



THE UNIVERSITY OF BRITISH COLUMBIA

Faculty Pension Plan Year in Review

2016

Annual Report

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Message from the Chair

Dear Members:

We are pleased to present the UBC Faculty Pension Plan's (FPP) Annual Report: *2016 Year in Review*.

On the investment side, 2016 witnessed large differences in returns between the various asset classes in which the UBC FPP is invested. Canadian equity returns were very strong, largely as a result of the bounce-back in energy and metal prices and the good performance of the financial sector. Foreign equities had lower returns as a result of both an appreciating Canadian dollar and their lower overall exposure to the strong energy and mining sectors.

Bond returns were also low in 2016, given the continued low interest rate environment and the U.S. increased interest rates late in the year, which drove down Canadian bond prices. The UBC FPP Balanced Fund's return of 6% for the year was in line with our expected longer term results.

In 2016 a few changes were made to the UBC FPP's investment manager structure. These included;

- i. Removing one of the Canadian equity managers (PCJ), due to lower-ranked performance, and reallocating its assets to the remaining three managers, and
- ii. Adding two new foreign equity mandates, a Global Equity fund and a Global Low Volatility Equity fund, both managed on a passive basis by BlackRock Investments. The mandate for U.S. Equity only (also BlackRock) was terminated.

These changes affected the Balanced Fund, Canadian Equity Fund, and Foreign Equity Fund Options.

We are excited to have launched a new Plan website in July 2016. The new website is more user-friendly and easier to navigate. We have added a number of new features and plan to continue to make improvements to better serve the members.

Dr. Joyce Boon and I were re-appointed to the Board of Trustees for a four-year term, effective January 1, 2017.

Dr. Boon has been an Appointed Trustee since Okanagan University-College joined UBC in 2006, and I have been an Appointed Trustee and Chair of the Board since January 1, 2004.

I look forward to meeting many of you at the Pension Forum on May 10 at the Marine Drive Residence. There will be information booths available and there will also be short presentations from me as UBC FPP Chair and from management.

In closing, I would like to thank the other board members for their exemplary service and commitment over the past year. I would also like to thank the Pension Administration Office staff for their dedicated efforts. I look forward to working with them all in 2017.

Yours truly,

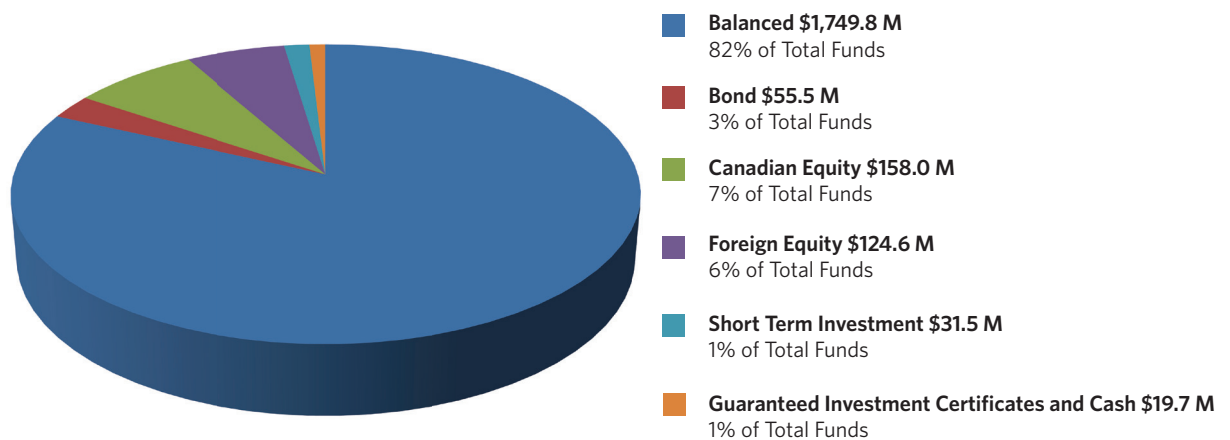


Photo credit: Martin Dee

Financial Statistics

All figures are based on the Plan's audited 2016 Financial Statements which will be available on the UBC FPP website under the **Plan Governance** tab, on the **Annual Reports & Financial Statements** page.

Market Value of the Funds as at December 31, 2016



Market Value of the Funds for last five years

All figures as at December 31

	2012	2013	2014	2015	2016
Balanced Fund	\$1,246,829,399	\$1,432,622,204	\$1,587,262,145	\$1,655,735,859	\$1,749,754,369
Bond Fund	\$78,343,673	\$53,817,936	\$57,369,657	\$50,718,051	\$55,511,439
Canadian Equity Fund	\$106,331,985	\$126,022,267	\$133,862,533	\$125,471,482	\$157,985,095
Foreign Equity Fund	\$45,873,527	\$79,281,556	\$95,616,095	\$126,230,452	\$124,615,404
Short Term Investment Fund	\$51,364,549	\$41,860,713	\$38,246,438	\$34,407,793	\$31,456,062
Guaranteed Investment Certificates*	\$14,980,211	\$14,510,620	\$14,948,646	\$16,616,001	\$19,680,631
Total Market Value of Funds	\$1,543,723,343	\$1,748,115,296	\$1,927,305,514	\$2,009,179,637	\$2,139,003,000

