Report on Pension Plans Registered in British Columbia

SEPTEMBER 2018

British Columbia | Financial Institutions Commission

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THE FINANCIAL INSTITUTIONS COMMISSION OF BRITISH COLUMBIA (FICOM) IS A REGULATORY AGENCY OF THE MINISTRY OF FINANCE. IT WAS ESTABLISHED IN 1989 TO CONTRIBUTE TO THE SAFETY AND STABILITY OF THE BRITISH COLUMBIA PENSION AND FINANCIAL SERVICES SECTORS.

SEPTEMBER 2018

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About This Report

This year's report on pension plans prepared by British Columbia's Office of the Superintendent of Pensions presents a profile of all pension plans registered in British Columbia: defined benefit, defined contribution and target benefit.

The report contains:

» A summary of financial market performance;

» A profile of pension plans, membership and contributions;

» A summary of 2016 valuation assumptions for plans with benefit formula[1] provisions;

» An estimate of the funding position of plans with benefit formula provisions;

» A summary of target benefit plans registered in British Columbia;

» An assessment of risk related to plans with benefit formula provisions; and

» A summary of the Superintendent's guidance and decisions.

Capital and Equity Markets Performance

CANADIAN INTEREST RATES

The yield curve on Government of Canada bonds flattened in 2017 as yields for longer term bonds fell while shorter term bond yields increased. The year over year impact on solvency liabilities from the change in bond yields was not material. This impact however also depends on specific assumptions used by plans for the number of members electing lump sum transfers compared to annuity purchases.

[1] BENEFIT FORMULA PLANS INCLUDE BOTH DEFINED BENEFIT AND TARGET BENEFIT PLANS.

TABLE 2.1: GOVERNMENT OF CANADA BOND YIELDS AND SOLVENCY INTEREST RATES

	Rates in Dec. 2017	Rates in Dec. 2016	Rates in Dec. 2015
Government of Canada bonds[A]			
• Long-term (V122544)	2.20%	2.34%	2.16%
• 10-year (V122543)	1.98%	1.73%	1.40%
• 91-day T-bill (V122541)	1.05%	0.47%	0.50%
Solvency interest rates (non-indexed pensions)[B]			
• Commuted value	2.60%/3.40%	2.20%/3.50%	2.10%/3.70%
• Annuity purchase	3.02%	3.11%	3.13%

[A] BANK OF CANADA STATISTICS: HTTP://WWW.BANKOFCANADA.CA/RATES/INTEREST-RATES/

[B] BASED ON CANADIAN INSTITUTE OF ACTUARIES' GUIDANCE. FOR COMMUTED VALUE, THE FIRST INTEREST RATE APPLIES TO THE FIRST 10 YEARS AFTER THE CALCULATION DATE AND THE SECOND INTEREST RATE APPLIES TO SUBSEQUENT YEARS. THE ANNUITY PURCHASE RATE SHOWN IS THAT FOR AN ILLUSTRATIVE BLOCK WITH MEDIUM DURATION.

ASSET CLASS RETURNS

North American equity markets experienced strong gains in 2017, buoyed, by high expectations for U.S. tax reform. A rebound in economic growth led overseas stock markets to significant gains, with Eurozone GDP expanding at the fastest pace in a decade.

While valuations filed in 2016 were impacted by the performance of the Canadian markets, it is our expectation that some plans will file off-cycle valuations in 2017 to take advantage of the 2017 investment performance.

TABLE 2.2: ASSET CLASS RETURNS OF THE GENERAL MARKET, 2014–20167

	Returns in 2017	Returns in 2016	Returns in 2015	Returns in 2014
Stock returns[A]				
• Canadian equities: S&P TSX Composite	9.1%	21.1%	-8.3%	10.6%
• U.S. equities: S&P 500 (Canadian dollars)	13.8%	8.6%	21.0%	24.0%
• Non-North American equities: MSCI – EAFE (Canadian dollars)	16.8%	-2.5%	19.0%	3.7%
Fixed-income returns[A]				
• FTSE 90-day T-bills	0.5%	0.5%	0.6%	0.9%
• FTSE Universe Bond	2.5%	1.7%	3.5%	8.8%
• FTSE Long Bonds	7.0%	2.5%	3.8%	17.5%

[A] SOURCE: AUBIN CONSULTING ACTUARY INC. STATISTICS. HTTP://WWW.AUBINACTUAIRECONSEIL.CA

Plan Membership

The total number of members covered by plans registered in BC continues to increase gradually even as the total number of plans remains stable. The total number of members increased from 1,045,000 in 2016 to 1,145,000 in 2017 while the number of plans decreased from 683 to 677.

The total number of plans with a benefit formula component declined from 198 at December 31, 2016 to 190 at December 31, 2017. This includes 12 plans that were either terminated or transferred to other jurisdictions. Four new benefit formula plans were registered in 2017. The number of members in benefit formula plans increased from 971,000 at December 31, 2016 to 1,068,000 at December 31, 2017.

TABLE 3.1: NUMBER OF COVERED MEMBERS IN BENEFIT FORMULA PLANS AT DECEMBER 31, 2017

Size of Plan	Number of Plans	Total Number of Members
Fewer than 1,000	123	27,000
1,000–5,000	41	85,000
5,000–10,000	13	86,000
10,000 or more	13	870,000
Total	**190**	**1,068,000**

Almost 65 per cent of the benefit formula plans have less than 1,000 members and make up less than 3 per cent of the total membership. The average number of members in this group is 200.

