

RET RPIRM Model Solutions

Fall 2021

1. Learning Objectives:

1. The candidate will understand the issues facing retirement plan sponsors regarding investment of fund assets.

Learning Outcomes:

- (1a) Assess the different types and combinations of investment vehicles for providing retirement benefits given the particulars of the stakeholders' financial circumstances, philosophy, industry, work force and benefit package.
- (1b) Distinguish the various strategies, approaches and techniques used to manage retirement fund assets
- (1f) Identify and assess the sources of investment risk applicable to retirement fund assets

Sources:

RPIRM-144-17: Patient Capital Private Equity Opportunity: The Benefits and Challenges of Illiquid Alternatives

RPIRM-143-17: Attracting Pension Plan Assets: What Alternative Investment Managers Need to Know

Litterman Ch. 27, Managing a Portfolio of Hedge Funds

Commentary on Question:

The first part of this question tests candidate's ability to identify the main advantages of private market assets and hedge funds. The second part of the question tests the candidates' ability to identify liquidity issues with these investments. The last part of the question tests the candidates' ability to justify why manager selection is so important for these types of investments.

Solution:

- (a) Describe the advantages of investing the assets of a defined benefit pension plan in these alternative asset classes.

Commentary on Question:

Most candidates scored well in part a.

1. Continued

- Public corporations hold twice the cash as private companies, which exhibit higher equity ownership by managers and more leveraged to limit the waste of free cash flow. This model better aligns the interests of owners and managers, enabling privately held companies to achieve “remarkable gains in operating efficiency, employee productivity, and shareholder value.”
- Most important factor in private market investing is the role of asymmetric information, where some investors have superior knowledge relative to others ... private purchasers may sign agreements that “open the books” to them alone.
- All of these characteristics render illiquid assets inefficient to buy and sell – and thus particularly attractive to investors who can tolerate the long investment periods associated with private market allocations.
- These attractions have led many institutions with long investment horizons and known funding requirements, like pensions (with their extensive liabilities for retirees) to increase their allocations to illiquid alternatives as found in private market assets.
- Having a long horizon may give more patient investors a natural edge in harvesting this premium: They are rewarded for sacrificing liquidity that they simply do not need.
- One study showed that, over the last 40 years, less liquid stocks outperformed those with higher liquidity by almost 3% per annum in large capitalization stocks, and by a greater margin in smaller cap stocks.
- Hedge fund study: funds with longer “lockups” (which enable managers to invest in less liquid holdings) tend to earn higher returns than those without ... fund returns rise as their lock-up period increases, from a median of 4.5% for funds with lock-ups less than a quarter up to 13% for funds with a two to three year lock-up.
- At least part of the long run return premium of Private Equity and Venture Capital funds may be compensation for their illiquid characteristics. That is, as the illiquidity of certain private market alternatives increases, so do their expected returns.
- Alternative investments have historically displayed lower levels of volatility, higher absolute and risk-adjusted returns and varied correlations compared to traditional markets.
- Hedge funds use nontraditional techniques (such as short sales and leverage) to preserve and/or gain capital.
- Hedge funds are more loosely regulated than long-only portfolios and are restricted to larger or more sophisticated investors.
- The attraction of hedge funds is that they offer investors an opportunity to both enhance expected returns as well as reduce risk.

1. Continued

- (b) Describe the challenges posed by the illiquidity of such alternative investments.

Commentary on Question:

Most candidates scored well in part b. Many highlighted the need for liquidity in pension plans with lump sums or large payouts.

