

REPORT ON THE ACTUARIAL VALUATION



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Section 1. EXECUTIVE SUMMARY

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	To the Board of Trustees of the University of Winnipeg Trusteed Pension Plan Trust:
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	We are placed to present this recent which was a subject to the second of the second o
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	5. The recommended contributions determined in this valuation satisfy the requirements of the
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	contributions are in appared as a with the fall and a sale and a
	contributions are in accordance with the following schedule.
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•	The defined benefit provisions of the Plan have been amended since the date of the previous valuation; however, the amendments had no material impact on the results of our valuation.



FILING REQUIREMENTS to the Dion's financial necition since the manifere collection and December 24, 2042



Section 3. DATA

The valuation was based on data as of December 31, 2017, supplied to us by the Board of Trustees of the Plan. This data is summarized in Appendix C.

We subjected this data to a number of tests of reasonableness and consistency, including the following:

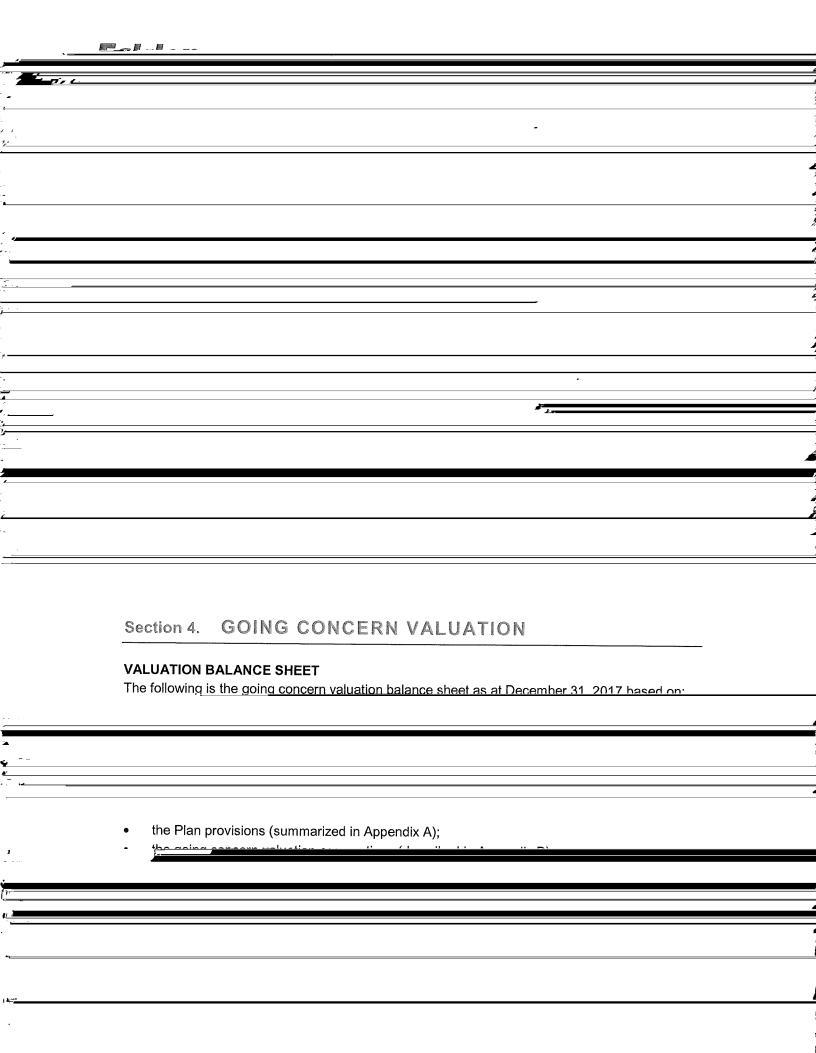
all dates remained unchanged from the data used in the previous actuarial valuation of the Plan;

the form of pension payment did not change (other than resulting from the death of a