*GICs were introduced into the FPP in May of 2012

Cash Flow for last five years

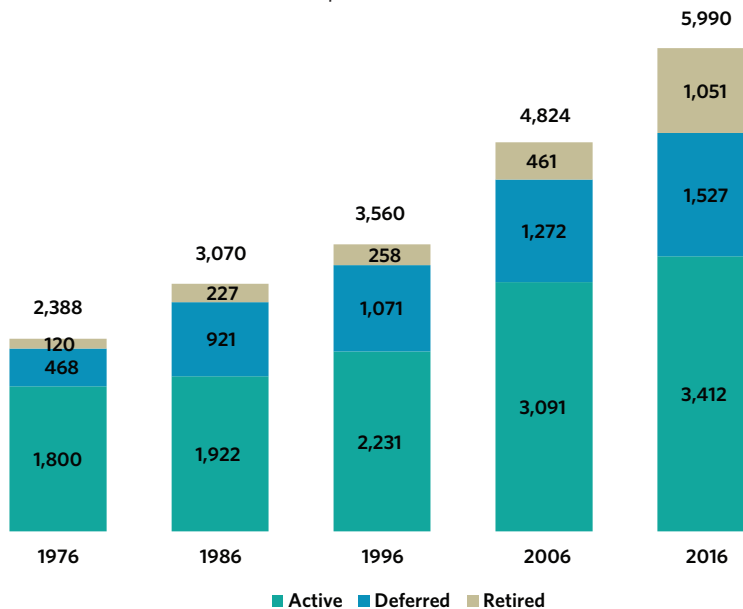
All figures as at December 31

	2012	2013	2014	2015	2016
Cash Flow					
Contributions					
Employer	\$35,227,042	\$38,017,045	\$38,373,562	\$38,901,720	\$41,154,069
Employee	\$17,489,426	\$19,135,063	\$18,997,745	\$19,248,282	\$20,838,337
Voluntary	\$639,088	\$715,204	\$851,428	\$830,213	\$768,187
Transfers-in from other Registered Plans	\$4,370,025	\$8,405,522	\$6,284,112	\$4,695,115	\$8,282,729
Retirement Benefits Paid	\$23,039,693	\$29,042,231	\$37,728,149	\$45,718,463	\$49,089,810
Withdrawals and Transfers-out	\$26,088,753	\$37,020,072	\$34,572,366	\$45,627,952	\$27,371,597

Membership Statistics

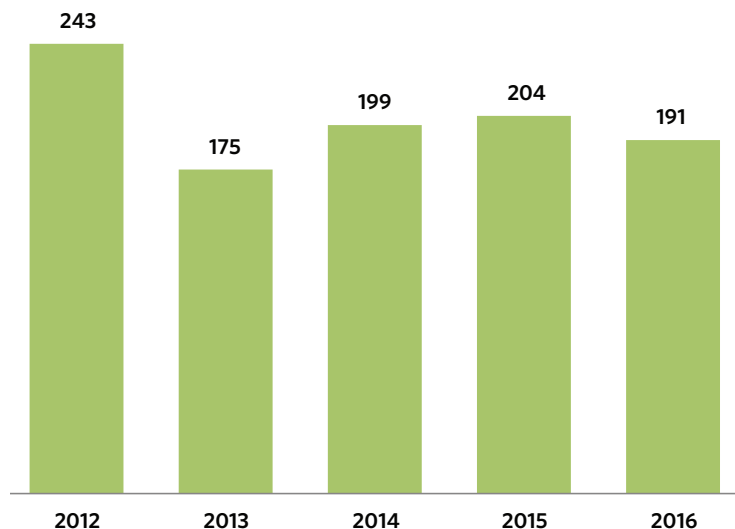
Number of Members as at December 31

The number of retirees in the Plan has more than doubled since 2006. "Active" refers to eligible plan members who are currently employed by UBC or other participating employers, and "Deferred" refers to members who are no longer employed but have chosen to leave their pension funds in the Plan.



