

The Road to Sustainable Risk Management – The Role of Operational Excellence

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Ontario Teachers' Pension Plan

- Teachers in Ontario have had pensions since 1917:
 - Run by government ministry
- OTPP created in 1990 by transferring \$17 billion from Ontario Government:
 - Jointly Sponsored Pension Plan:
 - Government of Ontario and Ontario Teachers' Federation
 - Independent Board of Directors (9)
- Responsible for retirement income of:
 - 179,000 active members
 - 124,000 retirees/families
 - 69,000 inactive members
- Net investment assets of \$138.9 billion as at Dec 31, 2013:
 - Equities, 45%
 - Fixed Income, 41%
 - Natural Resources, 8%
 - Real Assets, 22% (real estate, infrastructure)
 - Absolute Return Strategies, 8%
 - Money Market, -24%

"You Can't Manage What You Can't Measure"

- Significant investment to achieve long term sustainable risk management objectives has typically required a <u>burning platform</u>:
 - Financial crisis
 - New regulatory reform
 - Legacy systems that don't meet current needs or just don't work – systems get "rusty"!

Examples:

- IIF & McKinsey & Company Study identified Financial Services are making substantial investment in data and risk management
- JPMorgan Chase & Co announced plans to spend an additional \$4 billion and commit 5,000 extra employees to fix risk and compliance issues - Wall Street Journal

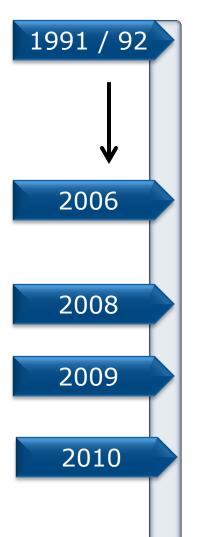
"You Can't Manage What You Can't Measure"

Substantial investment in data and risk management

Major Themes of IIF / McKinsey Study

- Data standardization and risk aggregation
- Front-to-back operating model
- Applications, architecture and infrastructure
- IT organization, governance and security

The Journey



Futures /
Swaps Trading

Increase in Volumes

Review Alternative Portfolio Mgmt Systems

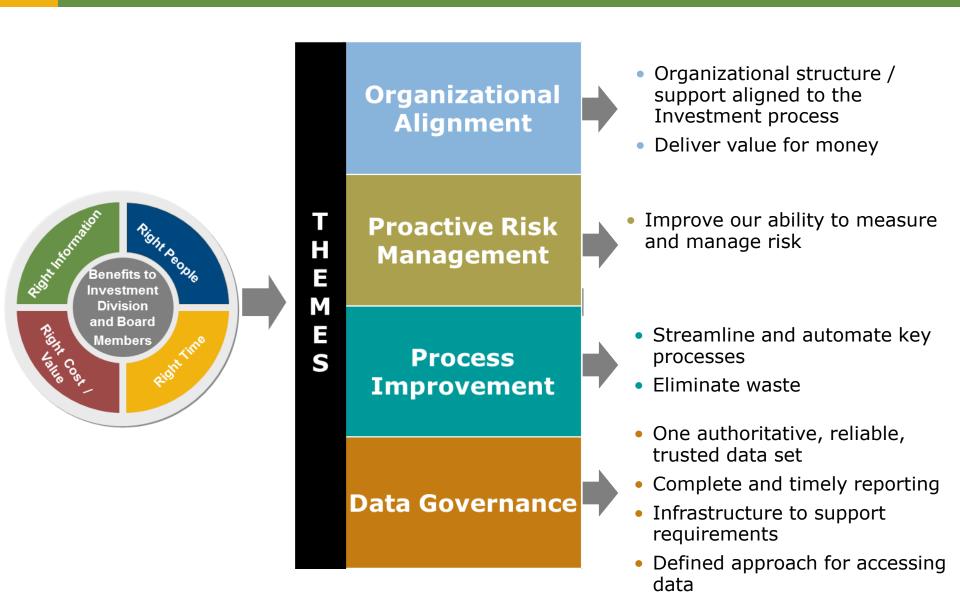
Financial Crisis

Data Management Dept Formed

Launch: Simcorp & Operational Excellence

- First Pension Plan to embark in derivatives trading
- Increasing volumes and product complexity put pressure on legacy systems
- Identified need to address systems and processes – validated in 2008