we examined the deletions from each of the data files (i.e., the files for active members,

accrued service changed by a reasonable amount;

retired member); and





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		Annual Special					
		Payment	End of				
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Going concern surplus / (unfunded liability) at December 31, 20	16	(\$18,803,000)
University special payments with interest to amortize the unfunded liability		\$2,288,000
Interest on surplus / (unfunded liability) during inter-valuation period at 5.25% per year		(\$987,000)
Expected curplus Unaturaled liability) of December 04, 0047		/# / F F F C C C C C C C C C C C C C C C C
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Plus actuarial gains/(losses) due to experience differing from assumed during the inter-valuation period:		
Gain/(loss) on retirements	(\$968,000)	
Gain/(loss) on mortality	(\$262,000)	
Gain/(loss) on terminationGain/(loss) on salaries and the YMPE	(\$139,000)	
Gain/(loss) attributable to net investment experience	(\$79,000) \$6,757,000	
Gain/(loss) attributable to pension increases	(\$1,040,000)	
Net actuarial experience gain/(loss)	(+ .,0 10,000)	\$4,269,000
Gain/(loss) due to changing the actuarial assumptions:		
= decrees in the valuation interest.		



0	The valuation interest rate was decreased from 5.25 % to 5.00% per year, resulting in a
	loss of \$3,915,000

	 The valuation generational mortality improvement scale was update to MI-2017 from CPM Improvement Scale B (CPM-B).
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	Estimated Dollar Amount	Percentage of Pensionable Earnings
Estimated 2018 pensionable earnings capped by the YMCE	\$8,078,000	
Determination of Additional University Contribution		
Total current service cost for benefits Fatimated member required contributions	\$1,521,000 (**E30 0 <u>00)</u>	18.8%
<u> </u>		
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University current convice cost	(POF4,000	44.70
University current service cost	\$951,000 (\$680,000)	11.7%
Regular University Contributions	(\$680,000)	(8.4%)*
Regular University Contributions University current service cost shortfall	(\$680,000) \$271,000	(8.4%)*
Regular University Contributions University current service cost shortfall Annual allowance for administration expenses	(\$680,000) \$271,000 \$160,000	(8.4%)* 3.3% 2.0%
Regular University Contributions University current service cost shortfall	(\$680,000) \$271,000	(8.4%)*
Regular University Contributions University current service cost shortfall Annual allowance for administration expenses Additional University Contribution	(\$680,000) \$271,000 \$160,000	(8.4%)* 3.3% 2.0%
Regular University Contributions University current service cost shortfall Annual allowance for administration expenses Additional University Contribution University Contribution for Current Service	(\$680,000) \$271,000 \$160,000 \$431,000	(8.4%)* 3.3% 2.0% 5.3%
Regular University Contributions University current service cost shortfall Annual allowance for administration expenses Additional University Contribution University Contribution for Current Service University Regular Contribution	(\$680,000) \$271,000 \$160,000 \$431,000 \$680,000	(8.4%)* 3.3% 2.0% 5.3% 8.4%
Regular University Contributions University current service cost shortfall Annual allowance for administration expenses Additional University Contribution University Contribution for Current Service	(\$680,000) \$271,000 \$160,000 \$431,000	(8.4%)* 3.3% 2.0% 5.3%
Regular University Contributions University current service cost shortfall Annual allowance for administration expenses Additional University Contribution University Contribution for Current Service University Regular Contribution Additional University Contribution	(\$680,000) \$271,000 \$160,000 \$431,000 \$680,000 \$431,000	(8.4%)* 3.3% 2.0% 5.3% 8.4% 5.3%
Regular University Contributions University current service cost shortfall Annual allowance for administration expenses Additional University Contribution University Contribution for Current Service University Regular Contribution Additional University Contribution	(\$680,000) \$271,000 \$160,000 \$431,000 \$680,000 \$431,000	(8.4%)* 3.3% 2.0% 5.3% 8.4% 5.3%
Regular University Contributions University current service cost shortfall Annual allowance for administration expenses Additional University Contribution University Contribution for Current Service University Regular Contribution Additional University Contribution	(\$680,000) \$271,000 \$160,000 \$431,000 \$680,000 \$431,000	(8.4%)* 3.3% 2.0% 5.3% 8.4% 5.3%
Regular University Contributions University current service cost shortfall Annual allowance for administration expenses Additional University Contribution University Contribution for Current Service University Regular Contribution Additional University Contribution	(\$680,000) \$271,000 \$160,000 \$431,000 \$680,000 \$431,000	(8.4%)* 3.3% 2.0% 5.3% 8.4% 5.3%