- Called “patient capital”: often restrictions on withdrawals for 10 years or longer before fully returning capital and profits to investors which limits allocations by individual investors to private market strategies.
- Gaining Exposure: Unlike the public markets, where investors can quickly and efficiently increase their allocation by purchasing shares in the open market, private market investors cannot gain instantaneous exposure, as managers need time to identify and negotiate attractive deals.
- Achieving a Diversified Allocation: Fund offerings are calendar-dependent, may not be accessible for smaller investors, and often require steep investment minimums. Individual investors seeking broad diversification in the space may have difficulty achieving that kind of exposure.
- Maintaining the Allocation: Making a \$1 million commitment to Private Equity for ten years is not the same as achieving a constant \$1 million allocation for that period. Over the years, the average exposure would probably reach about 50% of the total \$1 million commitment — so only half of the capital is “at work” most of the time.
- Illiquidity can be troublesome if multiple investors try to exit a hedge fund simultaneously, forcing the fund manager to unwind multiple positions to meet requests.
- Valuation – hedge fund strategies may involve less liquid hard to value instruments.
- Hedge fund investments are usually illiquid, with redemption windows at least as infrequent as monthly.
- Redeeming investors must notify the hedge fund manager well in advance of the redemption date, further decreasing liquidity.
- The ability to add value from tactical allocations is impeded by fund illiquidity, which imposes potentially long horizons on all positions taken.
- Illiquidity can also remove a fund from consideration or can cause the investor to require higher returns to justify investing in the hedge fund.

1. Continued

- (c) Describe why investment manager selection is important when considering investing in these alternative asset classes.

Commentary on Question:

Most candidates scored well in part c. Many commented on the duty to delegate and the lack of transparency with these investments.

- The difference between top and bottom quartile managers in Hedge Funds can be over 20 percentage points, and over 30 percentage points in private equity.
- The more illiquid the asset, the greater the dispersion we find across the best and worst performing managers.
- If they choose well, there is some consolation: manager performance tends to be more persistent for illiquid alternatives than for more liquid hedge funds and traditional long-only portfolios.
- Higher persistence of manager performance among illiquid alternatives suggests there are real differences in skill levels among managers.
- Greater illiquidity does not guarantee higher returns. It shifts the primary source of the return from “beta” to the individual manager’s superior skill at navigating the investment to a more successful outcome.
- In private market only a select few have good data, information is difficult to analyze and even harder to procure, and news takes a long time to get around.
- Skilled managers and long-term investors prefer private markets, where informational and other inefficiencies allow them to outperform their equivalent liquid asset benchmarks, often by substantial amounts.
- It is important that investment related tasks be properly delegated to parties with sufficient skills, knowledge and expertise. Required activities for investing must be performed according to the Prudent Person Rule.
- The Duty to Delegate - trustee must exercise prudence in: the selection of an investment manager, the instructions given to the investment manager, and the supervision of an investment manager.
- Constraints – Hedge funds are vehicles that allow investment managers to engage in pure active management, with no benchmark and unconstrained with regard to short selling, leverage.
- Lack of Transparency – Hedge funds are very secretive, will not reveal strategies or models used.
- Private equity managers can have an informational advantage in assessing transactions and making investment decisions.
- Private equity investors with a large network of contacts and deal sources hear about more deals and have the ability to access those deals.
- Best private equity investors often control companies and boards of directors, choose management, drive strategy and affect operational and financial decisions.
- Private equity investors can often acquire companies at prices lower than comparable, publicly traded companies.

1. Continued

- Private companies do not live under the scrutiny of thousands of investors who are highly focused on quarterly results so private equity managers can focus on the long term view of investments.

2. Learning Objectives:

1. The candidate will understand the issues facing retirement plan sponsors regarding investment of fund assets.

Learning Outcomes:

- (1g) Solve for a measure of investment performance relevant to a given benchmark

Sources:

RPIRM-104-15: Maginn and Tuttle, *Managing Investment Portfolios*, 3rd Edition, Ch. 12 (sections 1-6) – study note only sections 1 - 6

Commentary on Question:

Although one important piece of information was erroneously omitted from this question (the amount of member contributions), the vast majority of candidates were able to arrive at an answer by either assuming a particular contribution rate or assuming there were no contributions. Candidates were not penalized no matter what contribution rate they assumed. Despite missing key information, candidates performed relatively well on this question.

Solution:

- (a) Calculate the annualized time-weighted and money-weighted returns of Member A's account over the 25-year period.

See Excel.

- (b) Calculate the annualized time-weighted and money-weighted returns for Member B's account over the 25-year period.

See Excel.

- (c) Explain in words why the time-weighted and money-weighted returns are different.

