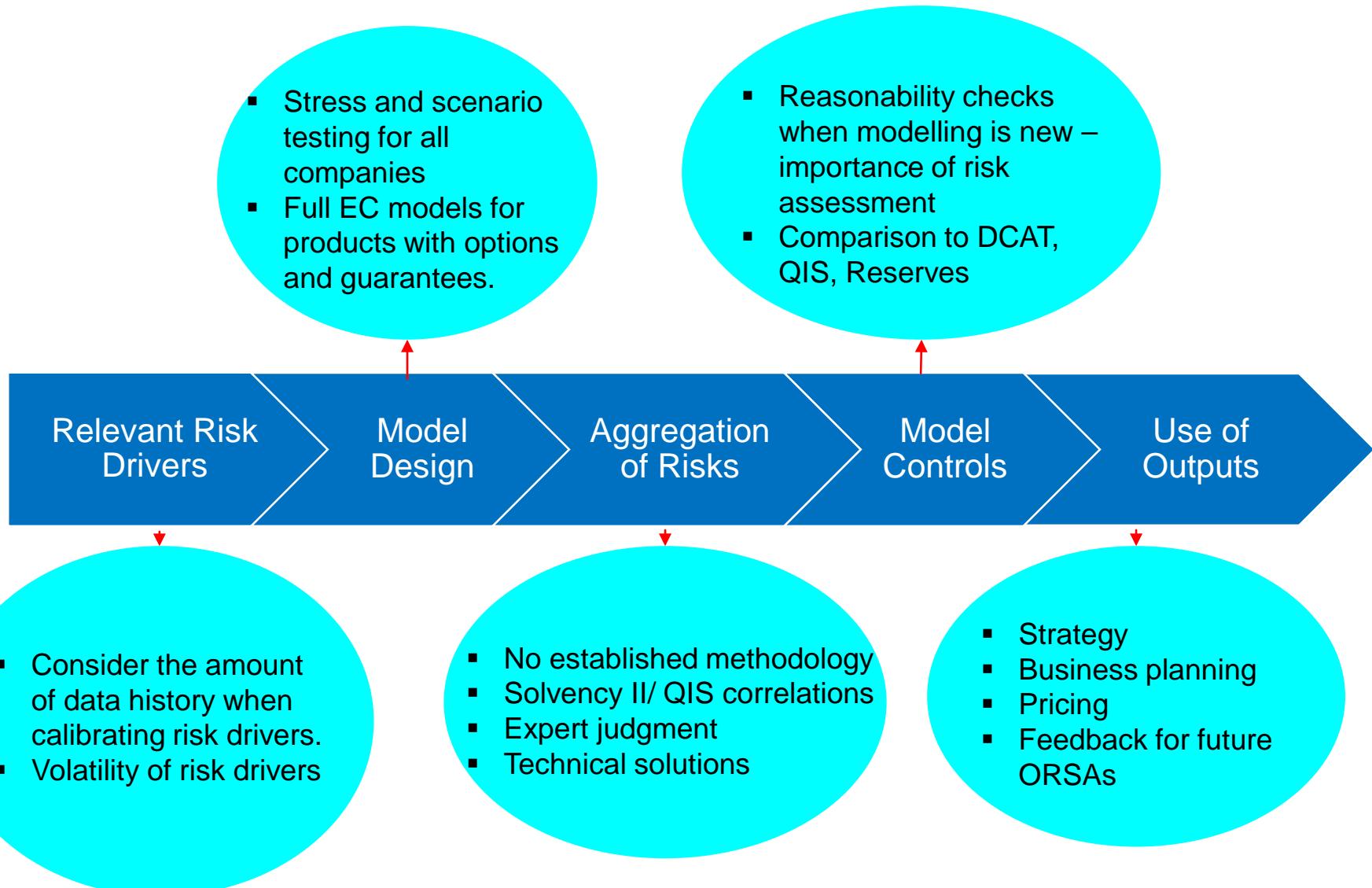


Source: "Own Risk and Solvency Assessment: Canadian current state observations" (KPMG in Canada, 2014)

- Reducing reliance on the standard regulatory capital model (MCCSR and MCT) through more rigorous challenges of the standard model, and testing with alternate approaches for principal risks.
- Effort to analyse and measure unmodelled risks.
- Ability to move beyond DCAT, and an understanding of requirements for Economic Capital modelling.
- Develop an understanding of appropriate use of stochastic modelling, and approaches to operational risk, risk aggregation and diversification.