Section 5. WIND-UP VALUATION

Accordingly, the following approach was used:

	The purpose of the wind up valuation is to determine the financial position of the Diam if it was
	The purpose of the wind-up valuation is to determine the financial position of the Plan if it were
	wound up on the valuation date. The circumstances in which the plan wind-up occurs is that both
	the University of Winnipeg ceases operations and the Plan wind-up giving rise to termination
	benefits to members not eligible for retirement on the wind-up date and retirement benefits to all
	other members. There are no benefits on plan wind-up that were excluded from our valuation.
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	"

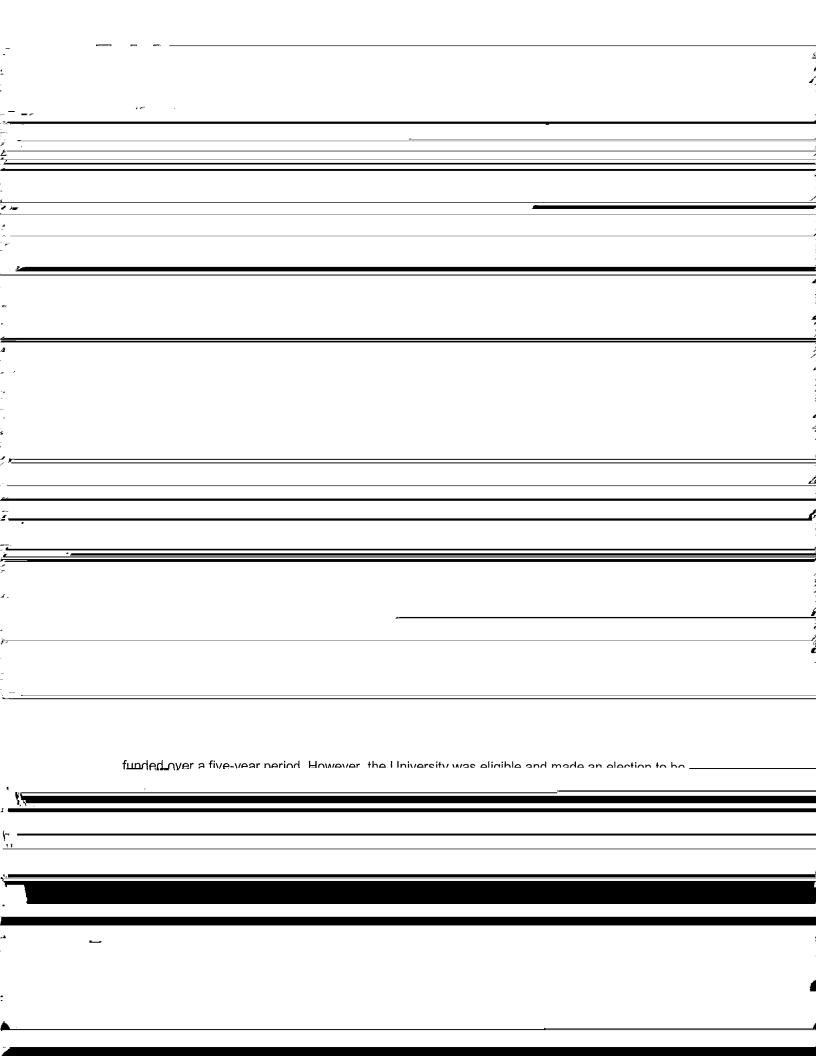


	Wind-up Valuation	12.31.2017	12.31.2016	