TABLE 3.2: NUMBER OF COVERED MEMBERS IN DEFINED CONTRIBUTION PLANS AT DECEMBER 31, 2017

Size of Plan	Number of Plans	Total Number of Members
Fewer than 100	370	12,000
100–500	89	18,000
500–1,000	15	10,000
1,000 or more	13	37,000
Total[A]	**487**	**77,000**

[A] THIS TABLE REFERS TO MEMBERSHIP IN PLANS SPECIFICALLY SET UP AS DEFINED CONTRIBUTION PLANS AND DOES NOT INCLUDE MEMBERS IN BENEFIT FORMULA PLANS CURRENTLY CONTRIBUTING TO A DEFINED CONTRIBUTION COMPONENT. THEY ARE INCLUDED IN TABLE 3.1.

The number of defined contribution plans increased marginally from the previous year with 16 plans terminating and 18 new plans being registered during the year. There was also an increase in membership from 74,000 to 77,000.

Pension Funds and Asset Mix

The total assets for all plans increased from $143,606 [2] million to $157,608 million, an increase of over $14 billion over the previous year. This reflected the overall performance of the markets in 2017 as illustrated in Table 2.2 above.

TABLE 4.1: TOTAL ASSETS OF REGISTERED PENSION PLANS AS AT DECEMBER 31, 2017

Asset Type	Market Value ($ Millions)
Benefit formula component	$149,750
Defined contribution component	$7,.858
Total Assets	**$157,608**

[2] AUGUST 2017 ANNUAL REPORT OVERSTATED DC ASSETS.

DISTRIBUTION OF ASSETS FOR BENEFIT FORMULA PLANS

Table 4.2 shows a significant increase in the cash holdings of plans from $200 million at December 31, 2016 to $523 million at December 31, 2017. This increase is a result of a large multi-employer plan increasing its cash holding by over $250 million compared to the cash held at December 31, 2016.

Plans reported a decline in the proportion of assets held in traditional debt and equity assets with a trend towards higher allocations to infrastructure and real estate investment categories. Allocation of assets into infrastructure investments continues to increase from year to year, with assets reported in 2017 of $13.8 billion compared to $11.4 billion in 2016, an increase year-over-year of 21 per cent. Plans reported $6.6 billion in infrastructure investments in 2014. Similarly, assets allocated to real estate increased by 11 per cent at 2017 compared to the previous year. Over 80 per cent of the assets reported in infrastructure and real estate investments were held by the three largest public-sector plans registered in B.C.

In the previous report, we highlighted that the allocation to the asset category reported as "Other investments" continues to grow. Plans are now required to provide an explanation of what is included in their category of "Other Investments". In 2016, plans reported $7.6 billion of assets allocated to this category compared to $9.5 billion in 2017. This category is made up mainly of domestic and foreign private equity placements and it is utilised mainly by the largest plans. It includes private debt holdings as well as annuity buy-in contracts held with insurance companies which cover payments of retiree benefits.

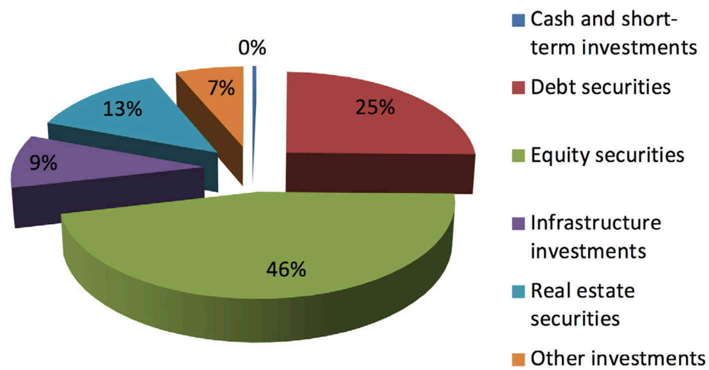
TABLE 4.2: MARKET VALUE OF ASSETS AS AT DECEMBER 31, 2017

Asset Class	2017 Market Value ($ Million)	2016 Market Value ($ Million)
Cash & short term investments	523	200
Debt securities	37,061	34,134
Equity securities	68,619	64,897
Infrastructure securities	13,756	11,382
Real estate securities	19,218	17,366
Others investments	9,508	7,595
Total[A]	**148,685**	**135,574**

[A] THIS EXCLUDES SMALL PLANS THAT ARE NOT REQUIRED TO FILE A BREAKDOWN OF ASSET MIX INFO, I.E. ASSETS OF LESS THAN $2.5 MILLION OR LESS THAN 50 MEMBERS (BOTH ACTIVE AND FORMER MEMBERS).

Plans required to file a distribution of their asset mix information added $15.3 billion in investment income to the total market value. They also made total contributions of $4.6 billion to their plans compared to $5.3 billion in benefits paid. These plans also reported $408 million in total plan expenses during the year.

