Marris + Miller

IT'S TIME TO GET STRATEGIC ABOUT PENSION RISK MANAGEMENT

An Introduction to Integrated Pension Risk Management (IPRM)

Insights from Marris + Miller

Pensions
That Move
You Forward.

In the face of changing interest rates, shifting pension investment structures and a move toward a principle-based regulatory framework for pension plan governance, companies and organizations of all sizes need to take a more strategic, long-term approach to risk management. That starts with breaking down the silos that currently separate pension risk management (PRM) and enterprise risk management (ERM).

This white paper introduces the concept of integrated pension risk management (IPRM), which unifies PRM and ERM under one approach to deliver greater value for both the pension and the plan sponsors. It is intended to be a conversation-starter, offering a set of directional ideas rather than a singular prescription. We look forward to your thoughts and feedback.

M. Catherine Miller
Managing Partner, Marris + Miller

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The Pension/Enterprise Risk-Management Gap

Typically, pension plan[1] sponsors and administrators have relied on traditional pension risk management (PRM) to identify and address the many factors that can affect a plan's assets, liabilities and costs. Through PRM, companies and organizations aim to manage pension risk and volatility by building a better understanding of the relationships between pension cash flow and factors such as market returns, interest rates, inflation, real salary growth, workplace demographics, and longevity trends. PRM helps to keep plans viable, stable and secure.

All of this is perfectly responsible, but it disregards the fact that pension risk is not the only type of risk an organization has to manage. There's also the broader category of **enterprise risk management (ERM)**, which focuses on the organization's people, processes and systems, and how best to deal with unexpected events, economic crises and major business risks (such as decreases in revenue or swings in currency exchange rates). ERM focuses on the interconnections between profit and loss, macro- and micro-economic environments, financial markets (e.g., interest, credit, inflation, spread, currency), demographic changes, legal risks and operational processes.

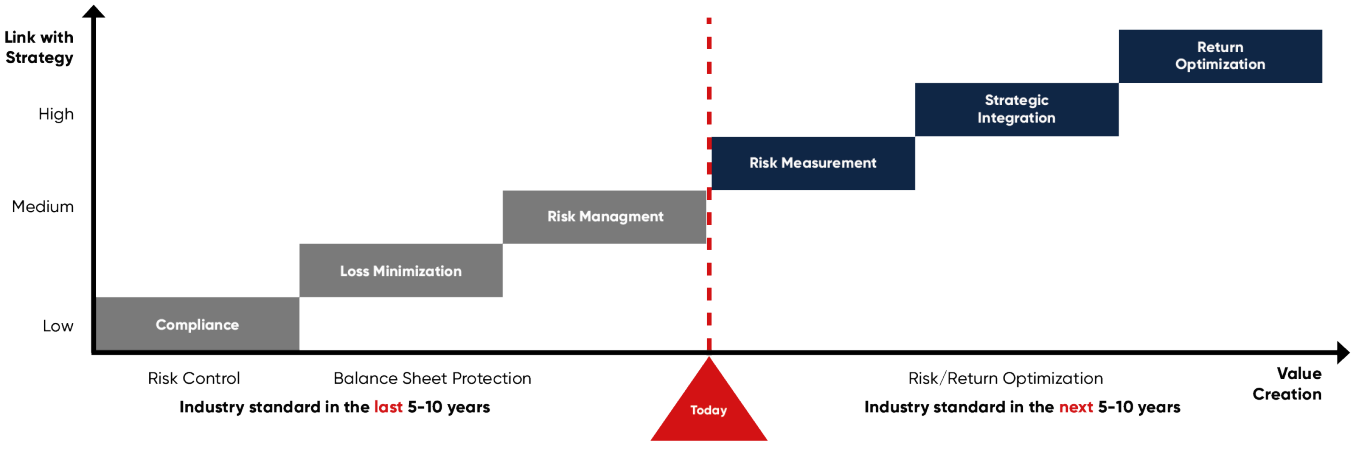
While it seems like PRM and ERM should go hand in hand, that's rarely the case. The two are usually handled separately and organizationally siloed, which means pension plan administrators seldom consider pension risk in the broader organizational context, while enterprise risk planners leave pensions out of their big-picture planning.