What does “better” look like?

Improving Projection of Capital and Stress Testing



Example “lite” models – Method Comparison

	Stress-based approach	Curve fitting	Replicating Portfolio	LSMC
Calibration effort	Low	Medium	High	Medium/high
Market risk coverage	Low	Medium	Medium/high	Medium
Non-market risk coverage	Low	Medium	Low	Low (depends on ability to generate real-world scenarios)
Ability to validate	Low	Medium	High	Medium
Projection ability	Low	Medium	Medium	High
In-house expertise required	Low level of expertise required	Medium/high	High	High
Senior management understanding	Easy to explain	Relatively easy to explain	Harder to explain	Hard to explain

Model Governance

Capital modeling in the past	Future requirements
“Skunk works” or R&D environment	“Production” environment, faster and more frequent reporting
Informal/piecemeal approach to developing and maintaining models – and adjusting results	Systematic, controlled approach to developing, maintaining and operating EC models
Irregular, limited validation of model	Ongoing validation and challenge of the model
Irregular, limited validation of data	Disciplined approach to validating and analyzing appropriateness of data, continuous basis
“Black box” level understanding of models by management – outputs	Management responsibility for understanding and suitability of all aspects
EC not part of key management metrics and processes – limited regulatory use	Management able to meet a “use test” for EC as a condition of regulatory use

Capital model challenges

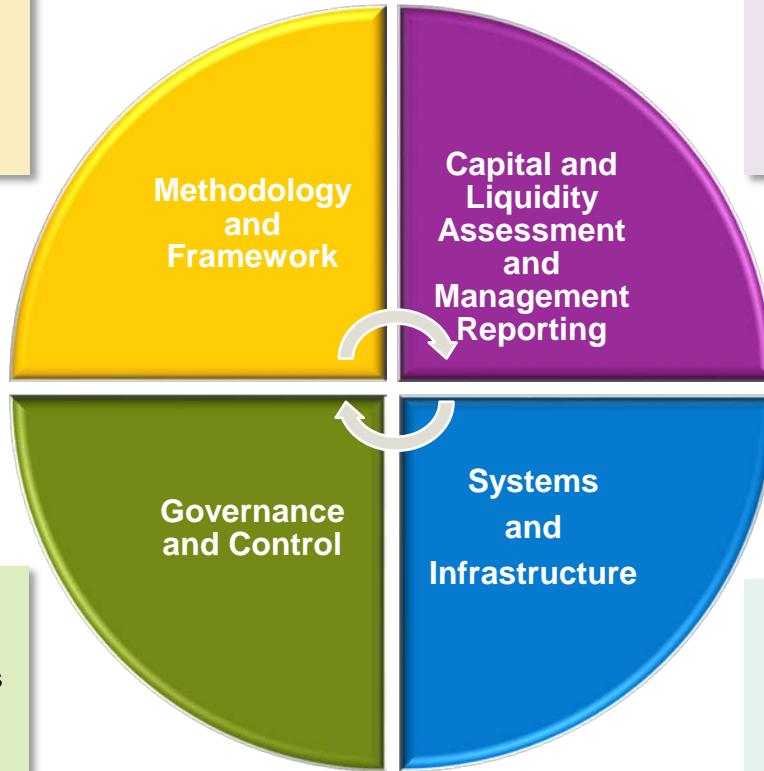
- Cost and complexity
- Skepticism about:
 - Complex models
 - Poorly understood models
 - Over-simplified approaches
 - Volatility, surprises, inaccuracies
 - Subjective/hard to measure items; eg. operational risk
- Data – availability, accuracy, suitability
- Lack of validation

Capital model challenges, cont'd

- Disconnect between EC and regulatory capital; tendency to manage to regulatory capital where it is the constraint
- Some risks dominate the EC agenda – can result in under-development in “less important” areas
- Embedding risk and capital management in management and governance of the enterprise:
 - Broadening common understanding of risk concepts
 - EC commonly centrally measured, monitored and managed; need to push down to business areas over time
 - Meeting the “use test”
 - Alignment of EC with objectives, compensation

Key components of an enterprise wide stress testing program

- Selection and calibration of macroeconomic scenarios.
- Best in class stress testing approach.
- Compliance with regulatory requirements.
- Integrated impairment, capital and liquidity management framework.
- Stress testing qualitative inputs



- Sensitivity and scenario analysis.
- Capital, liquidity and impairment assessment
- Monitoring of loss mitigation actions.
- Internal and external regulatory reporting.
- Monitor key performance indicators (KPIs)

- Senior management engagement and ownership .
- Governance framework to review stress testing methodology and results.
- Ensure results of stress testing influence strategic initiatives and board discussions.
- Stress testing subject matter expertise.