FIGURE 4.1: PERCENTAGE DISTRIBUTION OF ASSET ALLOCATIONS AS AT DECEMBER 31, 2017



Required Contributions to Plans

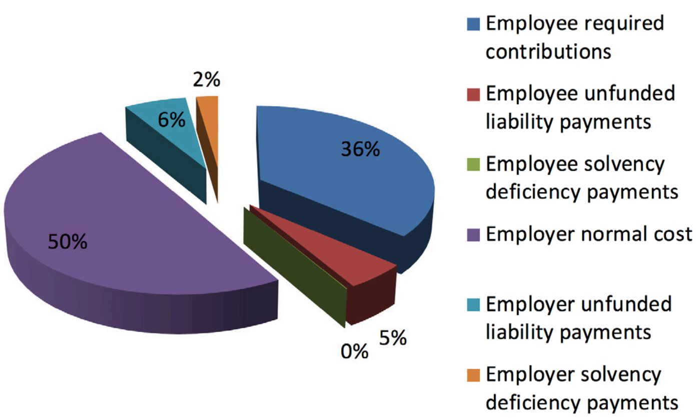
The total contributions to benefit formula plans did not increase significantly during the year, growing from $4.5 billion in 2016 to $4.6 billion in 2017. There was a significant reduction in contributions made by employers to amortize solvency deficiencies, declining from $154 million in 2016 to $104 million in 2017. This is primarily due to many plans filing valuations as at December 31, 2015 and December 31, 2016, and electing to amortize the total solvency deficiency at the review date over 10 years as provided under Schedule 8 of the Pension Benefits Standards Regulation. Further, many multi-employer plans with significant solvency deficiencies converted to target benefit plans and therefore were not required to fund for solvency.

The proportion of contributions made to fund future service increased from 83% to 86%.

TABLE 5.1: CONTRIBUTIONS TO FUND BENEFIT FORMULA PLANS AS AT DECEMBER 31, 2017

Type of Contributions Made ($ Thousands)	Amount Contributed in 2017	Amount Contributed in 2016
Employee required contributions	$1,662,276	$1,555,848
Employee unfunded liability payments	$234,835	$262,019
Employee solvency deficiency payments	$3,242	$3,969
Employer normal cost	$2,280,207	$2,162,280
Employer unfunded liability payment	$296,521	$349,009
Employer solvency deficiency payment	$103,756	$153,805
Total employer and employee contributions	**$4,580,837**	**$4,486,930**

FIGURE 5.1: PERCENTAGE DISTRIBUTION OF CONTRIBUTIONS TO BENEFIT FORMULA PLANS AT DECEMBER 31, 2017



Plan sponsors and members contributed $454 million towards their defined contribution plans during 2017. This includes $29 million contributed by members to their voluntary contribution accounts in addition to their required contributions.

2016 Valuation Assumptions Summary

Our office received 125 valuation reports for benefit formula plans with review dates in 2016. Due to the volume of reports filed, we have summarized the significant assumptions that are most variable among plans.

The assumed discount rate is often developed using the building block approach. Table 6.1 outlines the average rates that were used to develop the 2016 valuation interest rates.

TABLE 6.1: DEVELOPMENT OF THE AVERAGE DISCOUNT RATE FOR VALUATIONS REVIEWED IN 2016

(a) Best estimate assumed rate of inflation	1.68%	
(b) Expected long-term real return on invested assets	3.63%	
(c) Non-investment expenses	-0.21%	
(d) Total investment expense (passive + active)	-0.30%	
(e) Returns for active management	0.18%	
(f) Returns for rebalancing & diversification	0.22%	
(g) Margin for adverse deviation	-0.30%	
(h) Valuation interest rate (net of all expenses)	4.90%	(a + b + c + d + e + f + g)
(i) Valuation interest rate (net of investment expenses)	5.11%	(a + b + d + e + f + g)
(j) Gross valuation interest rate	5.41%	(a + b + e + f + g)

Of the 125 plans filed, 106 plans included a margin for adverse deviation. The expected long-term real return on invested assets is the estimated investment return using the target asset allocation.

Table 6.2 looks at how the age distribution of plans influences investment decisions. It examines the average age of members in each plan and the corresponding asset mix of the plan.

TABLE 6.2: ASSET DISTRIBUTION BY AGE GROUPS FOR VALUATIONS REVIEWED IN 2016

Asset Distribution/Average Age	< 50	50 to 55	55 to 65	65 to 75	> 75
Average Canadian Equity	16.7%	23.6%	25.0%	18.7%	15.3%
Average Foreign Equity	22.6%	27.0%	24.6%	24.8%	21.3%
Average Fixed Income	47.8%	39.2%	41.3%	46.3%	36.8%
Average Real Estate	7.7%	4.9%	3.2%	2.2%	4.6%
Average Other	3.5%	3.5%	4.6%	4.9%	18.4%
Average Cash	1.7%	1.8%	1.3%	3.1%	3.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Fixed Income	47.8%	39.2%	41.3%	46.3%	36.8%
Non-Fixed Income	52.2%	60.8%	58.7%	53.7%	63.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Number of Plans	18	20	56	26	5
Average Annual Return[A]	7.5%	6.6%	7.7%	6.9%	6.6%
Average Discount Rate	5.2%	5.2%	4.9%	4.4%	4.7%

[A] AVERAGE ANNUAL RETURN NET OF EXPENSES DURING THE INTER-VALUATION PERIOD.