New Enrolments as at December 31

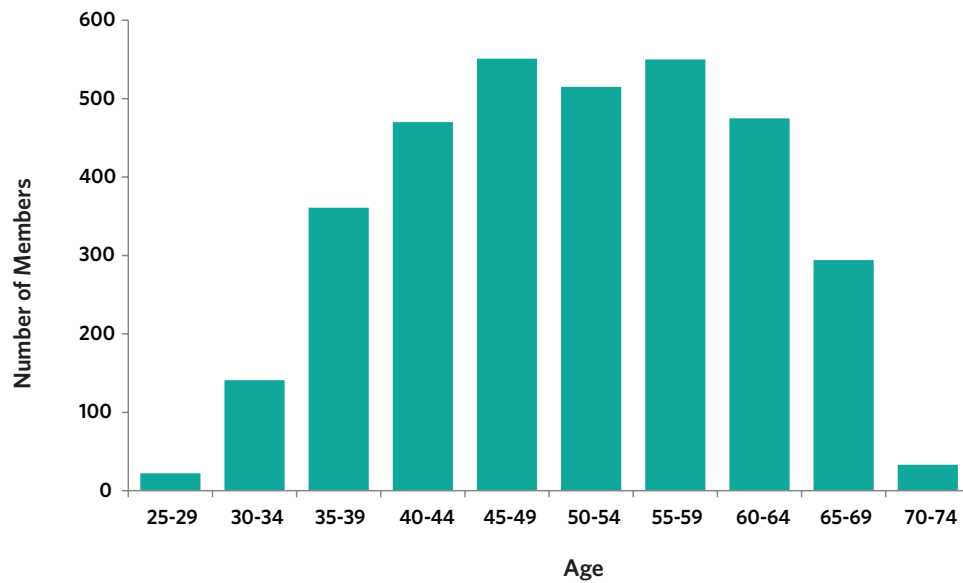
Enrolments into the Plan in 2016 decreased about 6.4% from 2015.



Membership Statistics cont'd

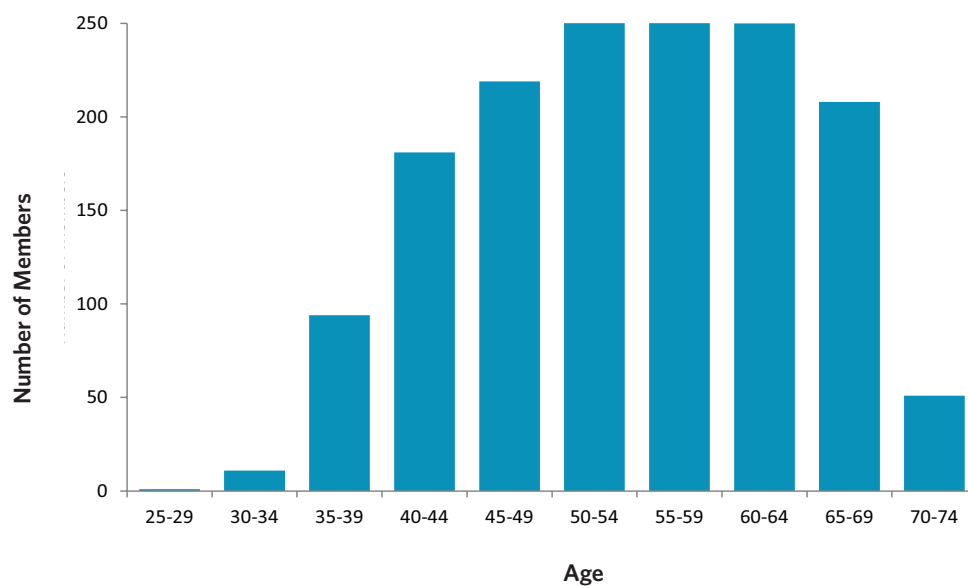
Active Members by Age Group as at December 31, 2016

The average and median age of Active members is 51 years.



Deferred Members by Age Group as at December 31, 2016

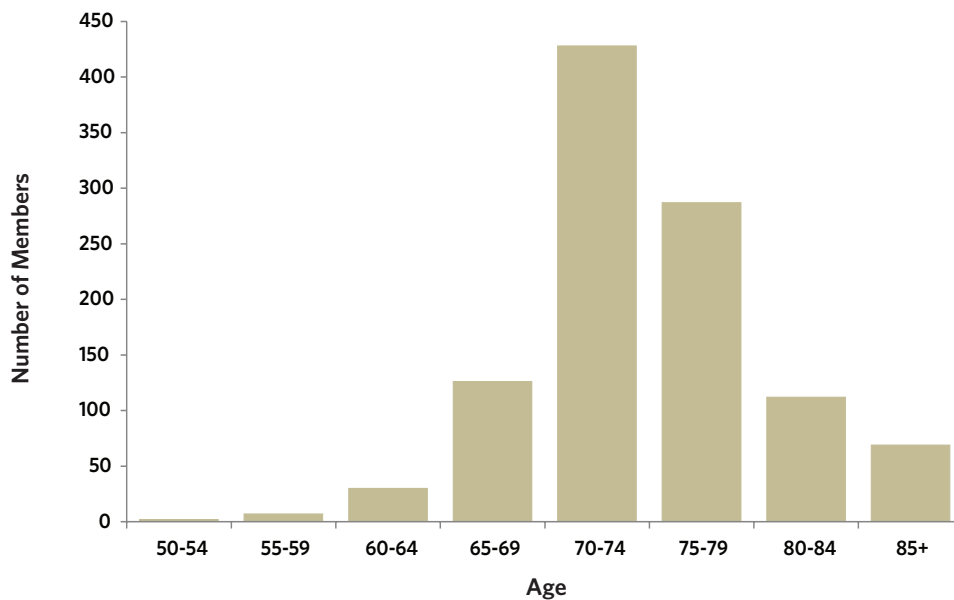
The average and median ages of Deferred members are 54.3 years and 55 years respectively.