Compounding the problem is the fact that pension and organizational planning operate on vastly different timelines. Business decisions have to be made faster than ever before. Technological acceleration has made it difficult to project more than a few years into the future, resulting in three- to five-year planning cycles. Yet pension planning often requires a 30- to 50-year perspective — to address questions of how to stabilize funding or reduce debt, for example.

As a result of these short-term pressures and siloed risk-management practices, the majority of enterprises are still at a basic level of risk control and balance-sheet protection when it comes to pension planning. They're focusing solely on compliance and loss minimization, without a real long-term strategy in place.

Bridging the gap requires a cohesive approach that integrates long-term pension plan goals into the core risk management strategy. By bringing together ERM and PRM, enterprises can shift from a pure balance sheet focus to emphasizing value-creation — not just for the pension plan, but for all stakeholders and plan sponsors.

Figure 1. Evolution of Risk Management [2]



1 For the purposes of this white paper, the term "pension plan" refers to employer-sponsored defined benefit plans, target benefit plans and jointly governed shared risk plans. **2** International Actuarial Association, 2011. Note on enterprise risk management for pensions. Retrieved from: www.actuaries.org/LIBRARY/Papers/Note_ERM_Pensions_EN.pdf

The Evolving Pension Landscape

Recent economic developments, regulatory reforms and financial policy shifts in Canada have shaken up the pension plan governance and management landscape, further necessitating an integrated, strategic approach to risk management. These have primarily included:

Changing Interest Rates

Changing Investment Structures

Changing Regulatory Frameworks

Changing Interest Rates

Movements in interest rates and expected inflation are two components of market risk, which affects both short- and long-term investment strategies.

Interest rates affect the prices of stocks, bonds, real estate and other income-producing assets due to the "present-value effect" where plan managers discount their expected cash flows and long-term returns at lower interest rates. Interest rates also affect the present value of pension liabilities, especially those backed by bonds: if rates go up, liabilities go down. When pension liabilities and the assets that back them have different durations, their values will change differently as interest rates shift. Plan sponsors therefore need to map out scenarios for both rising and falling interest rates to effectively determine the impact on plan funding.

When corporate bond rates rose in 2013, yields for defined benefit plan sponsors went up but there was not much improvement in portfolio returns. Although the market had rebounded, organizations still needed to put in more money to fund their deficits.
During this period, some plans benefited from the use of a liability-driven investment (LDI) strategy, which kept investment returns with much of the solvency liability growth, better controlling surplus volatility (beta risk or policy risk). That said, pension plans are quite complex — so while a rate change could improve corporate bond yields (which will have a positive impact on liabilities), there is no guarantee that the plan's other financing issues will improve, including its unfunded liabilities.

The ongoing shift away from solvency funding has the potential to transform the way pension funds manage risks. Plan sponsors will likely move away from LDI strategy and toward a more resilient approach focused on stabilizing the volatility of an investment portfolio during periods of significant and sustained market declines, ultimately achieving greater growth.

Changing Investment Structures

Pension plan managers have been reducing the assets invested in public markets and increasing the assets invested in private markets, driven largely by a desire for greater returns and public markets' growing liability gaps.

Despite their recent run-up, public markets have become structurally less attractive to many plan managers, who find public-market returns to not meet their expectations. Managers are also concerned about the long-term outlook, with many pension funds facing the prospect of a sustained low-return environment in public markets over the next 20 years.