As plans mature, we would expect the plans to invest more in fixed income and less in equities. However, this was not borne out by the allocation of assets for the plans we analyzed. Plans with the lower average age had higher allocation to fixed income securities. There may be other significant factors, such as plan design, the funding and benefit policies that drive the investment strategy, or the tolerance for risk and acceptance of contribution variability. Other considerations could relate to definitions and classifications of asset classes by different investment consultants. As expected, plans with highest maturity appear more conservative in their discount rate assumptions when compared to less mature plans.

Our goal is to collaborate with other jurisdictions in the coming years to build a larger data base. This will allow us to develop a better understanding of the investment strategies and decision-making of administrators to develop appropriate risk-based regulatory processes.

Included in the development of the discount rate is an implicit assumption for investment expenses. Investment expenses depend on the size of the investment. Plans with larger assets typically have access to lower investment fees. Table 6.3 outlines the average assumed investment expenses by plan size.

TABLE 6.3: AVERAGE INVESTMENT EXPENSE ASSUMPTION BY PLAN SIZE FOR VALUATIONS REVIEWED IN 2016

Size of Plan (Assets $)	Number of Plans	Average Investment Expense Assumption
Under 5 million	15	0.46%
5 - 10 million	17	0.37%
10 - 25 million	22	0.28%
25 - 100 million	43	0.30%
100 - 250 million	14	0.24%
Over 250 million	14	0.23%

On average, plans with more assets assumed lower fees as a percentage of assets. There appears to be a significant change in expense levels once a plan reaches $10 million in assets and another significant change at $100 million.

Non-investment expenses are assumed as either an explicit dollar amount or implicitly in the discount rate. For plans that assumed an implicit assumption, we have converted the implicit assumption to an explicit assumption for the purposes of the Table 6.4. Table 6.4 shows average non-investment expenses assumption based on the number of members in each plan.

TABLE 6.4: AVERAGE NON-INVESTMENT EXPENSE ASSUMPTION BY PLAN SIZE FOR VALUATIONS REVIEWED IN 2016

Size of Plan (Members)	Number of Plans	Average Non-investment Expense Assumption ($) Per Plan	Average Non-investment Expense Assumption Per Member ($)
Fewer than 100	43	41,887	922
100-500	37	97,589	379
500-1,000	14	218,941	300
1,000-5,000	21	281,370	148
5,000-10,000	6	738,37	109
10,000 or more	4	2,221,657	57

The non-investment expenses per member decrease as plans become larger as those larger plans can invest in more automated and more efficient processes. We recognize that non-investment expenses may vary based on the types and numbers of services contracted with service providers. The above information provides an opportunity for administrators to compare their expenses with plans of similar size to determine whether efficiencies can be achieved in terms of their level of administration costs.

While most assumptions in a solvency valuation are prescribed, the estimated wind-up expenses are not, and we have seen significant variations between plans in the estimated wind-up expense. Table 6.5 outlines the average wind-up expense based on the membership counts.

TABLE 6.5: AVERAGE WIND-UP EXPENSE ASSUMPTION BY PLAN SIZE FOR VALUATIONS REVIEWED IN 2016

Size of Plan (Members)	Number of Plans	Average Wind-up Expense ($)	Average Wind-up Expense per Member ($)
Fewer than 100	43	80,674	1,775
100-500	37	182,595	709
500-1,000	14	329,286	452
1,000-5,000	21	529,411	279
5,000-10,000	6	1,258,333	185
10,000 or more	4	2,625,000	68

As expected, larger plans assume a lower cost per member because many expenses that are included in a wind-up do not greatly increase as membership increases. In 2017, the Superintendent published expectations in terms of the assumptions used for wind-up expenses. As plans file valuations which follow the guidance provided by the Superintendent, we expect that the average assumption for wind-up expenses presented above will increase to reflect that the termination date, the settlement date and wind-up dates are not to be the same.

Funding Position of Benefit Formula Plans

The funding analysis provided in this section is based on the projected funding position[3] of all benefit formula plans at the end of 2016 and 2017. The figures do not include public sector plans.

- A ***going concern valuation*** of a plan provides an evaluation of the plan's funded status, if the plan continues indefinitely and benefits continue to be paid;
- The ***going concern funded ratio*** of a plan is the ratio of the plan's going concern assets to the plan's going concern liabilities;
- The ***solvency valuation*** of a plan estimates the plan's ability to meet its obligations, if the plan is terminated and must pay all its obligations immediately; and
- The ***solvency ratio*** of a plan is the ratio of the plan's solvency assets to the plan's solvency liabilities.

Table 7.1 shows the key funding figures for benefit formula plans at December 31, 2016, and December 31, 2017.

[3] OR ON ACTUAL FUNDING POSITION IF A VALUATION REPORT AT THE INDICATED DATES WAS FILED.