Membership Statistics cont'd

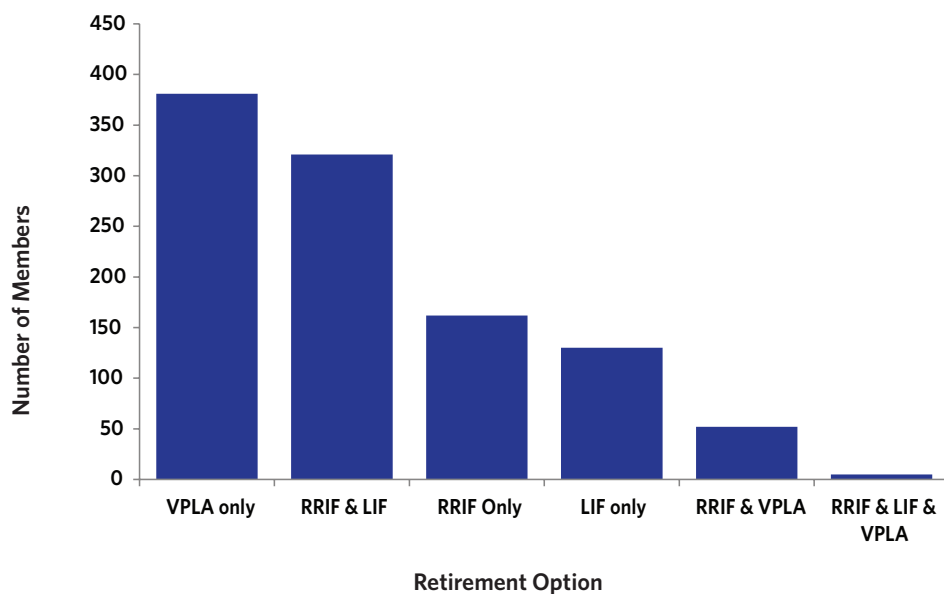
Retired Members by Age as at December 31, 2016

In 2016, there were 1051 retired members who have elected one or more retirement options from the Plan. The average and median ages of Retired members are 74.6 years and 74 years respectively.



Retirement Options elected by Members as at December 31, 2016

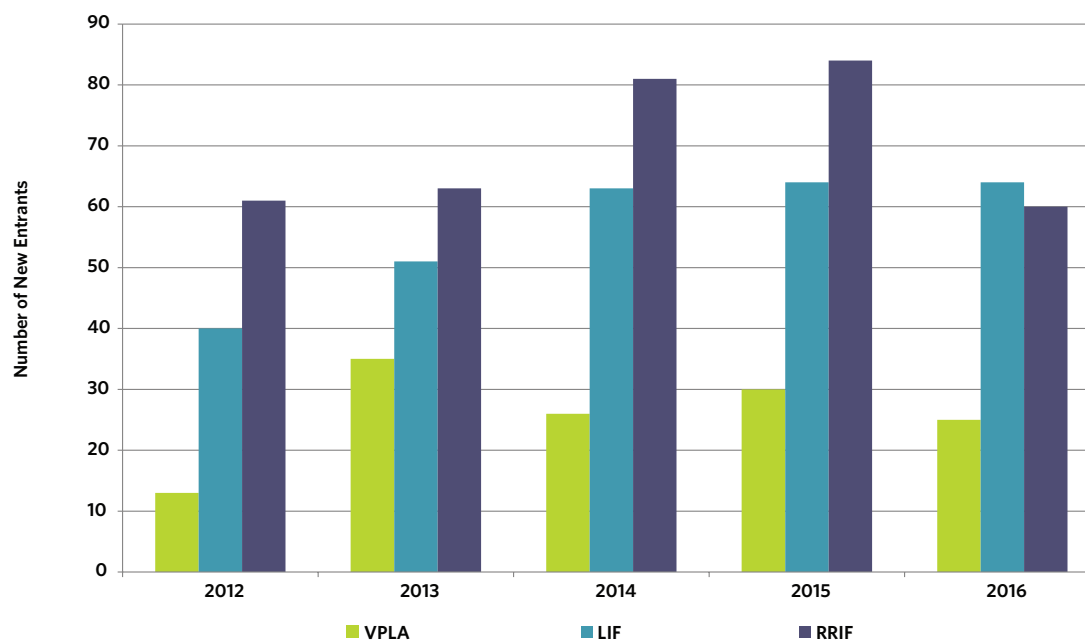
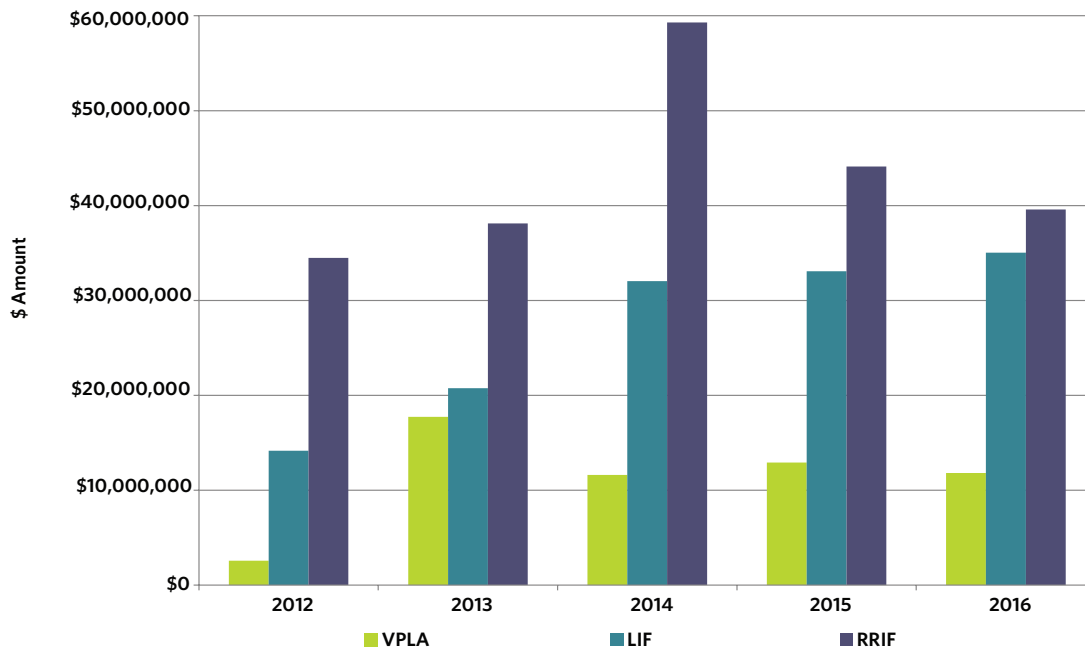
Members may choose to elect more than one retirement option; therefore, some members have a combination of retirement options from the Plan.