Commentary on Question:

Most candidates answered this question well. Full credit was given to candidates who had at least four of the following points:

- TWR is the growth rate of a single unit of money invested in the account.
- TWR is not sensitive to size and timing of cash flows.
- MWR is the average growth rates of all money invested in the account.
- MWR is sensitive to size and timing of cash flows.
- $MWR = TWR$ if there are no contributions.

3. Learning Objectives:

1. The candidate will understand the issues facing retirement plan sponsors regarding investment of fund assets.
2. The candidate will recognize and appropriately reflect the role of plan investments in managing plan sponsor risk.

Learning Outcomes:

- (1c) Given a context, analyze a Statement of Investment Policy.
- (2c) Evaluate how factors including cash flow requirements, various plan designs and various economic environments affect setting investment strategy.
- (2d) Apply and evaluate strategies and techniques for asset/liability management.
- (2e) Provide advice and analysis to plan sponsors regarding the mitigation of pension plan risks.

Sources:

WTW-a-guide-to-delegated-investment-management.pdf (valuwalk.com)

Morneau Chapter 17

Commentary on Question:

The first part of this question asks for a critique of the investment policy statement and the second part asks for recommended changes. Some candidates put recommended changes in the first part and there was some overlap with answers.

Solution:

- (a) You are given the following excerpt from the Investment Policy Statement (IPS) for the ABC Company Retirement Plan:

Plan Type	Defined benefit with ongoing accruals
Number of participants	Active – 4,000 Retired – 8,000
Composition of liability	Active – 25% of liability Retired – 75% of liability
Funded Percentage	55% using 7.25% discount rate
Trustee	ABC Retirement Board
Investment Manager	ABC Retirement Board
Performance benchmarks	Total fund return
Rebalancing	Asset allocation will be reviewed semi-annually

3. Continued

Asset Allocation

Asset class	Target	Minimum exposure	Maximum exposure
Large Cap public equity	43%	38%	48%
Corporate bonds	26%	20%	30%
Cash	2%	0%	3%
Real estate	9%	5%	12%
Hedge funds and private equity	20%	6%	20%

Critique the above elements of the IPS.

Commentary on Question:

Most candidates scored well on part a.

The investment policy should be appropriate relative to:

- time horizon of the plan
- funded status of the plan
- size of the plan determines what resources are available
- investment philosophy of the trustees
- assets should be invested in a way that it maximizes the benefits to plan participants and beneficiaries
- availability of skilled internal resources

The trustee may be required to delegate the investment management responsibility from the Retirement Board to an entity with more specialized investment expertise, such as a bank, a trust company, or an insurance company.

The trustee may consider the delegated investment manager approach to select the appropriate entities to manage the investments. Fiduciary responsibility cannot be delegated.

The plan is ongoing; therefore, it is appropriate to invest in alternative investments such as real estate and hedge funds. Proponents of alternative investments argue that those investments provide larger returns than traditional investments.

Some proportion of assets should be return seeking vs. liability matching since the plan is ongoing. The investment policy appropriately includes fixed income, since a large proportion of the liability is inactive.

The selections of assets appropriately include a diversified array of assets.

3. Continued

- (b) Recommend changes to the IPS. Confine your recommendations to the elements provided above.

Justify your recommendations.

Commentary on Question:

Most candidates scored well in part b. Many mentioned the need to rebalance more frequently and the need for asset liability matching.

- The investment manager may consider rebalancing at least quarterly for a better chance of staying within the desired minimum/maximum investment bands.
- The retirement board should consider other benchmarks in addition to the total return benchmark. The total return benchmark could encourage the managers to take more risk than is in the best interest of the plan's participants. Other benchmarks that could be added are the asset allocation benchmark and the journey plan mandate. The journey plan mandate changes the return profile over time.
- In addition to domestic large cap equities, the investment policy should include other asset classes, such as international equities, to maximize the return of the plan for an equivalent amount of risk.
- There should be a goal to maintain more liquid assets than 2% in cash, because the annual benefit payments are greater than 2% of the assets due to the large proportion of retiree liability.
- The proportion of liability-matching assets is low considering that 75% of the Fund's liability is attributable to retirees in payment. The Retirement Board should consider closer asset/liability matching, to avoid large losses in case equity markets go down or interest rates decrease.