As a result, there has been a noticeable increase in targeted allocations to private markets, commodities and real assets (infrastructure and real estate) over the last five years, with managers believing that they will outperform public-market assets. This shifting asset structure for pension funds will introduce a different dynamic to asset valuation:

- When assets are invested in public markets, market value can be easily obtained as the market prices are publicly available. In contrast, because private equity and real asset investments are held through ownership in limited partner arrangements, the fair value of the assets is determined by portfolio managers using financial information from the underlying investments and, on occasion, forecasts of future financial performance.
- A greater level of governance will be needed to accommodate this shift. For example, plan managers will require a deeper understanding and confidence in the underlying valuation techniques of private-equity assets. They will also need to review and monitor factors such as estimated future cash flows, discount rates and market comparables that are used when assessing the fair value of private-equity assets.
- While investment strategies based on private equities may improve the trade-off between expected risk and return, organizations need to ensure that current valuations will provide risk and return benefits comparable to public equities after adjusting for differences in fees, leverage and valuation methods.

Changing Regulatory Frameworks

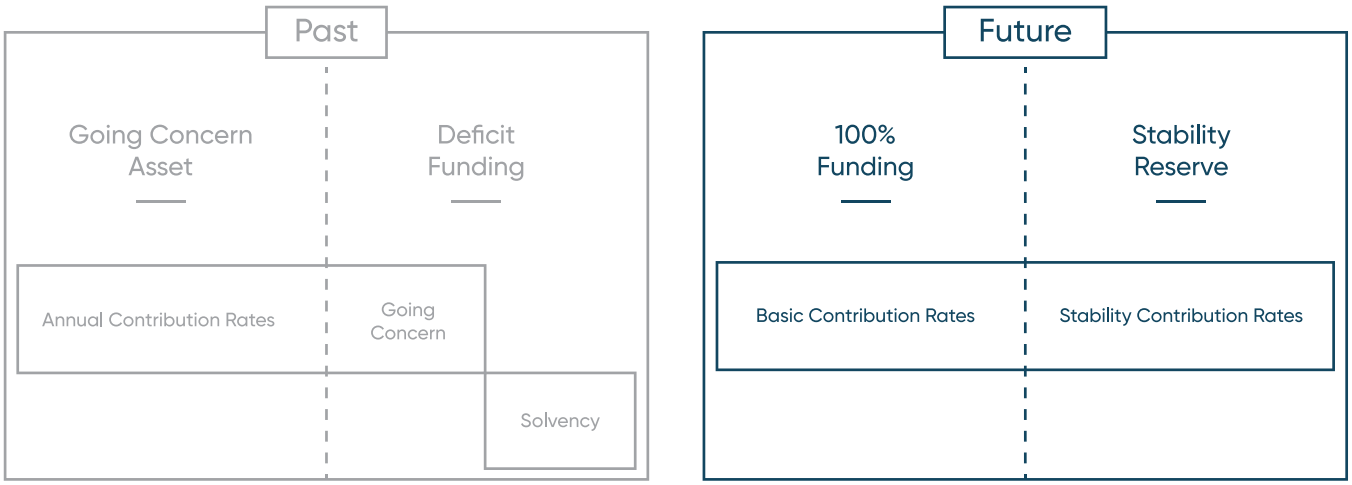
The widening of pensions' asset and liability gaps in recent years (due to the significant decreases in asset value) has led several provinces to adopt principle- or outcome-based regulatory frameworks for pension governance and risk management. These frameworks emphasize long-term planning to improve the sustainability, affordability and security of defined-benefit pension plans.

Traditionally, when there is a significant unfunded liability, solvency funding policies have required employers to make up the deficit within a certain period of time. Doing so can be challenging, however, when the economy is slumping. Since 2016, both Ontario[3] and Quebec[4] have changed the requirement for enterprises to fund their defined-benefit pension plans on a solvency basis. (Manitoba is also looking at making similar changes). Rather than fund their plans based on more aggressive, solvency-based assumptions (which have a greater impact on the organization's own finances and are more reactive to market conditions), organizations can now fund their plans on a "going-concern" basis. This assumption that a given plan will exist indefinitely reduces the impact of short-term market volatility on its funded status and lets plan sponsors base decisions around the long-term goal of providing secured lifetime income to plan members, which is the foundation of successful governance.