Membership Statistics cont'd

Where new retirees put their money

The following two graphs show where new retirees put their money within the UBC FPP retirement options (Variable Payment Life Annuity, LIF-Type Payment, and RRIF-Type Payment).





Market Commentary

The various Funds' gross returns (before fees) are used in the Market Commentary to be consistent with the method in which these returns are compared to other similar funds. The UBC Faculty Pension Plan website provides these returns both before and after fees.

Background

The past year had several key events that affected the markets. On the political side, the Brexit vote in mid-2016 and Trump's election in late 2016 had an effect. On the monetary side, interest rates continued to be very accommodative (i.e. low) with many countries still having negative real interest rates. The U.S. Federal Reserve Bank bucked this trend by increasing interest rates (albeit by a small 0.25%) in the fourth quarter of 2016. With commodities, energy and many metal prices staged strong comebacks from their big drops in 2015. This provided a tailwind for the resource-oriented Canadian market. Global economic growth continued at a slow pace in many developed countries although there appeared to be some renewed optimism among investors on this front by year-end.

Balanced Fund

Overall in 2016, the Balanced Fund had a return of 6.1% bringing the ten-year return to a respectable 6.1% per annum. Of particular strength in 2016 was the Canadian equity component, which comprises 20% of the Fund, and returned 21.3% for the year. This was a significant turnaround from this component's performance of -6.8% in 2015. Bond returns were low at 1.8% as interest rates remained very low. Later in 2016, there was fear of potential increases in interest rates which hurt bond prices. Foreign equities, including both U.S. and developed non-North American markets, returned just 3.2% in 2016 after returning almost 20% in 2015. The Real Estate portion of the Fund (i.e. 10% policy weighting) performed reasonably well again at 5.7% for the year. This return was mainly derived from the leasing income of these commercial properties as any capital gains were quite low in 2016. The return from the Real Estate component of the Fund has been a very respectable 7.8% per annum over the last 10 years. During 2016, there were changes made to both the Canadian and Foreign equity investment managers as described under those funds below.

The Balanced Fund's one-year performance of 6.1% ranked in the fourth quartile relative to a peer comparison of other similar balanced funds. The Fund often underperforms other balanced funds when stock returns are high given the more conservative asset mix profile of the Balanced Fund (i.e. less equity weighting at 50% on average than its peers). The higher percentage weighting to non-Canadian equity than many of its peers also explained some of this relative underperformance given the lower returns in foreign equities. Over a ten-year period, the Fund's strong return performance versus other similar balanced funds has ranked in the second quartile while also ranking in the "least risky" quartile compared to its peers.

Bond Fund

The Bond Fund had a one-year return of 1.8% as bonds experienced another year of low returns in 2016. The Bank of Canada left their Overnight Lending Rate at 0.5% throughout the year. At the end of 2016, a ten-year Government of Canada bond was yielding only 1.7%. Longer term, the Fund's gross return is 5.1% per annum over the last ten years with a low level of volatility. The U.S. Federal Reserve raised interest rates by 0.25% in the fourth quarter and indicated more increases were very likely in 2017. This hurt bond prices with the fourth quarter return of -3.4% being one of the weakest quarterly returns in over 20 years. Many foreign countries continue to have negative real interest rates as their central banks strive to stimulate economic demand and spending.