TABLE 7.1: FUNDING FIGURES FOR GOING CONCERN AND SOLVENCY VALUATIONS AS AT DECEMBER 31, 2017 AND DECEMBER 31, 2016

2017	Going Concern Valuation ($ Million)	Solvency Valuation ($ Million)
Total assets	34,786	36,282
Total liabilities	30,483	39,540
Aggregate funding balance	4,303	-3,258
Total funding balance for plans in deficit	-740	-5,086
Total funding balance for plans in surplus	5,043	1,828
Aggregate funding ratio	114%	92%

2016	Going Concern Valuation ($ Million)	Solvency Valuation ($ Million)
Total assets	$32,431	$33,821
Total liabilities	$27,350	$36,462
Aggregate funding balance	$5,081	-$2,641
Total funding balance for plans in deficit	-$796	-$4,346
Total funding balance for plans in surplus	$5,878	$1,705
Aggregate funding ratio	119%	93%

The aggregate going concern funding position decreased from 119 per cent as at December 31, 2016, to 114 per cent as at December 31, 2017. The going concern surplus – that is, assets less liabilities – decreased to $4.30 billion as at December 31, 2017. The main contributing factor to the decrease in funding position was the drop in assumed benchmark discount rates used by the Superintendent of Pensions of approximately 0.6 per cent which was used to project going concern liabilities as at December 31, 2017. The reduction in the Superintendent's benchmark discount rate is consistent with the reduction in discount rates used in plans that have filed recent valuation reports. This change increased going concern liabilities by approximately $2.69 billion.

The aggregate solvency position decreased slightly from 93 per cent as at December 31, 2016 to 92 per cent as at December 31, 2017. The estimated total deficit increased from $2.64 billion as at December 31, 2016, to $3.26 billion as at December 31, 2017. The projected total amount of solvency deficit that must be funded by plans in deficit is estimated to be $5.09 billion as at December 31, 2017. This was an increase of $740 million over the December 31, 2016 results.

Plan administrators continue to take advantage of funding relief available to them, both through letters of credit as well as funding relief provided by the October 2016 Order in Council, to reduce payments required to amortize solvency deficiencies.

Table 7.2 and Figure 7.1 show the range of estimated going concern funding ratios for benefit formula plans and the number of members impacted at December 31, 2017. The number of plans at December 31, 2016 are included for comparison.

TABLE 7.2: NUMBER OF BENEFIT FORMULA PENSION PLANS BY ESTIMATED GOING CONCERN FUNDED RATIO, AS AT DECEMBER 31, 2017 AND DECEMBER 31, 2016

Estimated Going Concern Funded Ratio	Number of Plans		Total Number of Members
	2017	2016	2017
Less than 85%	9	7	18,000
85% but less than 90%	13	14	90,000
90% but less than 100%	26	19	47,000
100% but less than 110%	38	37	77,000
110% or higher	101	114	189,000
Total[A]	**187**	**191**	**421,000**

[A] *EXCLUDES PUBLIC SECTOR PLANS*

Approximately 12 per cent of plans were estimated to have a going concern funded ratio of less than 1 at December 31, 2017 (using benchmark discount rates set by the Superintendent of Pensions), compared with 11 per cent at December 31, 2016.

FIGURE 7.1: PERCENTAGE DISTRIBUTION OF ESTIMATED GOING CONCERN FUNDED RATIOS FOR ALL BENEFIT FORMULA PLANS, AS AT DECEMBER 31, 2017

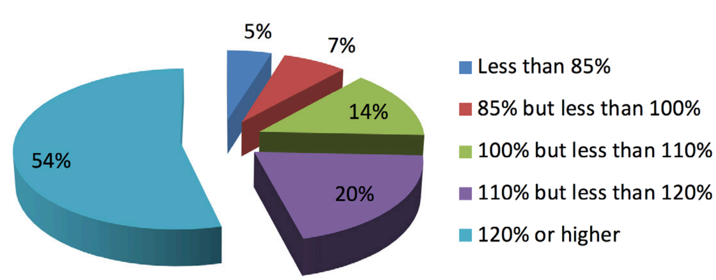


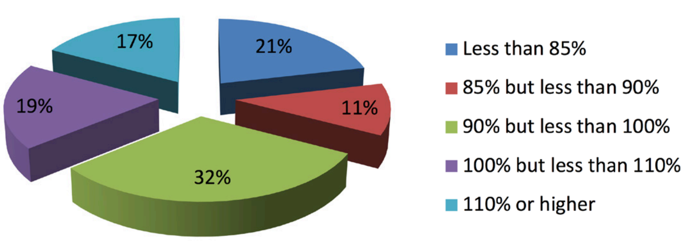
Table 7.3 and Figure 7.2 show the distribution of estimated solvency ratios and the number of members impacted as at December 31, 2017. The number of plans at December 31, 2016 is included for comparison. Approximately 64 per cent of benefit formula plans registered in BC are projected to have solvency deficiency as at December 31, 2017. This is an improvement from the previous year when over 66 per cent of plans were expected to fund for a solvency deficiency.

TABLE 7.3: NUMBER OF BENEFIT FORMULA PENSION PLANS BY ESTIMATED SOLVENCY RATIO, AS AT DECEMBER 31, 2017 AND DECEMBER 31, 2016

Solvency Ratio	Number of Plans		Total Number of Members
	2017	2016	2017
Less than 85%	40	43	179,000
85% but less than 90%	21	21	8,000
90% but less than 100%	59	63	74,000
100% but less than 110%	35	39	50,000
110% or higher	32	25	110,000
Total[A]	**187**	**191**	**421,000**

[A] *EXCLUDES PUBLIC SECTOR PLANS*

FIGURE 7.2: PERCENTAGE DISTRIBUTION OF ESTIMATED SOLVENCY RATIOS FOR ALL BENEFIT FORMULA PLANS, AS AT DECEMBER 31, 2017



A Summary of Target Benefit Plans Registered in British Columbia

With the introduction of the new *Pension Benefits Standards Act*, S.B.C 2012, c30 effective September 30, 2015 the Government formally introduced target benefit plans to pension plans registered in British Columbia. To date only multiemployer pension plans are permitted to include target benefit components in their plan provisions.

