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UBC FACULTY PENSION PLAN | Third Quarter 2011 Edition

Investing for the long term: Asset Allocation Choices



One of the challenges of investing in a defined contribution plan is that you, the member, direct how to invest your monies. The decision on how to invest vour assets will have a very significant impact on the amount of money you ultimately accumulate in your pension plan for retirement. This article examines some of the key concepts that are important in making your decision on what asset allocation is most appropriate for you. This includes the risk and return trade-offs that apply with different asset allocation choices using the fund options provided by the UBC Faculty Pension Plan.

WHAT IS PENSION PLAN "INVESTMENT RISK"?

Most people intuitively define "risk" as the possibility of losing capital or of having their pension fund balance fall. But is this the key risk for a pension plan member in the longer term?

Typically the key risk for a pension plan member is not having sufficient assets at retirement to afford the lifestyle they desire. Your goal should be to balance risk and return to maximize your assets at retirement.

THE ASSET ALLOCATION DECISION

As a Faculty Pension Plan member, your key decision is where to invest within the fund options made available by the Plan. In doing so, you will need to assess:

- Your key investment risks (e.g. negative returns, inadequate retirement income).
- How much risk you can take (a spousal pension or other sources of income may affect your risk profile).
- The level of risk you are comfortable with.

Key Concepts

- If you do not take on any risk, the chance of having sufficient assets at retirement significantly decreases.
- By investing in riskier assets, the long-term expected return is higher but there is no guarantee you will earn the higher return.
- Investing in the stock market may be a bumpy ride, but over the longer run has significantly outperformed other investments.
- As your personal circumstances change (e.g. aging, risk tolerance, other resources) it may be appropriate to alter your asset allocation.

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This material has been compiled by the University of British Columbia Faculty Pension Plan Administration Office from information provided to them and is believed to be correct. If there is any inconsistency between the contents of the newsletter and the pension plan trust or legislation, the trust and legislation will prevail.



Also, if retirement is a long way off, then short-term capital losses may be of less concern because you will have a longer timeframe to recover from any losses. By investing in assets that are expected to have higher returns (i.e. riskier assets), especially at the beginning of your career, it is more likely that you will have sufficient assets in retirement. However, as you approach the end of your career, you might consider reducing risk in order to lessen the impact that a downturn in the stock market would have on your retirement income. This is the concept of "life cycle investing," which adjusts risk according to your age as discussed below.

RISK AND REWARD

With any investment, it is important to understand the expected risks and rewards. In general, the expectation is that taking on more risk will lead to a higher return. "Risk" here is defined as the volatility of returns, or how wide a range of possible returns there may be in any one time period.

In Table 1, we show the 50-year history of returns of the Canadian stock market, as represented by the S&P/TSX index, as well as the history of returns of Canadian Treasury Bills (T-Bills).

Table 1: 50-year history of returns

50 Years (1961-2010)							
	Average Annual Returns	Number of Years of Negative Returns					
Canadian Stocks (TSX)	10.1%	14 (28%)					
T-Bills	6.6%	0 (0%)					
Difference	3.5%	14 (28%)					

Table 1 illustrates the difference between a riskier asset class (i.e. Canadian Stocks) and a less risky investment, Treasury Bills, which are representative of the returns of the Short Term Investment Fund. As shown, there is a significantly higher return (by 3.5% per annum) with the riskier asset class. However, this asset class has produced negative annual returns in 28% of the calendar years, whereas the T-bills had no negative returns in any one calendar year.

It is important to be aware that over time the riskier asset classes will produce more volatile returns (i.e. a wider dispersion of both positive and negative returns). Even though the long-term results show the higher returns from stocks, there can be periods where stocks underperform the less risky asset classes.

Ultimately, a less risky investment like the Short Term Investment Fund may be a reasonable investment for someone greatly concerned about losing their capital. However, in the longer run, a less risky investment has a materially lower expected return. This lower return (compared to stocks) would lead to a much lower amount of accumulated capital for your retirement.

Investing conservatively may seem an attractive option, but less risky assets typically have a lower expected return. By investing conservatively there may be a lower chance of experiencing negative returns but this may also increase the chance of having insufficient assets at retirement.

Some Observations

- Investing in the stock market can and should be expected to be bumpy, and negative annual returns are a possibility.
- Even over a median time period (five years) there are a number of cases where the stock market did not outperform Treasury Bills.
- Over the longer period, investing in the stock market led to higher balances.
- In order to have a reasonable chance of earning a higher return, you need to take on some risk; however, there is no guarantee that you will earn a higher return.