Of our two active bond managers with mandates which allow a limited amount of investing in bonds outside of Canada, both managers significantly outperformed their index benchmarks. Over longer periods (five and ten years), both of these managers have been exceeding the benchmark return by a material amount (0.5% to 0.7% per annum) while adding a further level of diversification to the Fund. These two active managers now represent over half of the weighting of the Bond Fund. The Fund's 20% allocation to Real Return Bonds (RRBs) helped overall results somewhat in 2016 as they returned 2.8% for the year, or roughly 1% above the nominal bond index benchmark. The fourth bond manager has a passive mandate and they matched the bond index return of 1.7% for the year.

The Bond Fund's performance relative to other similar bond funds has been below average (i.e. fourth quartile) over the last five years and second quartile over ten years. The risk level has been somewhat higher than the average bond fund over the last ten years largely due to the holding in RRBs which tend to have more volatile returns than nominal bonds. These RRBs are being held primarily as protection against potentially rising inflation rates.

Canadian Equity Fund

The Canadian Equity Fund posted a very strong return of 21.2% in 2016 and has returned 6.3% per annum over the past ten years. The Canadian stock market index remains heavily weighted in commodity stocks (i.e. energy and mining companies) whose high returns largely explained the strong results. Also, the large Financial sector (35% weighting in the stock index) performed very well with a 24% increase in 2016.

The large increase in both metal and energy prices, especially oil prices which were up very significantly for the year, were the main reasons for the strong return in 2016. The Energy sector makes up 21% of the market index and this sector's return for the year was 35%. Mining stocks also had a strong year as many metal prices had large increases leading to the Materials sector of the index rising 41% for the year. This was the strongest performing sector after being down over 20% in 2015.

The Fund is managed by three different investment firms, each handling approximately one third of the Fund after one manager was terminated in 2016 due to underperformance. One of the three managers in the Fund significantly outperformed the stock index benchmark for the year while the other two managers failed to achieve the index return. Over ten years, the Fund's return is 1.6% per annum above the index benchmark return, reflecting the high value added from all three of our active managers.

Over a ten-year timeframe, the Fund's performance ranks high in the second quartile compared to similar Canadian equity funds, while having a risk profile that is near the average peer fund. This is a result largely due to the fund's high level of diversification by manager and investment style.

Market Commentary cont'd

Foreign Equity Fund

The Foreign Equity Fund had a low return of 3.2% in 2016, after being up 19.6% in 2015. The longer-term result for this Fund over ten years is 5.7% per annum, which includes the very low results from the global financial crisis in 2008. The Fund's manager structure was revised somewhat in 2016. Two new mandates were added (i.e. Global equity and Global Low Volatility equity) both managed on a passive basis. These two new mandates represent one third of the fund with the other two active global managers representing the other two thirds. Overall the Fund was weighted roughly 58% in U.S. stocks, 39% in non-North American stocks (e.g. U.K., Europe, and Japan) and 3% in Emerging Market stocks when the four global managers' positions were combined.

The appreciating Canadian dollar against the currencies of most developed countries hurt the returns of the Fund's foreign equities for the year when these returns are converted back into the Canadian dollar, given we do not hedge our currency exposure. For example, the MSCI World index returned 9% in Local currencies whereas the return was only 4.3% when converted back to Canadian dollars. In particular, the Canadian dollar appreciated strongly against the U.K. pound (by 23%) and the Euro (by 6%) in 2016.

The Fund's strong five-year returns (18% per annum) ranks high in the first quartile while the fund's risk profile is just a little higher than average in comparison to its peer group of foreign equity funds. Since the significant restructuring of this Fund about seven years ago, these relative results have continued to show strong improvement. The ten-year return at 5.7% is about average as is its risk level versus its peer group of foreign equity funds.

Short Term Investment Fund (STIF)

The STIF's return in 2016 was 0.7%, reflecting the continued very low interest rate environment throughout the year. The Bank of Canada's Overnight Rate remained the same in 2016 at 0.5%. The Fund only invests in very high quality fixed income instruments with very short (i.e. typically 45 days or less) maturities. The fund held 32% in Federal bonds, 25% in Provincial bonds and 43% in high quality Corporate bonds at the end of 2016. Investment management of this Fund was switched to Sun Life Financial in late 2015, largely for improving operational efficiency.

Fund Rates of Return

The following table provides performance results for periods ending December 31, 2016. The absolute returns are compared with returns of composite indices, which reflect the asset allocation of each fund. Relative rankings indicate the investment fund's percentile standing within a universe of comparable funds.

	1 year	5 years	10 years	Relative Ranking		
	%	%	%	(1 st percentile is best ranking)		
				1 year	5 years	10 years
Balanced Fund - gross ¹	6.05	9.55	6.10	80	48	39
Balanced Fund - net ²	5.62	9.03	5.58			
Composite Index 1 ³	6.33	8.39	5.47			
Bond Fund - gross	1.75	3.05	5.09	80	92	35
Bond Fund - net	1.43	2.73	4.76			
Composite Index 2 ⁴	1.90	2.87	4.88			
Canadian Equity Fund - gross	21.25	10.93	6.30	20	44	30
Canadian Equity Fund - net	20.78	10.47	5.85			
Composite Index 3 ⁵	21.09	8.38	4.73			
Foreign Equity Fund - gross	3.18	17.96	5.71	65	19	48
Foreign Equity Fund - net	2.74	17.30	5.12			
Composite Index 4 ⁶	3.03	17.23	5.98			
Short Term Investment Fund - gross	0.67	1.10	1.53	56	21	63
Short Term Investment Fund - net	0.48	0.93	1.37			
Composite Index 5 ⁷	0.51	0.81	1.39			

Average annual rates of return are compounded monthly. Past performance is not necessarily indicative of future results.