As of 2016, **Ontario and Quebec** have changed the requirement for enterprises to fund their defined-benefit pension plans on a **solvency basis**. As a result, organizations can now fund their plans on a **"going-concern" basis** (instead of being more reactive and funding plans based on more aggressive, solvency-based assumptions).

3 Osler, 2017. Goodbye Ontario solvency funding (in part)! Retrieved from: www.osler.com/en/resources/governance/2017/goodbye-ontario-solvency-funding-in-part **4** Benefits Canada, 2016. Quebec shakes up pension landscape with shift to going-concern funding. Retrieved from: www.benefitscanada.com/pensions/governance-law/quebec-shakesup-pension-landscape-with-shift-to-going-concern-funding-77211

Figure 2. New Funding Philosophies



British Columbia has moved to a risk-based regulatory framework for pension management. The provincial regulator conducts risk assessments of all registered plans to identify and understand the risk of loss to member benefits. Once the risk profile for a plan is established, the regulator can then allocate resources for response and monitoring as appropriate.[5]

These changes represent a fundamental shift in how pension plans are managed, going from focusing on the short-term balance sheet to asking employers to consider what they want their long-term pension outcomes to be. Based on those desired outcomes, plan sponsors must then look for ways to enhance their competitiveness and flexibility to make those outcomes happen.

Some of the most successful jointly governed pension plans have already adopted this new funding philosophy and achieved more than 100 percent in funding status.

Evolving regulatory frameworks will also have an impact on compliance monitoring. With greater reliance on broad-based standards versus strict funding rules and formulas, reporting transforms from a basic "tick box" exercise (reporting on asset value, liability value and member counts) to scenario-based liability and workforce analyses that take a long-term view of the pension's obligations. Plan administrators need to go beyond meeting minimum standards for compliance by thinking of what could go wrong instead of focusing solely on what did go wrong.

5 British Columbia Financial Institutions Commission, 2014. FICOM's risk-based regulatory framework for pension plans in British Columbia. Retrieved from: www.fic.gov.bc.ca/pdf/pensionplans/RegulatoryFramework.pdf

IPRM: The Future Of Pension Management

As the pension landscape continues to shift, several critical questions need to be addressed if organizations are to evolve how they manage their pension plans:

- What are the risks in the organization's overall strategy for its pension plan?
- What are the probabilities of these risks materializing?
- What are the relationships between the risks?
- What capacity do the plan and employer have to put plan funding or the employer position back on track should the risks materialize? What steps would be involved?
- What is the risk appetite of the key stakeholders?
- If the risks are greater than the risk appetite, should the overall strategy for meeting the plan's objective be changed?
- What monitoring should be put in place for plan funding and the employer position?
- What options are available (in areas such as contribution levels, inflation-protection measures and future benefits) should plan funding or the employer position improve?

THE ANSWER TO ALL OF THESE QUESTIONS?
AN APPROACH MARRIS + MILLER CALLS INTEGRATED PENSION RISK MANAGEMENT (IPRM) .

IPRM integrates the fundamental principles of PRM and ERM under a single umbrella. It's a method for bringing together all of the identified pension- and enterprise-related risks, allowing enterprises to better understand the relationships between them and respond accordingly. With IPRM, employers can take pension planning out of its silo and use it to help create value for all stakeholders.

By merging PRM and ERM into one approach, IPRM allows for the management of immediately visible risks (such as data errors, misaligned roles and responsibilities, and insufficient plan reviews) and also enables strategies for managing exposures to a variety of less visible internal and external risks. These include financial market risks (e.g., interest rates, exchange rates, credit, spread, liquidity), macro-economic risks (e.g., business cycles, inflation), political and regulatory risk, environmental risks, operational risks (e.g., people, processes, technology) and reputational risks.