4. Learning Objectives:

3. The candidate will understand how to evaluate the stakeholders' financial goals and risk management with respect to their plan

Learning Outcomes:

- (3d) Understand and apply the principles of financial economics with respect to pension plan investing

Sources:

RPIRM-162-21: Use of Financial Economics in Pension Actuarial and Investment Practice

Commentary on Question:

Commentary listed underneath question component.

Solution:

Assess the features of the accounting standards applicable to the following types of defined benefit pension plans according to the principles of financial economics:

Commentary on Question:

Most candidates performed well on this question and were able to identify the features of the accounting standards of both private sector and public sector plans and whether those features are consistent or inconsistent with the principles of financial economics. Answers from both the U.S. and Canadian standards were accepted, as well as any other valid answers not included below.

- (a) Private sector plans.

Commentary on Question:

Full credit was given to candidates that provided at least 6 acceptable answers.

The following are acceptable answers regarding the U.S. standards:

- Pension expense uses a discount rate at which benefits could be effectively settled. In practice that discount rate has usually been based on investment-grade corporate bond yields, which would be consistent with financial economics (FE) measurements for most plan sponsors.
- The liability and normal cost were measured using projected salaries for most purposes so this would not be consistent with principles of FE.
- Pension expense uses the market value of assets for some purposes which is consistent with principles of FE although a smoothed market related value of assets option is also possible and that is not consistent with the principles of FE.

4. Continued

- The expected return on assets component of pension expense included risk premia and used a smoothed value of assets – not consistent with the principles of FE.
- The expense included amortization of plan amendments and gains and losses rather than immediate recognition - not consistent with the principles of FE.
- Funded status of the plan is recorded on the entity's balance sheet – consistent with the principles of FE.
- Funded status is required to be measured as of the date of the financial statement (no early measurement dates permitted) – consistent with the principles of FE.
- Immediate recognition of gains and losses is permissible – consistent with FE but not necessary typically and many plans use a g/l amortization methodology – not consistent with the principles of FE.

The following are acceptable answers regarding the Canadian standards:

- International Financial Reporting Standard IAS 19 uses a discount rate based on investment-grade corporate bond yields. Consistent with the principles of FE.
- Asset measurements use market value of assets. Consistent with the principles of FE.
- The liability and normal cost were measured using projected salaries for most purposes, so this would not be consistent with the principles of FE.
- The funded status of the plan is reflected on the sponsor's balance sheet. Consistent with the principles of FE.
- Unlike U.S. private sector accounting standards, IAS 19 calculates a net interest cost by applying the discount rate to the net liability, so it does not include an expected risk premium in the expense calculation. Consistent with the principles of FE.
- Gains and losses are recognized immediately in other comprehensive income. Consistent with the principles of FE.
- One feature that has always been present in Canadian and international pension accounting standards but absent from U.S. pension accounting standards is a ceiling on the balance sheet asset or liability linked to minimum contribution requirements. Consistent with the principles of FE.
- Some entities may rely on a rollforward of a funding valuation to determine the defined benefit obligation. With this choice, the discount rate only needs to be updated once every three years, even though the assets are recorded at market value every year. These changes could be regarded as not consistent with FE

4. Continued

- (b) Public sector plans.

Commentary on Question:

Full credit was given to candidates that provided at least 4 acceptable answers.

The following are acceptable answers regarding the U.S. standards:

- GASB requires use of market value of assets - consistent with the principles of FE.
- Required plan sponsors to reflect the funded status on the sponsor's balance sheet, rather than just disclosing it in a footnote - consistent with the principles of FE.
- However, the measures of liability and expense use the entry age normal cost method - not consistent with the principles of FE.
- In most cases, GASB discounts future payments at an expected return on assets that incorporates risk premia expected to be earned on those assets – not consistent with the principles of FE.
- Plans for which current assets and projected future contributions are not sufficient to pay benefits in the long run are required to discount payments at a mix of the expected return on assets and a tax-exempt high-quality municipal bond rate – not consistent with the principles of FE.