- Single platform for scenario execution across different risk types.
- The infrastructure should be able to aggregate risk results.
- Strategic data platform to integrate data from different data sources.

ORSA summary results – Capital

Area	UK Benchmarking Findings (2013)	Canadian Benchmarking Findings (2014)
Capital Assessment	<ul style="list-style-type: none">■ Many firms used their current ICA (individual capital assessment) as a basis to populate the capital section of their report. A clear area of development is to utilise Solvency II numbers and broaden out risk quantification further.■ Firms with more mature capital sections presented a view on both the quantity and quality of own funds, including the composition and tiering of capital and debt.	<ul style="list-style-type: none">■ Limited discussion of quality of capital and access to new capital observed.■ In groups, discussion of fungibility of capital was also limited, either across legal entities or jurisdictions.

ORSA Development Roadmap

Improving Capital Assessment



Source: "Own Risk and Solvency Assessment: Canadian current state observations" (KPMG in Canada, 2014)

- More consideration of:
 - quality of capital
 - access to additional capital in the face of growth or stress events
- For complex organizations, better analysis and planning around fungibility of capital – i.e. ability to transfer capital freely between different subsidiaries and jurisdictions.

What does “better” look like?

Improving Capital Assessment

“Better practices” observed:

- Explicitly address the sources and quality of existing capital and opportunities for new capital if required
- Analysis of fungibility of capital in more complex groups
 - Address capital constraints between group legal entities, such as regulatory approvals required, particularly where different regulators apply, or where there are differing ownership interests
 - Specifically address effect of stress scenarios at a specific entity level and at the group level

ORSA summary results – Risk-based Decisions

Area	UK Benchmarking Findings (2013)	Canadian Benchmarking Findings (2014)
Use in Decision Making	<ul style="list-style-type: none">■ Several reports indicated how the ORSA would be used in future decision making processes. However, there was limited evidence of how the results of the Risk and Capital frameworks had been used in business decision making during the course of the year.■ Mature reports presented decisions for consideration by the Board and were aligned to the latest Business Plan. This demonstrated the role of the Board and key elements of the report for consideration.	<ul style="list-style-type: none">■ Embedding of ORSA in business decisions could not be observed in most cases, but in some cases was discussed in the ORSA description of risk management processes.

ORSA summary results – Risk-based Decisions

Area	UK Benchmarking Findings (2013)	Canadian Benchmarking Findings (2014)
Alignment to Business Planning	<ul style="list-style-type: none">■ Few reports demonstrated a clear alignment to the Business Planning process. ORSAs appeared to be run in isolation, or following the Business Planning process. This limited the challenge that Boards can raise and validity of the ORSA results.■ Reports incorporating the anticipated changes to the business profile through implementation of the business and the projected Risk Profile associated with this were limited in number but at the stronger end of the spectrum.	<ul style="list-style-type: none">■ As expected, consistency and linkages of the ORSA process and results with the risk management, strategic, business and capital planning processes were extremely limited.■ In many cases, it was unclear how the planned ORSA processes will be integrated with business and strategic planning.■ A leading practice is to clearly align the development and review of ORSA with these processes, and embed a documented risk assessment in business decisions.