Retirement for the AGES

The IPRM approach aligns well with the principles of the American Academy of Actuaries "Retirement for the AGES" framework, which encourages enterprises to take a more long term, strategic perspective when establishing (or revising) the purpose and mission of their pensions:

- **Adequacy** of the plan and its ability to secure lifetime income, taking into consideration factors such as wage growth, CPP contributions and cost-of-living increases
- **Governance** that clearly defines roles to reduce conflicts and manage competing needs
- **Efficiency** in maximizing returns while minimizing both costs and risks
- **Sustainability** of the system and the business through appropriate capital allocation and resilience to economic fluctuations

The IPRM Approach

The IPRM approach considers what could be done if certain risks were to materialize (especially those affecting more than one part of the business). It helps inform the company's approach to monitoring those risks, implementing contingency plans and, when necessary, adapting plans as events unfold. In this way, it evolves risk-management practices to focus less on risk control and more on return optimization and value creation for stakeholders.

IPRM helps enterprises answer the following key questions:

- What are the risks in the organization's overall strategy for its pension plan?
- What are the probabilities of these risks materializing?
- What are the relationships between the risks?
- What capacity do the plan and employer have to put plan funding or the employer position back on track should the risks materialize? What steps would be involved?
- What is the risk appetite of the key stakeholders?
- If the risks are greater than the risk appetite, should the overall strategy for meeting the plan's objective be changed?
- What monitoring should be put in place for plan funding and the employer position?
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The Benefits and Opportunities of IPRM

IPRM helps plan sponsors determine whether or not the resources and capacity are available to handle the impacts of potential risks to the plan by becoming more aware of the short- and longterm financial consequences of the various risk drivers. It provides a way of assessing their ability to manage risk, their understanding of the options for risk management, and the associated costs and benefits.

17%

PRM CAN INCREASE AVERAGE FIRM VALUE

GAIN COMPETITIVE ADVANTAGES

DECREASED COSTS + INCREASE PENSION KNOWLEDGE

IMPROVED DATA DRIVEN DECISION MAKING

Research shows IPRM can increase average firm value by as much as 17 percent. This is driven largely by the fact that IPRM can help enterprises gain competitive advantages, cut costs, increase its overall pension knowledge and improve decision-making through risk-driven data analysis.

Gain a competitive advantage

Companies and organizations that fully integrate PRM into their corporate strategic planning processes can gain competitive advantages. By taking a more proactive and strategic approach to pension management, the IPRM approach can help build a pension plan that clearly defines risk limits and tolerance, identifies key risk factors, and understands the relationships and expected costs of those risk factors — leading to a more resilient plan that can better respond to changing economic conditions.

In addition, organizations that are inspired to re-evaluate their risk-management strategies are likely to change how their pension programs work for their employees. When people's financial future are secure, they are more passionate about their work, perform better and make greater contributions to the company.

Reduce Pension-Related Costs

Successful IPRM strategies can help enterprises cut three types of pension-related costs:

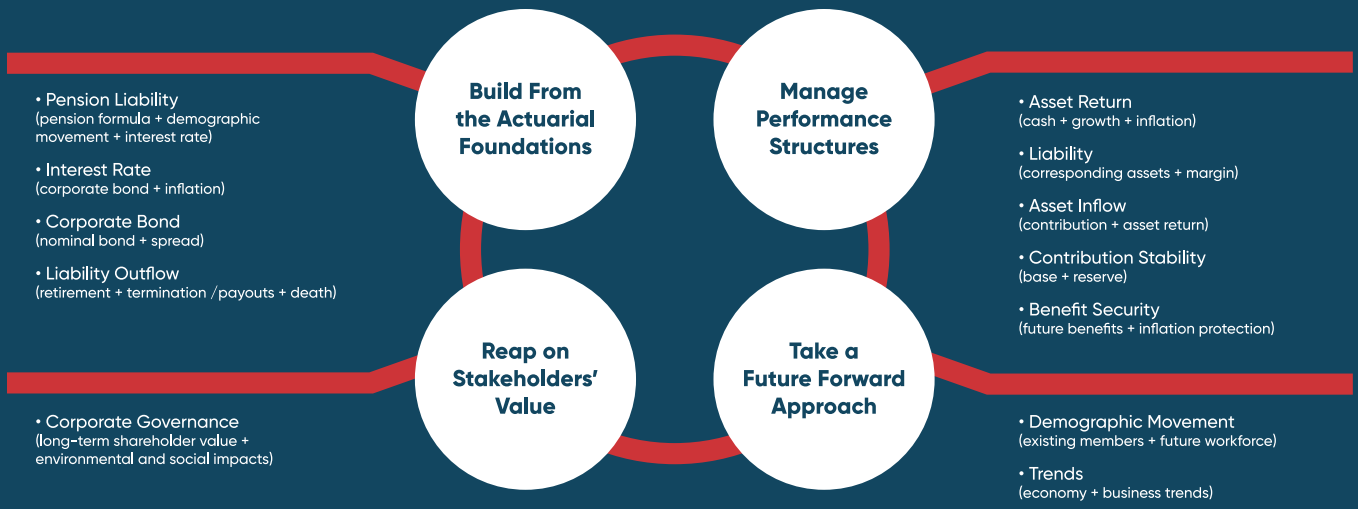
- Transaction costs: When too much time is spent dealing with data-related errors (for example, when beneficiary information is not updated in a timely way), administrative, overhead and operational costs can quickly add up. A strong risk culture can improve transparency and understanding of operational risk, saving costs through more proactive planning that systematically identifies weaknesses and prevents errors.
- Unexpected losses due to future events: In general, risk mitigation equals risk analysis plus longterm strategies. Good governance allows for forward thinking that evaluates future events and enables decision-making that minimizes or mitigates future losses.
- Costs of failed strategies: A sustainable system requires strong management from the very beginning. If leaders are not confident about their long-term strategies, they live in fear of regulatory audits and associated legal fees, external advisor fees and potentially even other costly mistakes. Good governance with well-implemented funding and investment strategies can turn around an underperforming pension fund.

Increase and share knowledge of pension performance

The IPRM framework encourages the sharing of risk knowledge across the organization, contributing to common understanding and a sense of purpose that will fundamentally change how risk is managed. When the entire organization appreciates the linkages between good governance and pension performance, better collaboration and more transparent strategic planning follow.

Empower and improve decision-making

Any pension program can be broken down into its components parts, allowing for a more in-depth and accurate examination of the factors that influence those parts. For example:



Build from the actuarial foundations

A thorough measure of plan costs and reserves, based on actuarial tables and scenarios, helps plan sponsors understand, manage and anticipate unexpected changes.

Reap on stakeholders' value

Raising the standard of pension governance does more than just ensure full funding and benefit security. By emphasizing sustainability, for instance, pension funds become more performance oriented (instead of focused solely on complying with actuarial rules) and can concentrate on value creation, regardless of plan type or formula.

Manage performance structures

Understanding the relationship between economic scenarios and pension fund performance gives plan sponsors the support in building strategies for a well-governed plan.

Take a future-forward approach

Systematically scanning the environment and identifying risk drivers requires sound judgment: to filter information and recognize trends from noise, and to make decisions that build resilient plans in the long term.

A risk-driven approach to data analysis will examine all the moving parts related to pension liability (which include wage growth, interest rates, demographic changes and return on assets) and how they align with the broader economic moving parts of inflation, economic cycles and productivity growth. This type of analysis goes beyond valuations to analyze decisions about the pension fund in the context of potential long-term returns measured against the impact on corporate risk — and then determine the next steps that need to be taken by the enterprise.

The Impact of IPRM on Smaller Pension Plans

IPRM isn't just for the largest pension plans. Good governance is vital for all plans, no matter how big or small — meaning even companies with smaller pension plans can benefit greatly by taking a more strategic approach to risk management.

Smaller pension plans require less funding to achieve 100 percent funded status. With a smaller capital base, it's easier to build up the capital reserve needed to protect the plan from market volatility. Companies with smaller pension plans are also more agile, meaning they can adopt new funding and investment strategies revealed through IPRM faster and more easily.