T er ek er k alad kallad likuwén en ér ekenyén di kallad	Ψίη<u>ή-</u>μη Δ εεετε	2000 (A)		
	Market value of Plan assets	\$137,241,000	\$131,687,000	
	Allowance for wind-up expenses	(\$200,000)	(\$195,000)	
	Total wind-up assets	\$137 <u>_</u> 041 <u>0</u> 00	¢424 402 000	
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	Wind-up Liabilities			
	Active members	\$61,521,000	\$68,258,000	
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· -	Inactive and deferred	\$1 116 000	¢1 205 000	
	Other (incl. outstanding surplus distribution)	\$1,116,000 \$172,000	\$1,285,000 \$195,000	
	Total wind well-billie-	MAD 204 A00	\$404.000.000	
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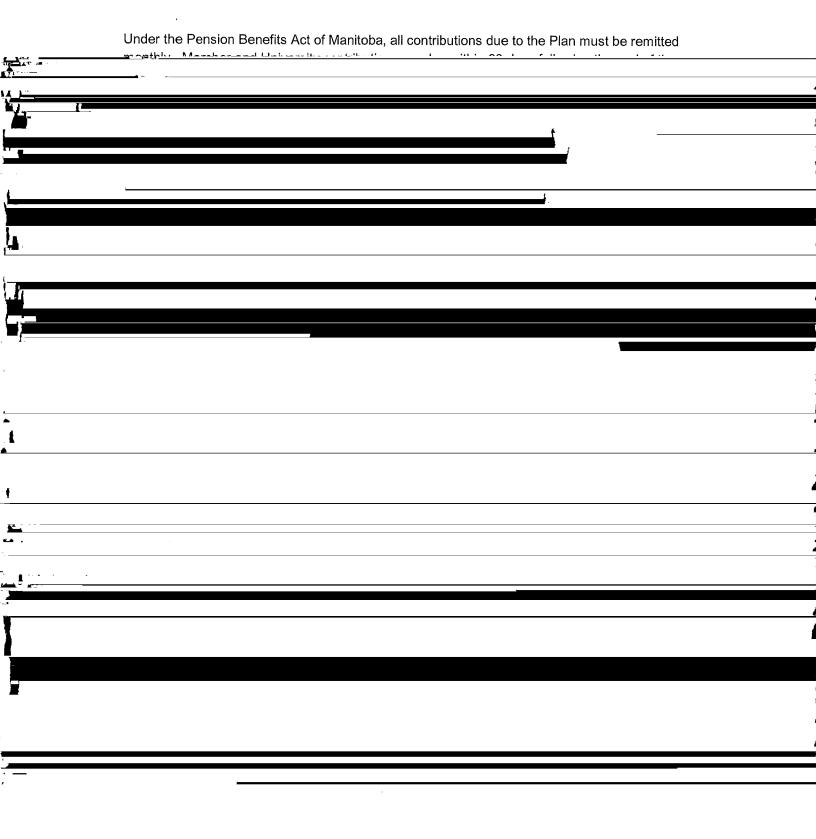
Section 6. SOLVENCY VALUATION