INVESTMENT FUND OPTIONS

The Faculty Pension Plan offers the following investment options:

- Balanced Fund
- Canadian Equity Fund
- Foreign Equity Fund
- Bond Fund
- Short Term Investment Fund
- A soon-to-be introduced Guaranteed Investment Certificate (GIC) option

Members can find detailed descriptions of the current FPP fund options at www.pensions.ubc.ca/faculty/investment. html.

The policy asset mix of the Balanced Fund is shown on the right in Table 2. The Balanced Fund asset mix's objective is to provide a typical member with a target retirement income of 67% of final year's income, after 30 years of investment in the fund. It was also designed to lessen the short-term volatility that a pure equity fund would have and has a shorter-term objective of minimizing the probability of a negative annualized three-year return. Consequently, the Balanced Fund has a mix of different asset classes, some that emphasize

LIFE CYCLE INVESTING

One common approach to help determine an appropriate asset allocation is "life-cycle" investing. Under this approach, the allocation to riskier assets is higher in your earlier years because there is a longer time to recover from losses. This allocation to riskier assets reduces as you age because there are fewer years remaining to offset a poor return close to your retirement date. Table 3 provides an example, with returns

Table	3: Exampl	e of asset	t mixes for	Life Cycle	Investing

Table 2: Policy Asset Mix of the Balanced Fund

Asset Class	% Allocation in Balanced Fund
Canadian Equities	20%
Foreign Equities	27%
Absolute Return Hedge Fund	3%
Government, Corporate, and Real Return Bonds	40%
Real Estate	10%

long-term return, and others that balance the volatility of the riskier asset classes.

Many members have chosen to invest some or all of their assets in the Balanced Fund, with its diversified mix of risky and risk-balanced assets. Younger members may decide to invest a greater portion of their assets in the riskier asset classes (the Canadian Equity Fund and the Foreign Equity Fund) that are expected to perform better over the long term. Older members might be more comfortable investing a larger portion of their assets in some of the less risky fund options (e.g. Bond Fund, Short Term Investment Fund, GIC option) as they near retirement.

based on a combination of actual Pension Plan and index returns.

The lifecycle asset mix options in Table 3 may be reasonable for some members but others may want to take on more risk (for example, they may have other assets outside of the Plan) or take on less risk, simply because they are more cautious.

hable 5. Example of asset mixes for the eyele investing							
Age Range	Asset Mix		Equity & Real Estate % ¹	Annualized Return over past 50 years	# of years of negative rates of return in the past 50 years		
20 - 40	Balanced Canadian Equity Foreign Equity	50% 25% 25%	80% (75/5)	9.7%	10		
40 - 50	Balanced Canadian Equity Foreign Equity	70% 15% 15%	72% (65/7)	9.6%	10		
50 - 60	Balanced Bond	90% 10%	54% (45/9)	9.2%	10		
Over 60	Balanced Bond Short Term*	60% 30% 10%	36% (30/6)	8.7%	6		

¹ The figures in the brackets below the total percentage are the Equity and Real Estate percentages, e.g. Age Range 20-40, the 80% total is 75% Equity and 5% Real Estate.

* When the new GIC Fund option is introduced some members may wish to consider using GICs for a portion of this short-term allocation.

Table 4 shows some potential asset mixes to consider based on a range of risk profiles.

	Less Risk			Lifecyle ee Table 3)		More risk			
Age	Asset Mix		Equity & Real Estate % ¹	Asset Mix		Equity & Real Estate % ¹	Asset Mix		Equity & Real Estate % ¹
20-40	Balanced Canadian Equity Foreign Equity	70% 15% 15%	72% (65/7)	Balanced Canadian Equity Foreign Equity	50% 25% 25%	80% (75/5)	Balanced Canadian Equity Foreign Equity	25% 37.5% 37.5%	90% (87.5/2.5)
40-50	Balanced Bond	90% 10%	54% (45/9)	Balanced Canadian Equity Foreign Equity	70% 15% 15%	72% (65/7)	Balanced Canadian Equity Foreign Equity	50% 25% 25%	80% (75/5)
50-60	Balanced Bond Short Term*	60% 30% 10%	36% (30/6)	Balanced Bond	90% 10%	54% (45/9)	Balanced Canadian Equity Foreign Equity	70% 15% 15%	72% (65/7)
60+	Balanced Bond Short Term*	50% 30% 20%	30% (25/5)	Balanced Bond Short Term*	60% 30% 10%	36% (30/6)	Balanced Bond	90% 10%	54% (45/9)

Table 4: Differing Risk T	olerances applied to a	a Lifecycle Investment Strategy

¹ The figures in the brackets below the total percentage is the Equity and Real Estate percentages, e.g. with the Lifecycle Age Range 20-40, the 80% total is 75% Equity and 5% Real Estate.