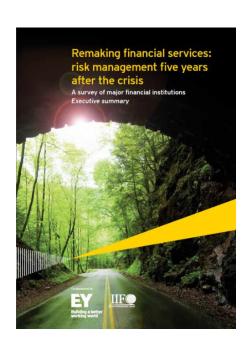
Operational Excellence

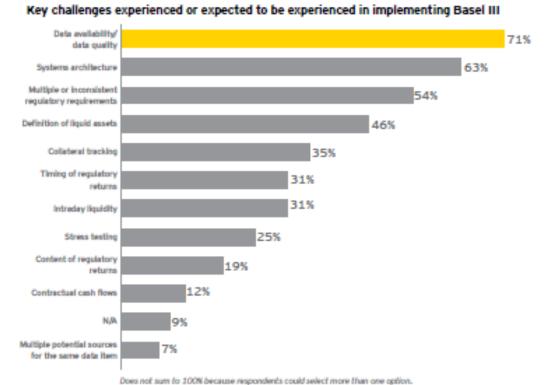


Data Challenge

A 2013 survey co-sponsored by EY & International Institute of Finance reveal top two challenges in implementing Basel III are
 Data Availability and Quality & Systems

Architecture





Data Challenge

A survey conducted by IBM identifies that "Value Integrators" outperform



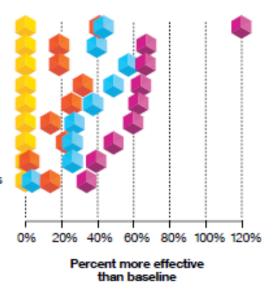
Value Integrators outperform across the entire Finance agenda.

They report substantial leads in information integration and risk management.

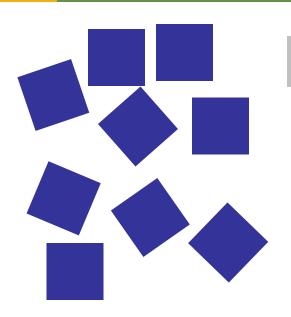
Driving integration of information across the enterprise Measuring / monitoring business performance Developing your people in the Finance organization Providing inputs into enterprise strategy Executing continuous Finance process improvements Supporting / managing / mitigating enterprise risk Driving Finance cost reduction Driving enterprise cost reduction Strengthening compliance programs and internal controls

Scorekeepers (baseline)

Disciplined Operators Constrained Advisors Value Integrators



Architecture



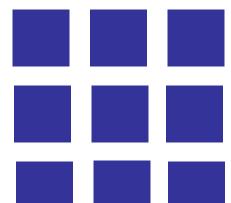
High complexity with high cost and low agility

Planning

Architecture

- 1. Framework
- 2. Roadmap
- 3. Principles
- 4. Process





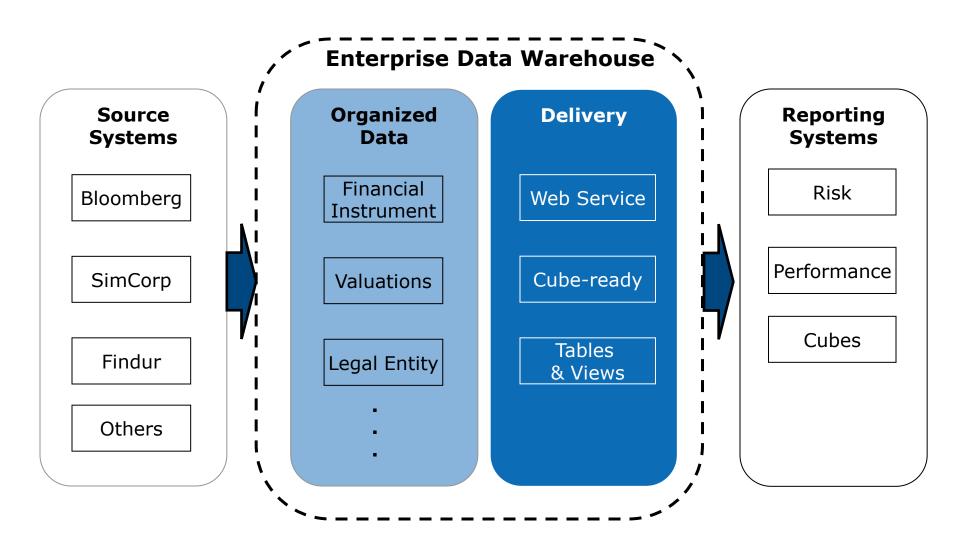
Appropriate complexity with cost aligned to value and required agility