The following are acceptable answers regarding the Canadian standards:

- Accounting under the Public Sector Accounting Board (PSAB)'s standard, *Retirement Benefits*, Section PS 3250, generally follows traditional practice – not consistent with the principles of FE.
- The expected return on plan assets is usually used to discount future benefit payments in calculating the accrued benefit obligation for plans that are partially or fully funded – not consistent with the principles of FE.
- The entity's cost of borrowing is used for plans that are unfunded – not consistent with the principles of FE.
- The accrued benefit obligation reflects the impact of future pay increases – not consistent with the principles of FE.
- Plan assets can be valued using a smoothing method – not consistent with the principles of FE.
- Gains and losses are amortized rather than being immediately reflected on the entity's balance sheet – not consistent with the principles of FE.

5. Learning Objectives:

2. The candidate will recognize and appropriately reflect the role of plan investments in managing plan sponsor risk.

Learning Outcomes:

- (2d) Apply and evaluate strategies and techniques for asset/liability management.

Sources:

RPIRM-163-21: Liability Driven Investment Explained

Commentary on Question:

The first part of the question tested candidates' technical knowledge for calculating effective duration under various interest rate / inflation scenarios. The second part of the question asked candidates to demonstrate their knowledge of how inflation-linked liabilities are impacted by inflation, and then explain what appropriate asset classes can be used to hedge that risk.

Solution:

- (a) Calculate the effective duration of the plan under the following scenarios:
 - (i) 100 basis point change in inflation and real interest rates remain constant.
 - (ii) 100 basis point change in real rates and inflation remains constant.

Commentary on Question:

Candidates either did very well or quite poorly on this question. Those who did poorly did not seem to understand the link between inflation, nominal interest rates and real interest rates, and therefore were not able to calculate the correct present value of cash flows under the various scenarios. Part marks were still given if the formula for effective duration was correct. Full marks were given to candidates regardless of whether beginning of year, middle of year, or end of year cash flow timing was used in the calculations.

$$\text{Effective duration} = [\text{PV}(1) - \text{PV}(2)] / 2 * D * P(0)$$

PV(0) = \$25,861,220 (present value of Plan Cash Flows under 2% inflation, discounted using the Nominal rates provided)

- (i) PV(1) = \$30,033,311 (present value of Plan Cash Flows under 1% inflation, discounted using Nominal rates provided – 1%)
PV(2) = \$22,602,894 (present value of Plan Cash Flows under 3% inflation, discounted using Nominal rates provided + 1%)
D = 1%
Effective duration = 14.37

5. Continued

- (ii) $PV(1) = \$30,479,088$ (present value of Plan Cash Flows under 2% inflation, discounted using Nominal rates provided – 1%)
 $PV(2) = \$22,227,218$ (present value of Plan Cash Flows under 2% inflation, discounted using Nominal rates provided + 1%)
 $D = 1\%$
Effective duration = 15.95

Please refer to the excel file for detailed calculations.

- (b) Describe the assets that can be used to hedge inflation-linked pension liabilities.

Commentary on Question:

Candidates did very well overall on this question. Most candidates were able to identify several asset classes whose performance is inflation-linked and could be used to hedge inflation-linked pension liabilities. However, in order to get full marks, it was not enough to simply list the asset classes. A description of how the asset class and the pension liabilities correspond to inflation scenarios was necessary. Full marks were given if two asset classes, with sufficient description, were provided.

The following asset classes can be used to hedge inflation-linked pension liabilities:

1. Government and/or Corporate Bonds

A bond's price behaves similarly to the value of pension liabilities in response to interest rate changes. Specific inflation-linked bonds can be used to hedge inflation-linked liabilities. These bonds provide a series of coupon payments which are adjusted for inflation. Therefore, changes in inflation will affect the value of the bond in a similar way as the value of the inflation-linked pension liabilities. A rise in inflation (without a corresponding increase in nominal yields) will increase the value of inflation-linked pension liabilities as well as the inflation-linked bonds.