There are currently 35 pension plans registered as target benefit plans in British Columbia. Thirty-three of the plans converted accrued benefits with members accumulating future benefits on a target benefit basis. One plan changed the plan format from a defined contribution component to a target benefit component. Members had the option of converting their defined contribution accounts to accrued benefits under the target benefit component or could choose to transfer their accounts to individual retirement accounts outside of the pension plan. One non-negotiated multi-employer plan has retained the accrued benefits as a traditional defined benefit accrual, and all future benefits will be accrued under target benefit rules.

As at December 31, 2017, there were 248,000 members participating in the target benefit plans registered in B.C. Only 77,000 of these members were actively accruing benefits. The plans reported assets of $11.9 billion.

Table 8.1 outlines the median assumptions for the 35 target benefit plans registered in British Columbia. The PfAD varies from 7.5% to 34% which is dependent on the equity allocation which ranges between 0% and 65% of plan assets.

TABLE 8.1: SIGNFICANT TARGET BENEFIT SPECIFIC ASSUMPTIONS

	Median %
PfAD	17%
Equity allocation	50%
Going Concern discount rate	5.8%
Benchmark discount rate	5.6%

Risk Assessment and Supervision

In the 2017 reporting period, the Office of the Superintendent continued to focus on refining and advancing its Risk-Based Regulatory Framework (the Risk Framework). The objective is to mature the risk assessment and supervision process for pension plans registered in B.C.

FICOM's Risk Framework uses early warning risk indicators as an initial screening tool to identify potential plan funding risk. Quantitative analysis is used to establish a Composite Risk Rating (CRR) which is a composite measure of the early warning risk indicators for each plan relative to all other plans. For 2017, the Risk Framework established a CRR score of 3.0 as a threshold out of a maximum score of 5.0. This threshold enabled us to focus our attention on plans that required further attention due to their higher relative risk level (Step 1: Risk Prioritization). The threshold may be varied from year to year.

Based on the results of the Step 1, 16 plans were selected for comprehensive review (Step 2: Risk Assessment). Due to the capacity of the Superintendent, the Supervision team prioritized the completion of risk reviews for nine of the riskiest plans. The regulatory actions taken resulting from the reviews are shown in Table 9.1.

TABLE 9.1: 2017 RISK ASSESSMENT RESULTS (PERIOD ENDING DECEMBER 31, 2016)

Regulatory Response Quadrant	Reviews Completed	Regulatory Activity
Education	1	Provide guidance notes and share best practices.
Monitoring	7	Regular and on-going communication with administrator focused on managing risk.
Proactive Supervision	0	Periodic management reporting.
Intervention	1	On-site examination. Development/ implementation of a Regulatory Action Plan.
Total	**9**	

Of the nine risk reviews completed in 2017, one plan required regulatory intervention. The main area of concern was the lack of adequate governance which put the security of member benefits at significant risk. Penalties for non-compliance were assessed and a Regulatory Action Plan with timelines was approved by the Superintendent, with consequences including possible removal of the administrator.

Seven plans were identified in the Monitoring quadrant of our regulatory response model. These plans required more proactive engagement with administrators to resolve and/or manage issues identified.

One plan was identified in the Education quadrant. Plans in this quadrant require more guidance from the Superintendent which includes assisting them to adopt best practices and develop appropriate procedures to meet compliance requirements. The issues we identified were due to the lack of awareness as well as limited capacity of the administrator to effectively administer the plan.

In 2018, our Risk Framework identified 54 plans with a CRR score of 3.0 or higher, representing 28 per cent of total benefit formula plans. Of these 54 plans, 19 had a CRR score of 4.0 or higher.

TABLE 9.2: COMPOSITE RISK RATING

Composite Risk Rating	2018		2017	
	Plans	% Total	Plans	% Total
3.0 and less than 4.0	35	18%	24	12%
4.0 or Higher	19	10%	5	3%
Total Number of Plans	**191**	**28%**	**195**	**15%**

The results for 2018 indicate a significant increase in the number of plans over our threshold score of 3.0, especially plans that have a CRR score of 4.0 or higher.

The increased number of plans above the threshold CRR was primarily due to the decrease in the benchmark discount rate (BDR) set by the Superintendent to calculate the funding adequacy ratio. The two main factors causing the drop in the BDR were the decrease in the market expectations and the change in asset allocation described in Table 4.2 of this report. The BDR is a discount rate assumption used by the Superintendent to determine the actuarial liability for a benefit formula plan to enable the comparison of plan liabilities on a common basis.

The funding adequacy ratio measures the funding required by the plan using the BDR. The BDR, is based on the asset mix characteristics of each plan segment[4], and is a key component in our funding adequacy ratio measure which compares the adequacy of a plan's going concern funding with a prudent level of funding. Plans using a discount rate higher than the BDR will generally have a worse funding adequacy ratio, leading to a higher CRR.