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	The table helow shows the solveney position of the Plan as at December 31, 2017. The
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	circumstances in which the plan wind-up occurs is that both the University of Winnipeg ceases
	circumstances in which the plan wind-up occurs is that both the University of Winnipeg ceases
	operations and the Plan wind-up giving rise to termination benefits to members not eligible for
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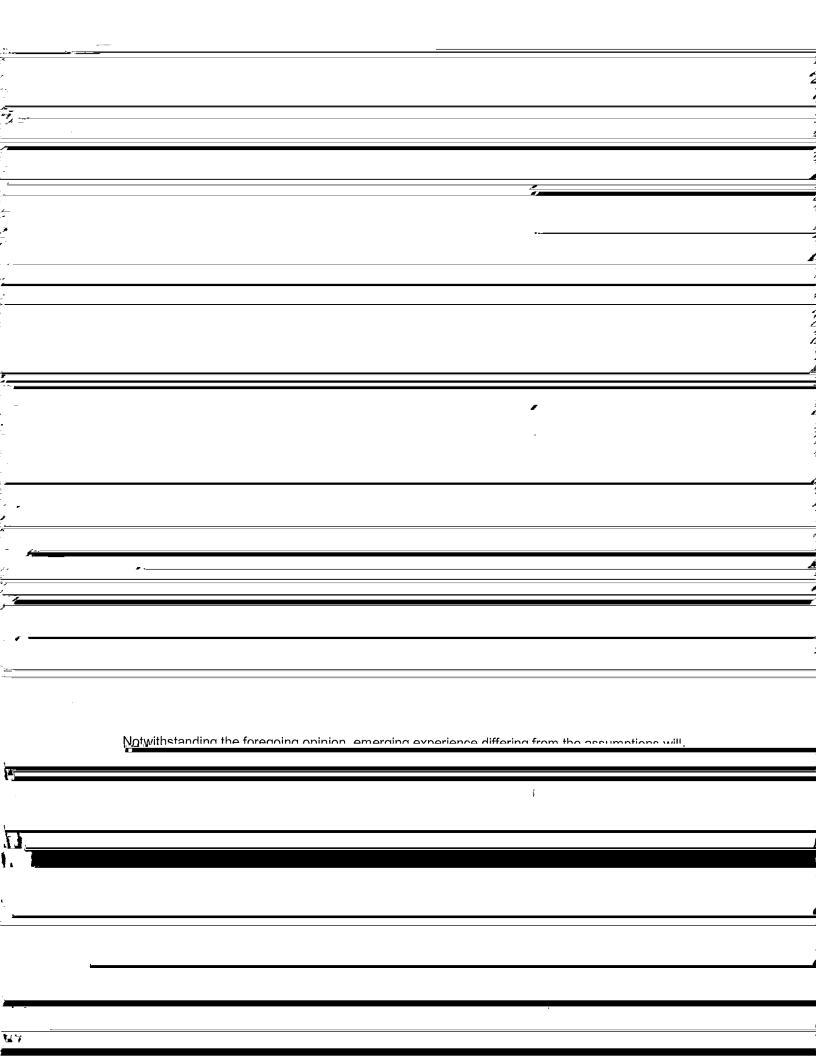
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	Section 8. ACTUARIAL OPINION
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<u> </u>	With respect to the University of Winnipeg Trusteed Pension Plan forming part of the actuarial
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	a. The purpose of this report is to provide actuarial estimates of the funding payments required to be made by the University of Winninea for the period from December 31, 2017 to the date
- -	to be made by the University of Winninea for the period from December 31 2017 to the date
- -	to be made by the University of Winninea for the period from December 31, 2017 to the date
- -	to be made by the University of Winninea for the period from December 31 2017 to the date
7	to be made by the University of Winninea for the period from December 31 2017 to the date
7 #	to be made by the University of Winninea for the period from December 31 2017 to the date