There are some drawbacks to these types of bonds. There is often a limited supply in the market. Also, corporate bonds have relatively short maturities while the supply of long-dated and ultra-long-dated bonds is even more limited or non-existent. Using corporate bonds to hedge pension liabilities also introduces credit risk.

5. Continued

2. Swaps

The pension scheme will typically receive the variable rate and pay a fixed rate. The fixed rate equals what the market expects inflation will average over the life of the swap. If actual inflation ends up being higher or lower than the pension scheme will receive more or less than the fixed rate they are paying, helping to hedge the inflation-linked liabilities. This creates more certainty that whatever inflation ends up being, the pension scheme will receive this via its swap portfolio.

However, swaps are operationally more complex than bonds and require more understanding and a more sophisticated investor. Counterparty risk exists that a bank defaults and is unable to settle any profit that has accrued within a swap contract. Liquidity issues are also present, the secondary market for swaps is not fully developed and therefore it cannot be easily traded like bonds, for example.

3. Real estate

Real estate is typically a large component of any measure of inflation (example, consumer price index). Historically there is a positive correlation with inflation and real estate. For both commercial and residential real estate, underlying rent increases are often tied to inflation.

Direct real estate, as opposed to REITs, has liquidity concerns that the pension scheme must be comfortable with.

4. Infrastructure

Infrastructure includes investments in physical assets such as bridges, roads, highways, airports, etc. Many of the underlying contracts of these assets have explicit links to inflation, and so the value of the assets will actually increase in inflationary scenarios. One example is the tolls charged on roadways.

While listed infrastructure is believed to provide inflation protection similar to listed equities, unlisted (direct) infrastructure funds are thought to provide the most protection against inflation.

5. Continued

5. Commodities

Commodity prices, in particular agriculture, are a major component of component of any measure of inflation (example, consumer price index). Typically commodity prices rise with inflation is accelerating, and can therefore provide a good hedge against inflation-linked pension liabilities. In the case of non-agricultural commodities, as the prices of goods increases due to higher demand, so does the value of the underlying commodities used to produce those goods (example, gold, aluminum, oil, natural gas, etc.).

Exposure to commodities can be achieved by direct investment, futures contracts, ETFs or less directly through purchase of stocks in companies that produce commodities.

6. Equities

While equities are not strictly viewed as hedges against inflation, a component of equity returns is tied to company earnings and profitability. Inflationary pressures can be passed onto consumers through prices of goods, and therefore flow through to the company's revenues and earnings. Forecasting of equity returns also typically includes consideration of GDP estimates, which would be impacts by inflation.

6. Learning Objectives:

3. The candidate will understand how to evaluate the stakeholders' financial goals and risk management with respect to their plan.

Learning Outcomes:

- (3a) Compare the interests of plan sponsors, employees, shareholders, taxpayers and other stakeholders related to the financial management of a retirement plan.

Sources:

RPIRM-154-18: Benefit Security Pension Fund Guarantee Schemes (pp. 4-13)

Commentary on Question:

Candidates were tested on the general principles of pension guarantee schemes. Commentary is provided separately for parts (a) and (b) below.

Solution:

- (a) Describe the advantages of pension guarantee schemes for the following:
 - (i) Sponsors of defined benefit pension plans; and
 - (ii) Members of defined benefit pension plans.

Commentary on Question:

Candidates were expected to clearly articulate how a pension guarantee scheme benefits each of the key stakeholders (both sponsors and members). Candidates who received full credit were able to explain the difference between realized advantages for both sponsors and employees and described multiple advantages for each party.

- (i) The existence of a pension guarantee scheme protects plan sponsors from the risk that employees will consider the long-term health of the sponsor when making long-term career decisions. Employees will be guaranteed to receive their retirement income, regardless of whether the employer is financially healthy and executing a sustainable business model, which gives employees less leverage in salary negotiations and helps employers retain needed talent.

