

About the Measurement Framework

About the plan being evaluated:

The Measurement Framework is designed to evaluate either a specific plan (e.g. the Ontario Teachers Pension Plan) or, a generic type of plan with a specific design and a specific type of plan sponsor (e.g. a final pay single corporate employer sponsored defined benefit plan, not all defined benefit plans in general). The Measurement Framework was developed by a working group sponsored by the Society of Actuaries' Pension Section.

This version has been slightly modified from the original to reflect an important difference between the 2017 Call for Models applicable to public retirement plans, and the previous call for models. Given the higher level of importance of the “transition” process in the 2017 Call for Models, we have added a new criterion to the Measurement Framework- “practicable / effective transition process”. In addition, with respect to models that include multiple tiers of benefit provisions, as might be the case during a transition period, the criteria applicable to “Individuals” may be applied separately for each tier if deemed appropriate.






About the ratings

- The overall ratings are done assuming a “perfect world” where “actors” understand and take advantage of the best features of plans. They do not consider moral hazard to stakeholders & agents.
- A second set of ratings is developed considering the effects of moral hazard. Moral hazard as defined in this application are when stakeholders (particularly individuals) can be led to not act in their own best interests based on a lack of understanding of features & consequences or, when agents take actions that don't align with interests of stakeholders, particularly individuals or shareholders/owners. While regulatory risk is its own category, we've considered regulatory risk as another adverse incentive (elected officials, including the judiciary, may be guilty of overzealous regulation, affecting the action of individuals, employers and the markets).



About the Measurement Framework

Each criteria is given a specific rating of red, red-yellow, yellow, yellow-green or green, using a color block, as illustrated below.

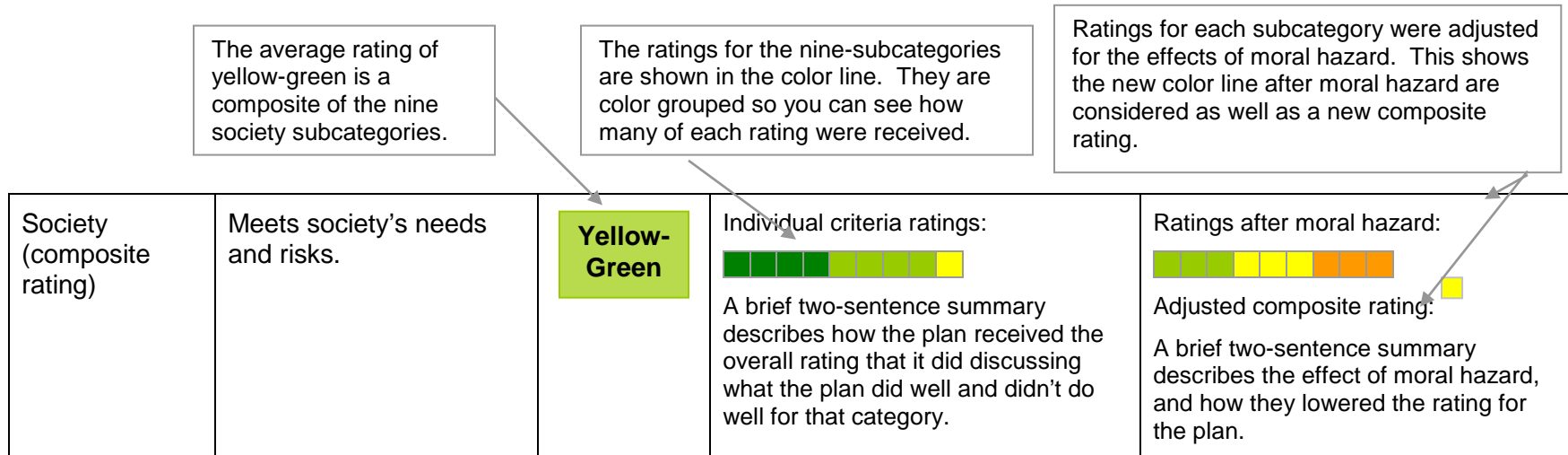
Rating	Threshold	Rating	Threshold
 Green	Plan meets the criteria for the stakeholder nearly perfectly.	 Yellow-Red	Plan generally does not meet the criteria for stakeholders or only in limited circumstances.
 Yellow-Green	Plan mostly meets the criteria for the stakeholder; plan may not meet it due to outside considerations (rates of turnover) or plan design feature.	 Red	Plan does not meet the criteria for the stakeholder in almost any circumstance.
 Yellow	Plan sometimes meets the criteria for individual stakeholders or can meet the criteria if the stakeholders use the plan features as intended.		