* When the new GIC Fund option is introduced some members may wish to consider using GICs for a portion of this short-term allocation.

When looking at the sample asset mixes in Table 4, it is important to note that the "less risky" asset mixes are not necessarily "low risk." These asset mixes take into account that at younger ages there is a greater capacity to take investment risk, and that the risk of having insufficient assets at retirement is lower if the mixes are not too conservative.

You may decide on an asset mix based on your current risk profile. Remember though that your attitudes to risk, or

your risk profile, will likely change over time. If you set your asset mix based on your current risk profile, it is important to reassess your risk profile and asset mix from time to time.

HISTORICAL RETURNS OF THE UBC FACULTY PENSION PLAN

Table 5 shows the rates of return of the five existing FPP funds over different time periods. This history is based on the actual FPP funds since their inception in 1994 (Balanced Fund was incepted in 1967) and has been estimated using market index rates of return prior to this date.

Table 5: Rates of F	Return for	FPP Funds
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Annualized Returns to December 31, 2010								
Period	Balanced	Canadian Equity	Foreign Equity	Bond	Short Term			
1 year	9.98%	17.97%	6.27%	8.61%	0.58%			
2 years	11.22%	24.16%	8.36%	9.53%	0.52%			
3 years	2.48%	2.23%	-4.78%	7.22%	1.38%			
4 years	2.66%	4.48%	-6.04%	6.35%	2.15%			
5 years	4.82%	7.23%	-1.30%	5.76%	2.52%			
10 years	5.52%	8.61%	-0.85%	6.42%	2.82%			
15 years	7.45%	10.60%	3.55%	7.01%	4.08%			
25 years*	8.90%	9.81%	7.18%	8.70%	5.92%			
50 years*	9.27%	10.47%	9.28%	7.69%	6.86%			

*estimated, based on historical market index returns (Balanced Fund has been estimated for the 50 years period only).

As might be expected, equities (at least the Canadian Equity Fund) performed better than the Balanced Fund over the long term, which in turn performed better than the Bond Fund. However, over the last 10 years the Bond Fund outperformed the Balanced Fund. This reconfirms the concept that higher risk funds (e.g. equity funds) have higher expected returns but there is no guarantee that you will earn a higher return. In this case, the higher risk investments did outperform over 50 years, but not over the last 10 years.

While past performance is of interest, past performance may be a poor indicator, and is certainly no guarantee, of future performance.

CONCLUSION

Your decision on how to allocate your capital between the different fund options is very important and will have a significant impact on your investment results. If you are not entirely comfortable with making this decision, you should consider seeking assistance from resources such as a professional investment advisor.

This article was originally published in the Pension News Q2 2007 and has been updated by Mercer Canada for the UBC Faculty Pension Plan. Comments should be send to: fpp@hr.ubc.ca.

A note on the returns of Bond Funds:

Returns from a bond portfolio come from two sources:

- The yield on the bond portfolio; and
- Changes in bond prices (mainly due to changes in market yields).

In the 10 years from Dec. 31, 2000 to Dec. 31, 2010, the yield on the Canadian Bond index decreased by 2.6% (from 5.7% to 3.1%) as interest rates dropped. This reduction in bond yields resulted in bond prices increasing, which explains part of their positive return over this 10-year timeframe. With the yield on the Bond index on Aug. 31, 2011 at only 2.6%, there is much less expectation that this yield could decrease much further (and hence increase bond prices) over the next 10 years. If bond yields were to increase (i.e. interest rates rise), then bond prices would fall, which would have a negative effect on the Bond Fund's return.

MARKET COMMENTARY



Equity markets were weak worldwide in the third quarter due to continuing negative economic news on a number of fronts. This included European sovereign debt and banking concerns, fears of a possible double dip recession in the U.S., and slowing growth in China. Bond markets were the beneficiary of this as investors moved money into bonds, seeking less risky investments. The Canadian stock market had another weak quarter returning -12.0%, leading to a year-to-date return of -11.9%. The market's high exposure to commodity stocks hurt as the Energy sector dropped 18.7% in the third quarter. Two of the largest index sectors, Materials and Energy, which combined account for almost 50% of the TSX index, are down 17.7% and 19.1% respectively, so far in 2011.