In addition, employers may view the existence of a guarantee scheme as a license to take-on riskier investment strategies for their plan, given that the guarantee scheme provides a backstop in case of an adverse event. Taking on additional risk can help sponsors close funding deficits with minimal added contributions.

6. Continued

- (ii) Member benefits are protected in the event the sponsor goes bankrupt and cannot otherwise provide the promised retirement income. Given that many employees have concentrated risk with the plan sponsor (i.e., both the current wages and future/pension income are derived from the same source) the guarantee scheme can offer a source of risk diversification and help employees avoid a “double blow” if the company goes bankrupt.

In many cases, plan members also do not have sufficient information regarding the financial health of the plan sponsor to make fully-informed decisions on long-term retirement plan risk. The existence of the guarantee scheme lowers the consequences for plan members of this information asymmetry.

- (b) Describe the challenges that pension guarantee schemes face.

Commentary on Question:

Many candidates did well on this section. High-scoring responses noted and described 4+ significant and distinct challenges faced by guarantee schemes

The current regulatory and financial environments expose guarantee schemes to a number of significant challenges. Among these are:

- Moral hazard – Because the guarantee scheme provides a backstop should the company or plan go bankrupt, some sponsors choose to adopt riskier investment practices because of the asymmetric risk/reward tradeoff offered by the underlying guarantee. These practices can expose the guarantee scheme to higher levels of risk than would have been faced if the sponsor was responsible for the downside-risk consequences.
- Adverse Selection – In the traditional pension guarantee structure, premiums received from stronger sponsors tend to subsidize the guarantee provided to weaker sponsors. Because financially stronger plan sponsors are likely to also have the resources to shrink or terminate their plan, there is a risk that the stronger players will leave the market/guarantee scheme, leaving only the weaker plans to pay into the guarantee fund.
- Mispricing of underlying risks – Due to the number of plans covered by a traditional guarantee scheme, it is difficult or impossible for the scheme to assess the true underlying sponsor financial condition (e.g. solvency/debt levels) when setting guarantee premiums. This can lead to mispriced guarantee “insurance.”
- Systemic risks – Many of the sponsors covered by a typical guarantee scheme are subject to similar market risk factors. It is difficult/impossible for guarantee schemes to manage these macro/market factor risks, which could lead to a large number of sponsors suffering insolvencies at the same time during a significant market disruption, creating an unmanageable burden on the guarantee scheme.

7. Learning Objectives:

1. The candidate will understand how to analyze the issues facing retirement plan sponsors regarding investment of fund assets and make recommendations.

Learning Outcomes:

- (1b) Distinguish the various strategies, approaches and techniques used to manage retirement fund assets.

Sources:

Morneau Shepell Handbook of Canadian Pension and Benefit Plans, 17th Edition, 2020 - Ch. 7

Commentary on Question:

This question was aiming at testing basic understanding of responsible investments strategies, which is not only a recent addition to the exam curriculum, but also a trending topic in the pension investing world.

Candidates generally did very poorly, either providing answers totally unrelated to the subject or no answers at all. This was especially true for part ii) and iii).

Solution:

Describe the following responsible investment strategies:

- (i) Positive and negative screenings;
 - (ii) Economically targeted investments;
 - (iii) Shareholder advocacy; and
 - (iv) Environmental, social and governance (ESG) investments.
-
- (i) Screening is the application of social or environmental value judgments to the investment process. Negative screens exclude companies that engage in activities that the screener judges to be negative and positive screens include companies that engage in socially positive activities.
 - (ii) Aims to improve the economic and social development of local communities (which may be defined as quite an expansive geographic area).
For example, this can be done by helping to create local jobs or expertise in areas such as infrastructure or home construction.
The social benefits may include affordable housing, more diversified and sustainable local economy, or urban revitalization.

7. Continued

- (iii) The attempt by a shareholder to influence corporate behaviour through corporate communication, shareholder proposals, proxy voting, and divestment.
- (iv) The fact of making investments based on environmental, social or governance reasons, rather than purely economic ones.

These are a few examples for each specific reason:

- Environmental: Water and waste management and Climate change.
- Social: Human rights and Child labour.
- Governance: Corruption and Executive compensation.