Of the 54 plans with a CRR of 3.0 or higher, 17 were selected for an in-depth review. Supervision staff have already engaged with plan administrators and trustees as part of the initial step of the risk assessment process, which included a formal request of each selected plan's triennial assessment under section 41(2) of the *Pension Benefits Standards Act*, a completed self-assessment questionnaire on the plan's governance, and a copy of the plan's Governance Policy if not already provided to the Superintendent. Our priority for 2018 is to complete full comprehensive reviews of all 17 plans selected.

Superintendent Guidance and Decisions

This section provides a summary of the guidance issued by the Superintendent during the year as well as decisions that may be of interest to stakeholders.

GUIDANCE FROM THE SUPERINTENDENT

1. PENS 18-001 TERMINATION EXPENSE ASSUMPTION

The Superintendent was concerned about termination expense assumptions used in solvency valuations. He believed that the expense assumptions underestimated the actual expenses that would result from a wind-up of a pension plan, thus overstating the solvency position of pension plans. This had a direct effect on the funding requirements and benefit security in the event of plan termination.

The Superintendent issued revised Bulletin PENS 18-001 clarifying his previous position under Bulletin PENS 17-002. This Bulletin confirmed the Superintendent's expectation that to provide for a realistic settlement of benefits, the assumed termination date, settlement date and wind-up date of the plan should not be the same. The Superintendent has been in discussion with the Canadian Institute of Actuaries to request a revision to the Standards of Practice. Staff will monitor to ensure that the actuarial valuations filed comply with the Superintendent's expectations.

2. PENS 18-002 CALCULATING COMMUTED VALUES FOR MULTIJURISDICTIONAL PENSION PLANS

This Bulletin provides clarification regarding the calculation and payment of commuted values for multijurisdictional pension plans registered in British Columbia. Stakeholders requested clarification on how to calculate commuted values for members in different jurisdictions who belong to their plan, given the variations in the rules and funding requirements with other jurisdictions.

The Superintendent released guidance on this matter in February 2018 indicating that the calculation of commuted values must be in accordance with the legislation of the jurisdiction of the members' employment. For example, multijurisdictional target benefit plans registered in BC may calculate commuted values using going concern assumptions for members in jurisdictions that allowed for the payment of commuted values using such assumptions.

3. PENS 18-003 AUDITED FINANCIAL STATEMENTS

This Bulletin provides clarification on the requirements of filing Audited Financial Statements for plans with benefit formula component assets that exceed $10 million.

- **i.** Plans with both a benefit formula and defined contribution components are required to file an audited financial statement only on the assets of the benefit formula component of the plan.
- **ii.** For purposes of filing the audited financial statements administrators are not required to include the liabilities or pension obligations of the plan but are not precluded from doing so.

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[4] *BASED ON THE UNIQUE CHARACTERISTICS OF BENEFIT FORMULA PLANS, WE HAVE DIVIDED THEM INTO FOUR SEGMENTS: PRIVATE SECTOR PLANS, PUBLIC SECTOR PLANS, MULTI-EMPLOYER NEGOTIATED COST PLANS, AND TARGET BENEFIT PLANS.*

ADMINISTRATIVE PENALTIES ISSUED BY THE SUPERINTENDENT

The *Pension Benefits Standards Act* provides authority for the Superintendent to issue administrative penalties for contraventions of prescribed provisions of the legislation. In 2016, the Superintendent issued guidelines that set out the process for issuing penalties. In the future, the Superintendent will publish decisions with regards to issuance of administrative penalties on the FICOM website.

1. PENALTY AGAINST THE ADMINISTRATOR OF RICHMOND ELEVATOR MAINTENANCE PENSION PLAN

The Superintendent issued an administrative penalty against the administrator of Richmond Elevator Maintenance Pension Plan for persistent non-compliance with the requirements of the legislation. These included;

- **i.** Failure to file Annual Pension Report on time;
- **ii.** Failure to provide annual statements to active and retired members; and
- **iii.** Failure to file actuarial valuation report.

2. PENALTY AGAINST THE ADMINISTRATOR OF THE PENSION PLAN FOR EMPLOYEES OF BC DAIRY FOUNDATION

The Superintendent issued an administrative penalty against the administrator of the Pension Plan for Employees of BC Dairy Foundation for persistent non-compliance with the requirements of the legislation including;

- **i.** Late remittance of contributions to the plan;
- **ii.** Failure to file Annual Pension Report on time; and
- **iii.** Failure to remit the prescribed fee for the filing of the Annual Pension Report.

MESSAGES FROM THE SUPERINTENDENT

The goal of the Superintendent and staff is to take opportunities to provide stakeholders with his views and direction on issues that are pertinent to pension plans registered in British Columbia. This is through doing presentations to industry working groups and participating in various industry panel discussions. This section provides a summary and highlights of the sessions the Superintendent and his staff were involved in during the year.

1. FRAMEWORK, GOVERNANCE AND SUSTAINABILITY OF NORTH AMERICAN PENSION PLANS

This international seminar was organized by the Brazilian Pension Fund Managers Association (Abrapp) – Framework, Governance and Sustainability of North American Pension Funds.

FICOM shared with participants the lessons learnt from the development and implementation of a risk-based supervision framework. FICOM has adopted a Risk-Based Supervisory Framework to identify pension plans whose activities and/or performance may pose significant threats to the benefit security of members of their plan. FICOM's framework is consistent with international standards and is based on using early warning indicators or metrics to identify higher risk plans in order to allocate appropriate resources and engage administrators in developing appropriate regulatory measures to manage the adverse impacts of the identified risk.