IPRM can help employers explore options to provide secured retirement income for their employees without having to become investment experts. Because most smaller plans have limited resources, they are less likely to have in-house committees skilled in areas like financial accounting or budgeting, capital markets, financial securities, labour management relations, actuarial principles, and more. However, by adopting IPRM, employers with smaller plans can more easily identify and focus on what's really important for the plan, helping them save time and costs in the long run.

Finally, more secure and sustainable pensions can also help in attracting and retaining skilled workers, fueling growth and competitiveness for smaller enterprises.

How Marris + Miller Approaches IPRM

The actuary industry has traditionally evaluated pension risks through math alone using liability and asset studies. The IPRM framework goes beyond just numbers to provide the tools necessary for the development of more strategic solutions. In general, there are five steps associated with implementing IPRM: identification of the initial considerations for putting IPRM in place; risk identification and initial assessment of risk exposure; risk management and contingency planning; documenting of decisions; and risk monitoring and feedback loop.

At Marris + Miller, we've taken these five steps and expanded them to develop a practical methodology for implementing IPRM.

Our Process

1. Management meeting: Management tells us about their employees, pensioners, and short-term and long-term business goals.

2. Preliminary measures: We define and evaluate the relationship of risks and pension performance, from data management and administration process to actuarial assumptions and risk-adjusting asset valuations.

3. Review and scenario: Based on an in-depth review of employer- and plan-specific risk drivers and risk factors, we summarize the company's risk-assessment activities and cost scenarios.

4. Research and analysis: We research and suggest practical steps to build resiliency around pension performance with risk analysis (i.e., employer financial abilities and funding requirements) and criteria to measure results.

5. Dashboard: The findings are analyzed and summarized on a customized dashboard called Resilience Builder 360™, which not only shows the risk allocation of the plan but also tells managers where to prioritize their efforts to see the biggest impact. (See next page for more details.)

6. Feedback: Senior executives and pension trustees give feedback on the dashboard and measured results.

7. Strategies: Through our 3-I framework (information, intelligence, innovation), we help employers understand the purpose of the pension program and how to integrate PRM into their daily decisions.

8. Changes: To stay competitive, companies must be able to adapt quickly. We help employers measure and improve their pension risk management framework to secure benefit promises and control costs in the face of unanticipated changes.

Resilience Builder 360™

The findings of our in-depth risk culture and pension management practice assessments are compiled in Resilience Builder 360. This simple, intuitive online dashboard allows leaders to see their pension's risk map and track how the decisions they make affect both pension and corporate performance over time.

The dashboard provides an overall "resilience score" out of 100 as well as individual scores for six key governance qualities: culture, purpose, collaboration, process, knowledge and execution. It also provides an at-a-glance look at plan controls, providing a quick overview of the plan's reserves, contributions, conditional benefits, capital budgets, risk-adjusting assets and expected rate of return. Also summarized are risk measures such as currency, credit, interest rate and liquidity.

Most importantly, the dashboard highlights focus areas for improvement as well as recommended action items across the six governance qualities. Pensions that exhibit risk competency across our six governance qualities are more likely to achieve successful outcomes when tackling tough challenges. The Resilience Builder 360 dashboard makes it easier to:

- Leverage existing programs (rather than starting new ones)
- Focus on behaviours that people can actually change
- Hire and engage people with the skills to assist the risk function
- Embed principles into organizational processes to ensure the risk-management program is continually reinforced and maintained
- Measure process to ensure the risk committee remains supportive of the pension program and aware of improvements being made so it can reinforce good behaviours and reorient inappropriate ones

Conclusion

PRM and ERM don't have to be dealt with in isolation. By adopting the IPRM framework, plan sponsors of all sizes can start to take a more strategic approach to pension risk management: one that complements and incorporates their enterprise-wide risk management practices to ensure their pension programs are stable, secure and creating real value for all stakeholders.

For more information about IPRM and how we can help you build a more resilient pension program, email us at **IPRM@marrismiller.com** or book a meeting with us at **www.marrismillerscheduling.as.me**.

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