¹ The Gross rate of return is the rate of return of the fund before investment management and administration fees have been reflected. However, the return is net of the investment managers' operating expenses.

² The Net rate of return is the rate of return of the fund after all expenses have been reflected.

³ **Composite Index 1:** 32% FT TMX Bond Universe, 13.3% S&P/TSX, 6.7% S&P TSX Capped, 5% MSCI ACWI ex Canada, 20% MSCI World ex Canada, 5% MSCI World ex Canada Minimum Volatility, 10% CPI + 4%, 8% FT TMX Real Return Bonds

⁴ **Composite Index 2:** 80% FT TMX Bond Universe, 20% FT TMX Real Return Bonds

⁵ **Composite Index 3:** 66.7% S&P/TSX, 33.3% S&P/TSX Capped

⁶ **Composite Index 4:** 66% MSCI World ex Canada, 17% MSCI ACWI ex Canada, 17% MSCI World ex Canada Minimum Volatility

⁷ **Composite Index 5:** FT TMX 91-Day TB Index

Investment Managers' Rates of Return

The following table details each manager's performance for the periods ending December 31, 2016. The trustees and management monitor the performance of each of the managers and meet with them regularly to review their performance. Measured against comparable managers, each manager's relative performance is expected to rank in the top third. The managers are also expected to achieve returns greater than their index-based benchmark over a four-year period.

Asset Class	Manager	Gross Rates of Return (%) ¹			
		For periods ending December 31, 2016			
	Index-based Benchmark	1 year	2 years	3 years	4 years
Canadian Equity ²					
	Connor, Clark & Lunn Q-Growth Fund	17.32	5.81	7.70	11.87
	S&P/TSX Composite TR	21.08	5.36	7.06	8.52
	Guardian Capital LP	18.22	6.77	8.86	10.10
	Leith Wheeler Investment Counsel	30.73	7.53	8.05	11.99
	S&P/TSX Capped Composite Index	21.09	5.36	7.07	8.52
Non-Canadian Equity ³					
	MFS	4.57	11.37	12.31	18.22
	JP Morgan	2.23	10.45	11.76	17.66
	MSCI World ex Canada Net (CAD) Index	3.27	11.34	12.40	17.96
	BlackRock MSCI ACWI ex Canada Index	n/a	n/a	n/a	n/a
	MSCI ACWI ex Canada Index	n/a	n/a	n/a	n/a
	BlackRock MSCI World ex Canada Minimum Volatility Index	n/a	n/a	n/a	n/a
	MSCI World ex Canada Minimum Volatility (CAD) Index	n/a	n/a	n/a	n/a

continued on next page

¹ The gross returns reported are time-weighted annualized returns. It is not possible to simply sum the returns for individual managers to obtain a fund return.

² As of June 2016, PCJ Investment Counsel was terminated.

³ As of October 1, 2016, two new foreign equity mandates were implemented and the U.S. equity mandate was terminated.

Investment Managers' Rates of Return cont'd

Asset Class	Gross Rates of Return (%) ¹				
	Manager	For periods ending December 31, 2016			
		Index-based Benchmark	1 year	2 years	3 years
Fixed Income					
	AllianceBernstein	3.38	3.31	5.29	3.61
	PIMCO Canada Corp.	2.42	3.44	5.01	3.60
	SSGA/Windwise Canadian Universe Bond Index	1.71	2.60	4.63	3.13
	FTSE TMX Canada Universe Bond	1.66	2.59	4.61	3.13
	BlackRock Inc. - Real Return Bond Fund	2.84	2.76	6.15	0.98
	FTSE TMX Canada Real Return Bond	2.86	2.83	6.17	0.99
Real Estate					
	bcIMC - Realpool	5.28	5.30	6.23	6.64
	Bentall Kennedy	5.92	5.92	5.36	6.09
	Consumer Price Index + 4%	5.50	5.55	5.52	5.45
Money Market					
	Sun Life Financial Money Market	0.68	0.81	0.94	1.02
	FTSE TMX Canada Cdn 91-Day Treasury Bill	0.51	0.57	0.68	0.76