It is the view of FICOM that effective Risk-Based Supervision should be based on the identification of the Regulator's objective which will drive all the activities of the Regulator. Further that Risk-Based Supervision is not only an activity, but also a state of mind and a culture of decision making. This should drive all pension supervisory decisions.

2. GOVERNANCE

Panel discussion organized by Tory's LLP to discuss governance requirements and expectations under the new pension legislation of Alberta and British Columbia. The Superintendent reiterated that "Success without governance is often called 'chance' and obviously chance is not a successful business model (ProteusPerformance.com)."

The objective of effective governance is to enable the delivery of the pension promise. Governance has become more important in all business decisions because it optimizes best practices and maximizes the likelihood of good outcomes from business decisions. Good governance emphasises the fulfilment of the fiduciary duty of the plan administrator and can also be a safeguard for the administrator.

3. 2018 PENSION BENEFITS AND LAW INSTITUTE - ESSENTIALS TASKS

At this session the Superintendent provided an update on the activities of his office and initiatives underway:

- **i.** *Governance:* The results of FICOM's baseline survey indicated that administrators are very confident on their understanding of their fiduciary duties under their plans, but are least confident in their ability to provide education and tools for their members. While the legislation is specific regarding governance expectations, stakeholders asked the Superintendent to provide a balance between prescriptive and non-prescriptive requirements. The Superintendent will focus on assisting administrators to build on their governance capacity.

ii. *Report on Funding:* While there appears to be a significant improvement in long term funding, many benefit formula plans are still facing increasing short-term funding challenges. This is due to a combination of low interest rates and demographic improvements. It creates a funding dichotomy, with plans in significant healthy going concern funding positions struggling to meet the funding requirements due to their less healthy solvency ratios. The government passed an Order in Council in 2016 which will provide funding relief for plans facing solvency funding challenges.

iii. *Risk-Based Supervision:* FICOM has implemented a Risk-Based Supervision Framework. The focus is to encourage administrators to look beyond the required minimum funding and focus on planning and anticipating the potential challenges of their plans, leading to the development of strategies for managing and mitigating the impacts of adverse events.

4. THE LATEST DEVELOPMENTS IN TARGET BENEFIT PLANS – INTERNATIONAL FOUNDATION OF EMPLOYEE BENEFIT SPECIALISTS

This panel discussion looked at the various models of target benefit designs introduced by different jurisdictions in Canada. While the specifics of the designs may vary, the common theme is establishing a balance between the liability of the plan sponsor while ensuring that plan members share in the plan's risk. Designs have generally included provisions for adverse deviations as a trade-off to ensure affordability and predictability of funding requirements over the long term. Key Takeaways from industry:

i. Target benefit plans are emerging across Canada, but the design features currently vary by jurisdiction.

ii. Most designs include provisions for adverse deviation intended to enhance benefit security. This may lead to lower but more secure benefits.

iii. The current design of PfADs may lead to intergenerational inequities.

DECISIONS

United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada, Local 170 v. British Columbia (Information and Privacy Commissioner), 2018 BCSC 1080

In 2010 and 2011, the Independent Contractors and Business Association (ICBA) made requests under the *Freedom of Information and Protection of Privacy Act* for certain information related to 16 union-sponsored pension plans. The Office of the Superintendent of Pensions (Superintendent), the public body holding the responsive records, withheld some of the information requested on the basis that disclosure could harm the interests of a third party. After hearing evidence on the matter, The Office of the Information and Privacy Commissioner (Commissioner) ordered the release of all requested records.

Judicial review of the Commissioner's decision was sought and court referred the matter back to the Commissioner for reconsideration. ICBA made another request in 2015 and certain information was withheld by the Superintendent on the basis that the information requested could harm the interests of third parties; that is, the unions sponsoring the pension plans subject to the request. ICBA appealed this decision to the Commissioner. Ultimately, the two matters were joined into a single action, and the Commissioner ordered the release of all information requested by ICBA.

The unions argued that the release of the information had a reasonable expectation of causing harm to their ability to compete for skilled workers, and sought judicial review of this decision as well. The matter was heard in October and November 2017. Court released its decision in June 2018, and again referred the matter back to the Commissioner for a hearing by another adjudicator.

Court held that while the original adjudicator had identified the appropriate tests of reasonableness for assessment of potential harm to the interests of a third party upon the release of the requested information, the adjudicator did not properly apply those tests. Court held that "[T]he adjudicator applied too high a bar in deciding whether disclosure of the information could reasonably be expected to result in the relevant harms."

Court cited the judgement of the Supreme Court of Canada in *Merck Frost Canada Ltd. v. Canada (Health)*, 2012 SCC 3 as determining the standard of proof needed for a public body to refuse to disclose information because it would do damage to a third party. The standard described is "a reasonable expectation of probable harm." Such an expectation was described by the Supreme Court as follows

> *"…while the third party need not show on a balance of probabilities that the harm will in fact come to pass if the records are disclosed, the third party must nonetheless do more than show that such harm is simply possible. "*

In the matter at hand, court held that "while the adjudicator enunciated this standard, she nevertheless failed to apply it, especially considering all her findings," and returned the matter to the Commissioner for redetermination by another adjudicator in a manner consistent with the findings of court.

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