ORSA Development Roadmap

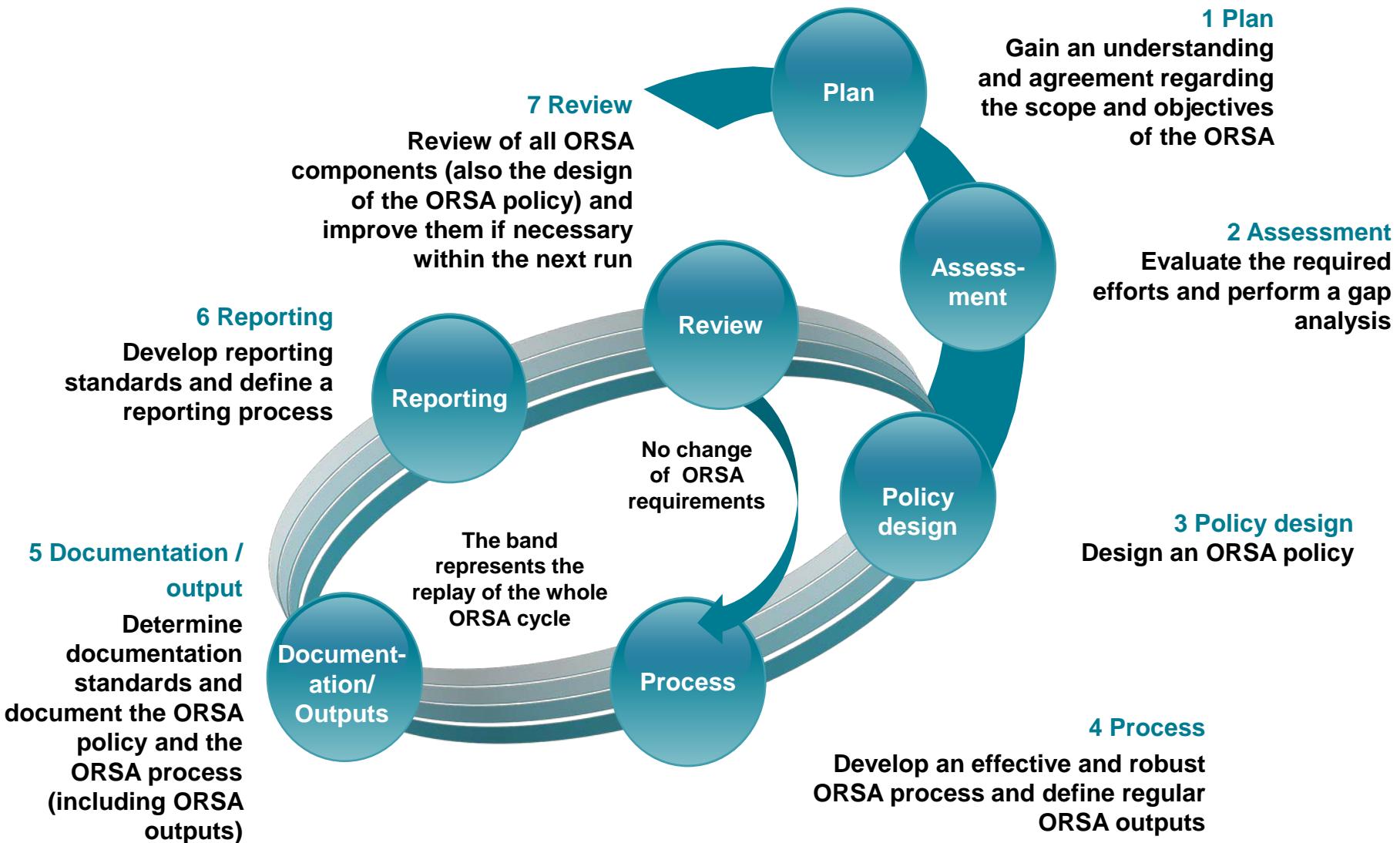
Embedding in Decision Making and Planning