About the Measurement Framework

About the categories

- **Five categories have a single rating: self-adjusting, aligns roles with skills, new norms for work and retirement, alignment with markets, and practicable / effective transition process.** Four other categories, which are based on how well the plan meets the needs of the four key stakeholders, have sub-categories with a composite rating. The four stakeholders are society, individuals, employers and markets. The summary page shows both the composite rating and ratings in the subcategories.
- Each of the stakeholder categories has a different number of subcategories, from 6 to 11 subcategories.
- The example below shows how to read the summary of the society category, with both the composite and sub-category ratings. We've shown a sample rating.












Plan Name Summary

Summary				
Criteria	Objective	Rating	Evaluation	Effect of moral hazard
Self-adjusting	Automatically adjusts to changing demographic and economic conditions.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Aligns roles with skills	Aligns stakeholders' roles well with skills.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
New norms for work and retirement	Could support flexible work arrangements, e.g. phased retirement, return to work, etc.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Alignment with markets	Could use market mechanisms effectively to hedge risks.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Practicable / Effective Transition Process	Transition process considers applicable legal requirements as well as the objectives of all stakeholders.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■






Plan Name Summary

Summary				
Criteria	Objective	Rating	Evaluation	Effect of moral hazard
Society (composite rating)	Meets society's needs and risks.	Rating	Individual criteria ratings:  Color line above should be completed based on ratings for the 9 society criteria. Include a two-sentence discussion of why category received rating that it did.	Ratings after moral hazard:  Adjusted composite rating:  Color line above should be completed based on adjusted ratings after moral hazard for the 9 society criteria. Include a two-sentence discussion of affect of moral hazard on ratings.
Individuals (composite rating)	Meets individuals' needs and risks.	Rating	Individual criteria ratings:  Color line above should be completed based on ratings for the 11 individual criteria. Include a two-sentence discussion of why category received rating that it did.	Ratings after moral hazard:  Adjusted composite rating:  Color line above should be completed based on adjusted ratings after moral hazard for the 11 individual criteria. Include a two-sentence discussion of affect of moral hazard on ratings.
Employers (composite rating)	Meets employers' needs and risks.	Rating	Individual criteria ratings:  Color line above should be completed based on ratings for the 8 employer criteria. Include a two-sentence discussion of why category received rating that it did.	Ratings after moral hazard:  Adjusted composite rating:  Color line above should be completed based on adjusted ratings after moral hazard for the 8 employer criteria. Include a two-sentence discussion of affect of moral hazard on ratings.



Plan Name Summary

Summary				
Criteria	Objective	Rating	Evaluation	Effect of moral hazard
Markets (composite rating)	Meets markets' needs and risks.	Rating	Individual criteria ratings:  Color line above should be completed based on ratings for the 6 market criteria. Include a two-sentence discussion of why category received rating that it did.	Ratings after moral hazard:  Adjusted composite rating:  Color line above should be completed based on adjusted ratings after moral hazard for the 6 market criteria. Include a two-sentence discussion of affect of moral hazard on ratings.