Appendix A. SUMMARY OF PLAN PROVISIONS

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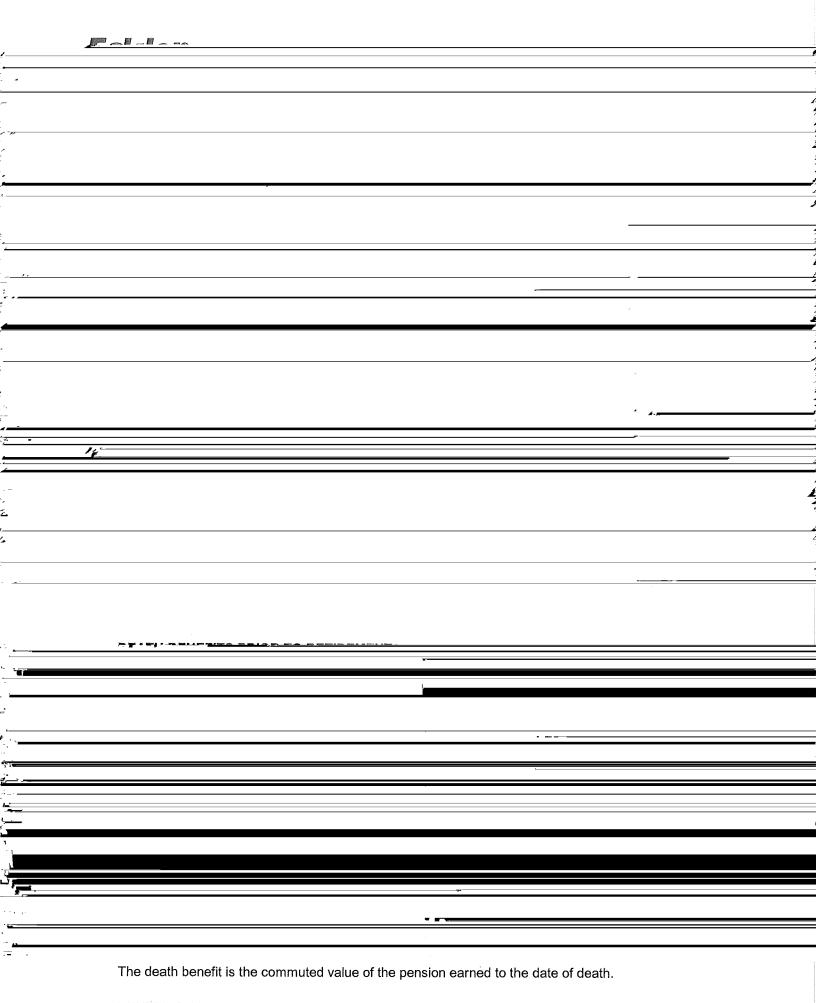
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LATE RETIREMENT

	A member who continues in employment after his normal retirement	date continues to make
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BENEFITS ON TERMINATION OF EMPLOYMENT

A member who terminates employment is entitled to a deferred pension payable from normal retirement date.