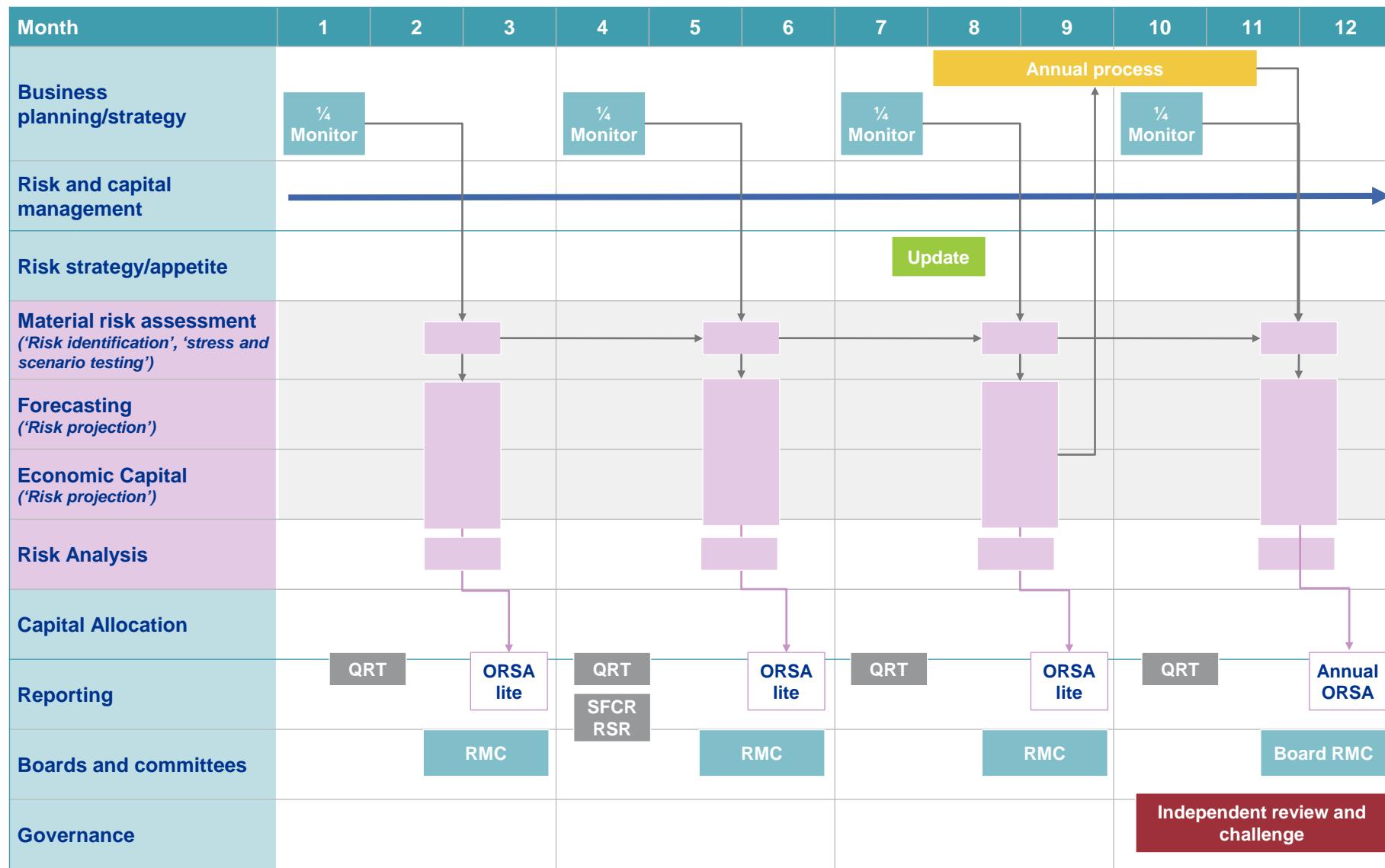
Source: "Own Risk and Solvency Assessment: Canadian current state observations" (KPMG in Canada, 2014)

- Synchronize the ORSA cycle with reviews of other decisions and monitoring processes
 - Timetable for risk appetite, strategic planning, capital and business planning
 - Make ORSA review a building block – reflect the logical dependencies
- Require documented consideration of risk in business decisions.