Plan Overview

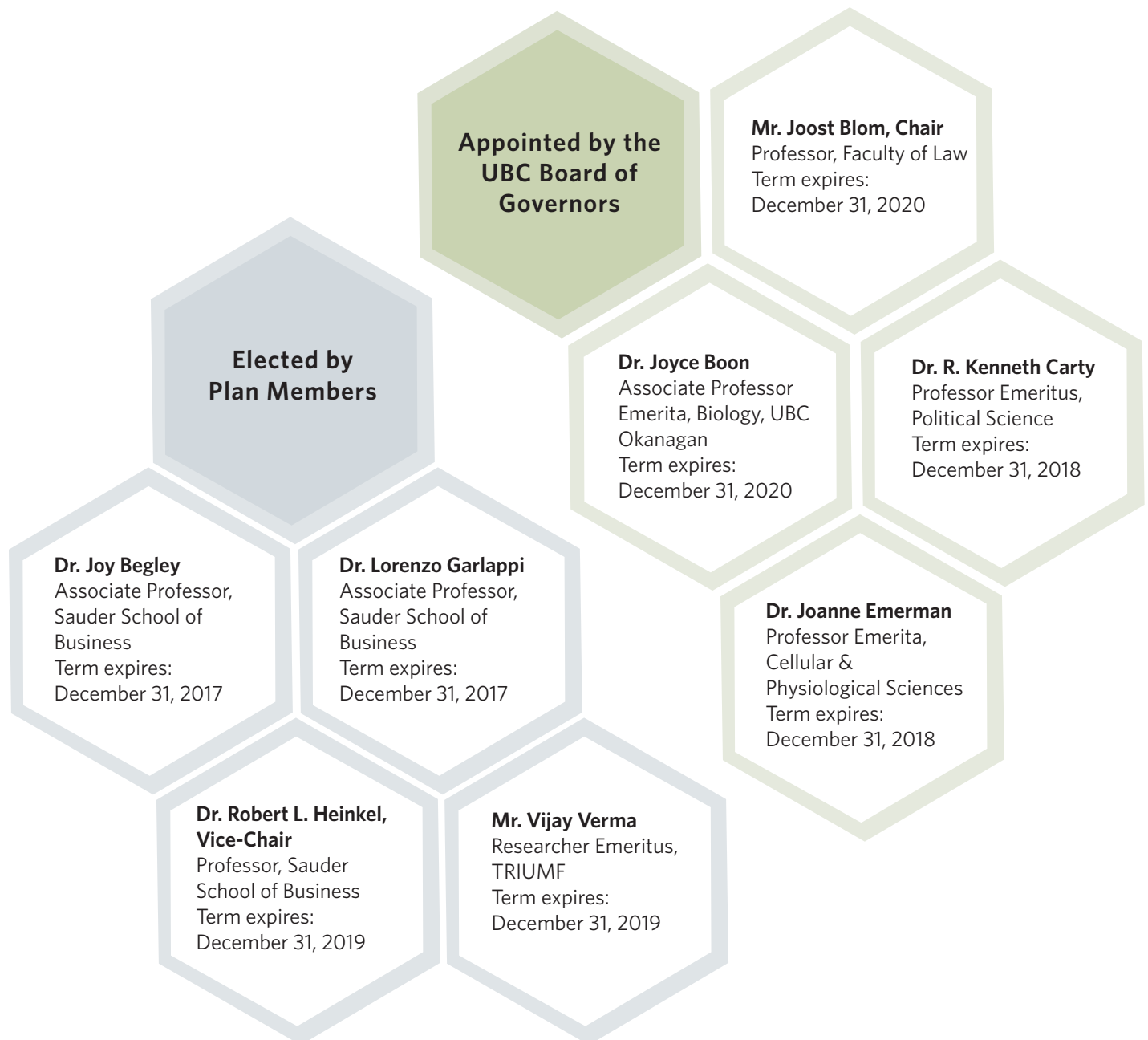
The University of British Columbia Faculty Pension Plan, approved by Canada Revenue Agency (CRA), became effective April 1, 1967 to provide retirement, termination and death benefits for members of the faculty and administrative executive staff of the University.

As a defined contribution (money purchase) pension plan, both plan members and the University or other participating employers make contributions to the member's account, which together with investment earnings, is ultimately used to provide benefits at retirement, at termination of the member's employment, or upon the death of the member. The pension plan is registered federally under the Income Tax Act, Registration No. 0211987 and provincially under the British Columbia Pension Benefits Standards Act, Registration No. P085435.

Board of Trustees

as at January 1, 2017

The UBC Faculty Pension Plan is administered by a pension board composed of eight trustees. Four trustees are elected by and from the members of the Plan and four are appointed by the University. The responsibilities of the Board are outlined in detail in the Plan's Governance Policy, available on the Plan's website.





Management & Staff

Orla Cousineau
Executive Director,
Pensions

Mike Leslie
Executive Director,
Investments

Debbie Wilson
Associate Director,
Pensions

Diana Iampietro
Manager, Faculty
Pension Plan

Lorraine Heseltine
Member Services
Specialist

Lily Lee
Member Services
Associate

Louise Mah
Pension Clerk

Maricres De Leon
Pension Plan
Accountant

GV Fragante
Systems Analyst

Helena Huynh
Systems Analyst

Kathy Pang
Communications
Manager

Chelsey Maher
Communications
Assistant

Claudia Chan
Office Administrator

Shirley Lim
Project Coordinator

Service Providers

 **Aon Hewitt:** Actuary

 **Deloitte:** Auditors

 **Sun Life Financial:** Record Keeper and Custodian