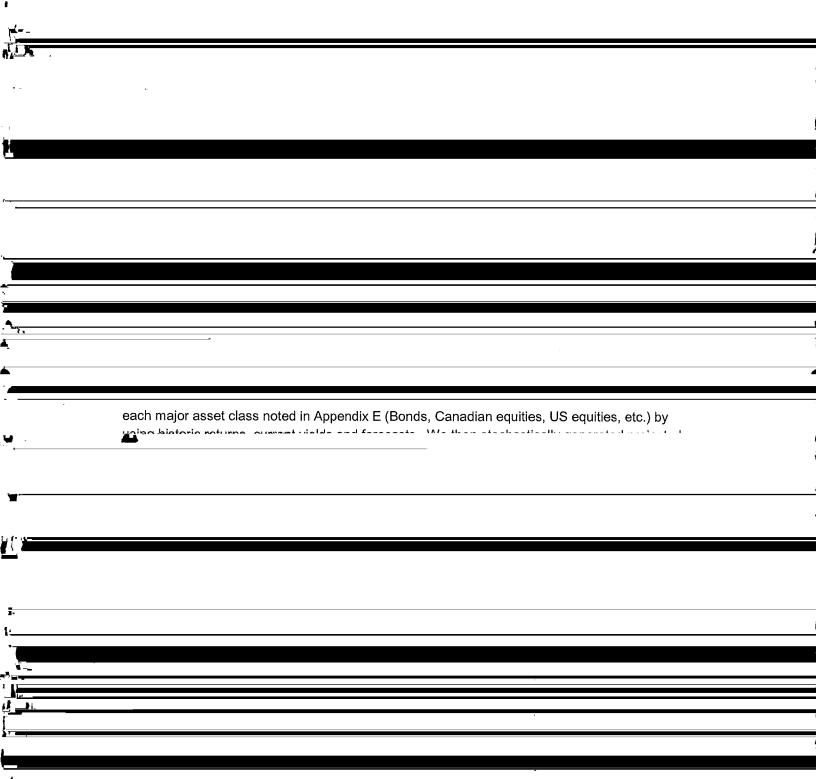
Appendix B. ACTUARIAL ASSUMPTIONS

Going Concern Valuation

These assumptions are the same as those used at the previous valuation, except where noted.

Valuation interest rate:

In order to determine the expected investment return on the investments of the Plan, our model determined expected long term capital market returns, standard deviations and correlations for





		get provided by the Trustees. An implicit allowance for investment management expenses of	
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	Salar	The Response Transfer of the Paris of the Pa	
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	Salar Į	General increase of 3.0% persease. This rate is based as applications for modest	
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-		implied inflation at December 31, 2017 of 2.0% per year based on the difference between long-term nominal and real return Government of Canada bond yields plus real salary increases in the Canadian	
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assumed that the YMPE will increase from its 2018 level of \$55,900 by 3.0% per year. This is consistent with the general salary increase assumption. Pensions in pay are increased annually by an amount equal to the excess return of the fund, net







Appendix C. MEMBERSHIP DATA

	This section provides a sum	nmary of mambarchin data-u	and in the voluetion. The de	to woo
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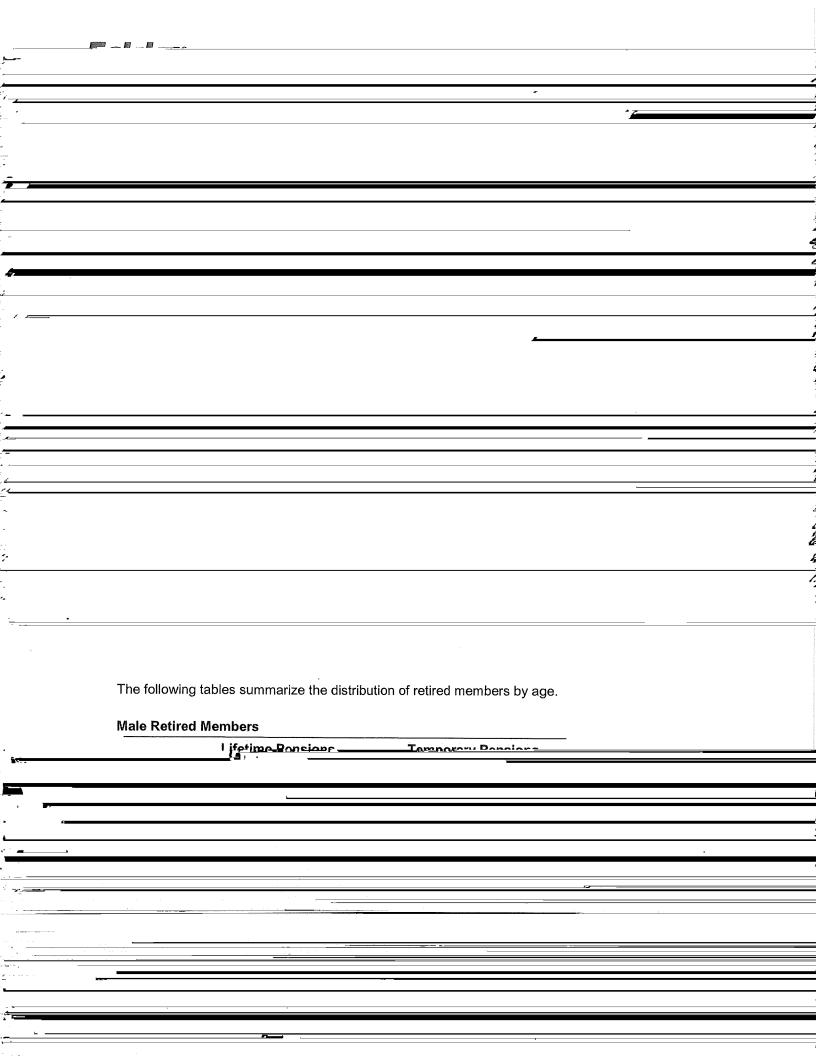
\$101,702