Architecture is a plan with organizing principles and design objectives

Data Governance - Objectives

- A "single source of the truth" for data
- Availability of high quality, complete data
- Simplification of data access
- Defined data support

Data Governance – End State



The Challenge / Benefit

The Challenges:

- Cost
- Change Management
- Organizational Alignment

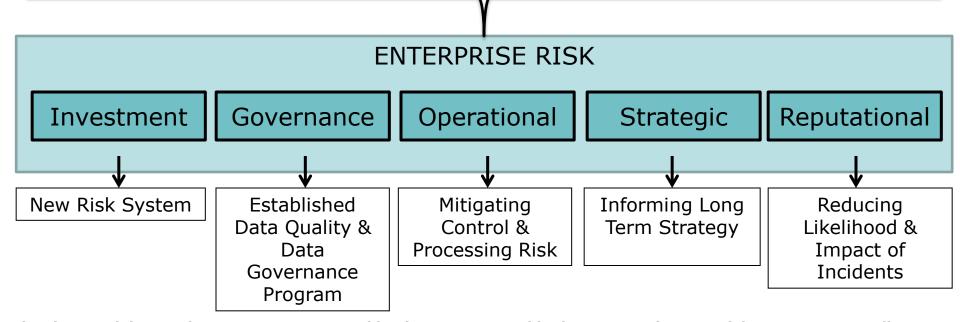
The Benefits:

- Business agility and integrated data
- Efficient operations that are 'less risky'
- Improved decision making
- Supports future growth and risk reduction

Effective Risk Management



Operational Excellence is a program that also supports Teachers' risk appetite (risk / reward) objectives



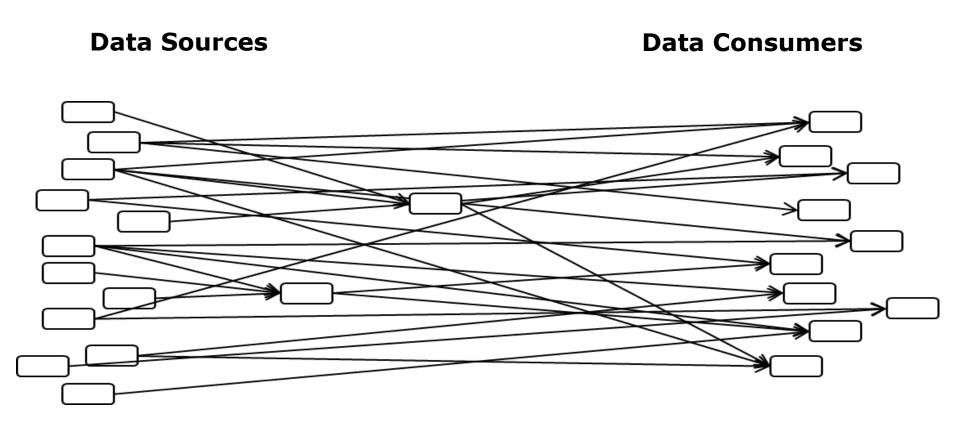
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Agenda

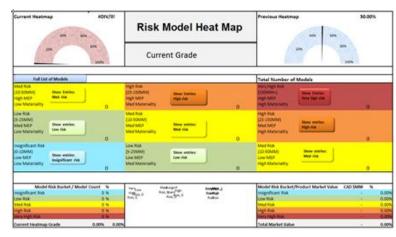
- About Teachers'
- The Need You Can't Manage What You Can't Measure
- The Journey
- Operational Excellence
- The Data Challenge
- The Challenges / Benefits
- Measuring Success
- Conclusion

Data Challenge



Measuring Success

- Risk Model Heat Map has been developed to:
 - Measure relative risk associated with each model
 - Measure the relative overall quality of the portfolio of models



Conclusion



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