Overview of one approach to planning the approach to the ORSA



Illustrative example of high level ORSA process BAU timeline



The (largely separate!) processes in 2014

Typical business as usual (BAU) reporting and planning cycle

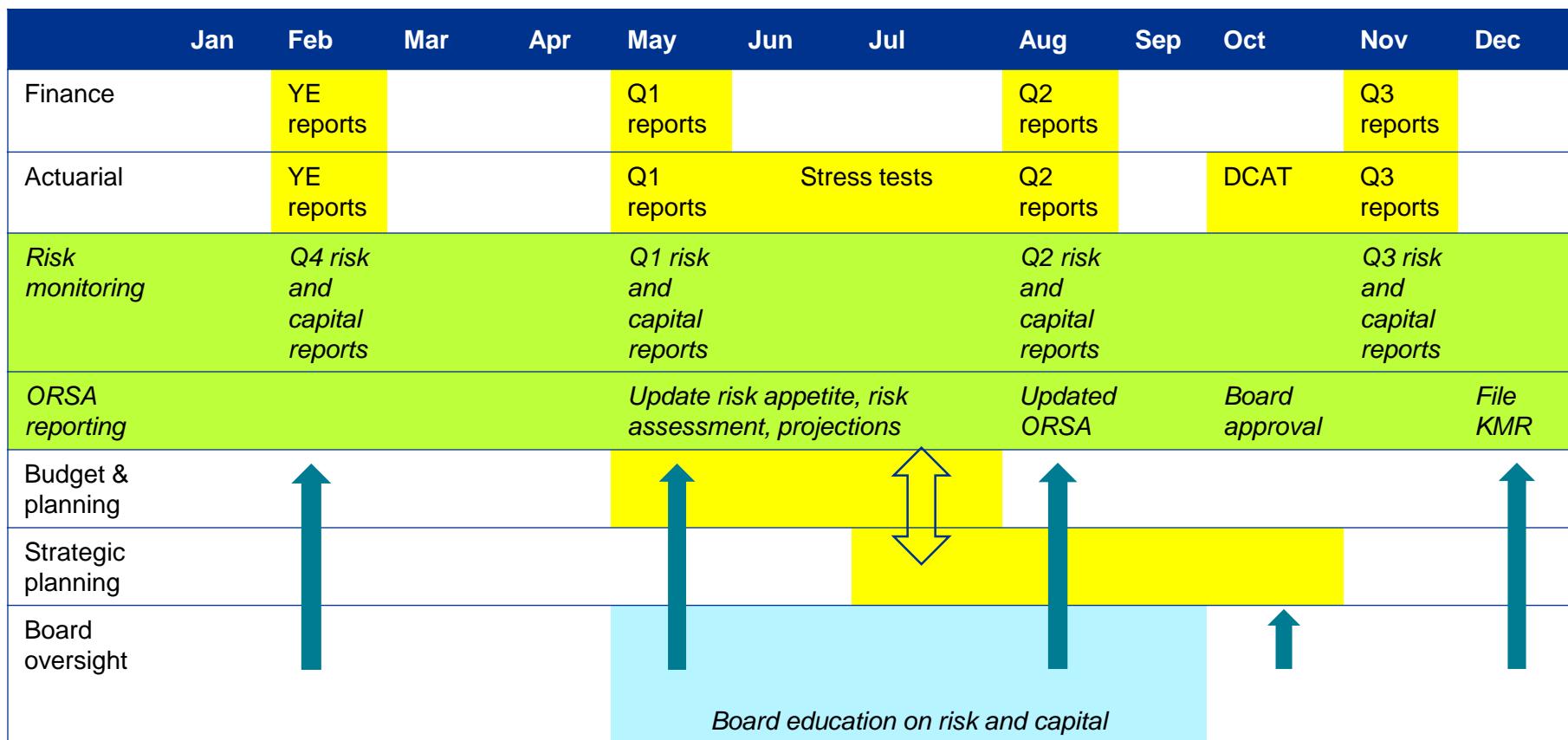
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Finance		YE reports			Q1 reports			Q2 reports			Q3 reports	
Actuarial		YE reports			Q1 reports	Stress tests		Q2 reports			Q3 reports	DCAT
Budget & planning												
Strategic planning												
Board oversight												

Typical 2014 ORSA development process

Last year?	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Project plan, workshops			Project plan		Assess and retrofit existing policies and reports		Quant analysis of capital			Review and redraft		Final ORSA
Gap analysis			Board input		Develop "missing pieces"		Drafting of ORSA report		External review	Board approval		File KMR

What does “better” look like?

Embedding risk and ORSA in BAU processes



- Regular risk reporting aligned with the reporting cycle
- Develop a dashboard to facilitate continuous reporting and monitoring
- Align risk reviews and the completion of ORSA with strategic and business planning cycle

Other Presentations

The other presentations that were presented as part of the Risk and Regulatory series are:

- IFRS 9 Classification, Measurement and Impairment (Insurance Sector): Initial Considerations
- The New World of Cyber Resiliency
- Market Conduct
- Regulatory Compliance Management

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