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Distribution of Active Membership

The following table summarizes the distribution of active membership by age and credited service. We have included the count of members in each group and shown their average

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	Age	10 14-	45 40	Cro	edited Serv		2F L T+4=1	
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	40 - 44				_1			
	45 - 49		1 \$58,495 4	1 * 1			3 \$64,034 5	
		*	1 \$58,495 4 \$83,104	1 1	\$52,555		\$64,034 5 \$77,725	
	45 - 49	1	1 \$58,495 4	1 * 1	\$52,555 4		3 \$64,034 5	
	45 - 49	*	1 \$58,495 4 \$83,104	1 1		\$75,774	\$64,034 5 \$77,725	





The following table summarizes the changes in membership since the previous valuation.

	Reconciliation of Members	ship Acti	ive	Days Asses	<u></u>		
# *	At December 31, 2016	63	70	281	38	452	
	Retirements - Pension	(7)	(5)	14	(2)	-	



Appendix D. PLAN ASSETS

Assets of the Plan are held in trust with CIBC Mellon. The funds are invested in a number of pooled funds. We have relied on the audited financial statements for the fund prepared by the University of Winnipeg on behalf of the Board of Trustees for the year ending December 31, 2017.

	2017.		
	The pooled funds are invested in marketable accoming		
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	by the audited financial statements consisted of the fo	ollowing:	
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	Actual Asset Mix at December 31, 2017		
		Market Values	Proportion
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	Fixed Isseems		
	- 1000 1000m c		
	FINOS Jacoma		



FINANCIAL STATEMENTS 2017

Asset Mix Benchmark

Going Concern Funding Ratio	<85%	85% - 90%	90% - 95%	95% - 100%	100% - 105%	>105%
Canadian equities	20.0%	17.5%	15.0%	12.5%	12.5%	10.0%
Clobal aguities	OF 00/	00.004				

Emerging market equities	10.0%	7.5%	5.0%	5.0%	5.0%	5.0%
Real estate	1ቢብ%	10	10 0%	10 00/	40.00/	40.00/

Total Growth Portfolio	75.0%	65.0%	55.0%	50.0%	45.0%	40.0%
Universe/Long bonds	20.0%	30.0%	40.0%	45.0%	50.0%	55.0%
High yield bonds	<u>5.0%</u>	<u>5.0%</u>	<u>5.0%</u>	<u>5.0%</u>	<u>5.0%</u>	<u>5.0%</u>
Total Liability Matching	25.0%	35.0%	45.0%	50.0%	55.0%	60.0%
Total Fund	100%	100%	100%	100%	100%	100%

The constraints on the asset mix are as follows:

Asset Mix Constraints



	Appendix E. CERTIFICATION
	With regard to the December 31, 2017 actuarial report for the defined benefit part of the
- 10	
	knowledge and belief:
	 A copy of the official Plan document and all amendments made to December 31, 2017, were provided to the actuary;
	The mambarable data excelled to the actuary includes a complete and accurate description
<u> </u>	