**Plan Name
Society**

Society's Needs & Risks (Composite Rating)				
Criteria	Objective	Rating	Evaluation	Effect of moral hazard
Adequate	Protects vulnerable citizens.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Affordable	Does not take resources from other social needs. Ensures risk pooling done efficiently.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Sustainable	Sustainable across and within generations. Equitable across and within generations.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Robust	Fair, covers great majority, creates shared economic growth, avoids moral hazard	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Does not promote economic risk	Efficiently allocates resources and encourages labor force participation.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Does not promote political risk	Promotes fiscal/political integrity and political stability.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■



**Plan Name
Society**

Society's Needs & Risks (Composite Rating)				
Criteria	Objective	Rating	Evaluation	Effect of moral hazard
Does not lead to system failure	Withstands shocks, not prone to instability or moral hazard.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Addresses imperfections of other stakeholders	Promotes strong individual decision making and covers lack of market instruments.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Promote social solidarity and integrity	Ensures basic standards of living; ensures risks are shared.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■



**Plan Name
Individuals**

Individual's Needs & Risks (Composite Rating)				
Criteria	Objective	Rating	Evaluation	Effect of moral hazard
Guaranteed income	Provides substantial level of income protection.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Predictability of income	Facilitates retirement planning.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Retirement flexibility	Allows choice of retirement age, including possibility to phase into retirement.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Portability	Minimizes loss upon employment termination.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Sensitive to employment conditions	Benefits may vary in line with employment conditions.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Sensitive to family needs	Benefits may vary in line with spousal and children needs.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Requirement for individual skills	Level of knowledge required to plan for retirement.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■



**Plan Name
Individuals**

Individual's Needs & Risks (Composite Rating)				
Criteria	Objective	Rating	Evaluation	Effect of moral hazard
Investment risk	Protects against fluctuations in market returns.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Longevity risk	Protects against possibility to outlive assets.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Inflation risk	Includes both pre and post retirement inflation.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Premature retirement risk	Protects against forced early retirement due to disability, family circumstances, and involuntary termination.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■



Plan Name
Employer

Employer Needs & Risks (Composite Rating:)				
Criteria	Objective	Rating	Evaluation	Effect of moral hazard
Supports primary business purpose	Enhances core purpose of the employer's business.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Workforce management: attraction & retention	Enhances business value by allowing attraction and retention of the "right employees".	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Workforce management: transition of employees	Enhances business value by facilitating the orderly transition of employees.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Responsive to owners	Responds to needs of owners, e.g., shareholders for public companies, which may limit amount of risk to be taken.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Business risk	Ability to react quickly to changes in the competitive landscape.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■
Regulatory risk	Allows plan to be operated to fit needs and change to meet conditions easily within regulatory framework.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. ■



Plan Name
Employer

Employer Needs & Risks (Composite Rating:)				
Criteria	Objective	Rating	Evaluation	Effect of moral hazard
Fiduciary risk	Allows plan to be easily operated to minimize fiduciary liability.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating.
Litigation risk	Allows management of workforce to avoid lawsuits.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating.



**Plan Name
Markets**

Markets Needs & Risks (Composite Rating:) (includes both financial markets and intermediaries (e.g. insurers))				
Criteria	Objective	Rating	Evaluation	Effect of moral hazard
Maximizes use of markets	Effectively uses markets and hedging mechanisms; stakeholders can purchase hedging instruments cost effectively.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating.
Transparent (cost)	Costs of plan are transparent (fees, costs to sponsors, other stakeholders, etc).	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating.
Strong Governance	Fiduciary roles of plan sponsors well defined. Plan structure minimizes agency issues, particularly regarding plan investment and risk taking.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating.
Efficiently priced	Market price is well understood and accepted by stakeholders. Plan does not contain features which cannot be efficiently priced. Plans incorporate discipline in pricing.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating.



**Plan Name
Markets**

Markets Needs & Risks (Composite Rating: <input type="text"/>) (includes both financial markets and intermediaries (e.g. insurers))				
Criteria	Objective	Rating	Evaluation	Effect of moral hazard
Efficient risk bearing	Plan efficiently pools idiosyncratic risks and hedges systematic risks (both economic and demographic).	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. <input type="text"/>
Allocation of risk	Plan efficiently allocates risk across stakeholders, giving each stakeholder the risk he can best bear.	Rating	Discussion of rationale for rating	Discussion of how rating was adjusted (or not adjusted) for moral hazard with revised rating. <input type="text"/>

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