The U.S. stock market also had another negative quarter dropping 7.0% and 4.2% for the year-to-date in Canadian dollar terms. Global equities (as measured by the MSCI World index) returned -10.0% over the third quarter and -7.9% year-to-date in Canadian dollar terms. Emerging markets' weak performance in 2011 continued with a return of -16.4% for the third quarter and -18.1% on a year-todate basis.

The Canadian Bond market had another strong quarterly return of 5.1% in Q3 with a large difference between long bonds (9.8%) and short bond returns (2.3%) over the quarter. In terms of returns by issuer, Provincial bonds were again the strongest sector in Q3 at 6.6% and Real Returns Bonds returned 5.0%. Inflation, as measured by the CPI, was 3.1% over the one year.

Canada Pension Plan (CPP) Changes

The previously announced changes to the CPP have started to come into effect. If you are retired and receiving your CPP retirement benefit, these changes won't affect you. If you are still working and receiving your CPP benefit or you have yet to start your CPP benefit, some or all of these changes may affect you. Read on to learn more...

EARLY AND LATE RETIREMENT RULES

- **Early retirement:** If you start your CPP benefit before age 65, the benefit is reduced to reflect the fact that you'll be receiving it for a longer period of time. Starting in 2012, the reduction will be increased in phases over four years. The reduction will increase from the current 6.0% to eventually 7.2% for each year you begin your pension before age 65.
- Late retirement: If you postpone receipt of your CPP benefit past age 65, the benefit is increased to reflect the fact that you'll be receiving it for a shorter period of time. In 2010, this increase was 6% for each year you postponed your pension after age 65. Beginning in 2011, this percentage is increasing over a three-year period eventually to 8.4% for each year you postpone your pension after age 65. You must begin your CPP benefit by age 70.

NO WORK CESSATION TEST FOR EARLY RETIREMENT

Starting in 2012, you can start your CPP benefit after age 60 without a requirement to stop working or significantly curtail work. If you are under age 65 and start your CPP pension, you and UBC will continue to contribute to CPP to grow your pension benefit while you are receiving benefits. If you continue to work past age 65, you may choose to continue making contributions to CPP or to cease making contributions. If you continue to make contributions, UBC will also continue to contribute to CPP.

Already receiving CPP, working at UBC and age 65 or older?

If you are age 65 or older, still working at UBC and receiving your CPP retirement benefit, your CPP contributions will be reinstated in January 2012 and UBC will also recommence contributions. This will result in an increase to your CPP pension annually. You may elect not to have CPP contributions reinstated by completing and returning an opt-out form to the UBC Finance Department prior to January 1, 2012. Joanne Young of the UBC Finance Department will be forwarding information to members affected by this change in the near future.

CHANGE TO PROVISION FOR PERIODS OF LOW EARNING

When your CPP benefit is calculated, periods of zero or low earnings are dropped out of the calculation up to a certain maximum. This can mean a potential increase to your monthly CPP benefit up to the maximum amount. There is a general dropout provision as well as specific provisions for child rearing and periods spent receiving a CPP disability benefit. The general dropout provision will increase from the current 15% of the years when you had no or low income to 16% in 2012 and to 17% in 2014.

To learn more about these changes, please refer to the CPP changes factsheet at www.servicecanada.gc.ca/eng/isp/pub/ factsheets/postrtrben.shtml.



WWW.PENSIONS.UBC.CA/FACULTY

Member Request Deadlines

Change Effective November 2011

To improve administration, all member requests affecting account balances must be received by the Pension Administration Office by 4pm PT on the 4th last business day of each month. Monthly Submission Deadline Dates are available at the FPP website under the QuickFind menu.

FPP Election Update

We are pleased to advise that Dr. Rob Heinkel has been re-elected by acclamation. The Board welcomes Mr. Vijya Kumar Verma, who was also elected by acclamation, to the Board of Trustees. Both trustees will serve for a four-year term from January 1, 2012 to December 31, 2015.

It is with much regret that we announce that Dr. Neil Guppy decided not to stand for re-election due to his upcoming commitments. We would like to thank Dr. Guppy for his valuable contributions to the Faculty Pension Plan since 2006, and wish him well in his future endeavours.

New Member and Retirement Workshops

"You & Your Pension Plan" workshops for new members or members wishing to learn more about the Plan are available throughout the year, as well as "Understanding Your Retirement Income Options" workshops for members approaching retirement.

Understanding Your Retirement Income Options January 19, 2012 February 17, 2012 All sessions are from 12 pm to 3 pm

For more info or to register for one of the sessions above, please contact Jim Loughlean at jim.loughlean@ubc.ca. Please refer to the Workshops page on the FPP website for up-to-date workshop information and dates.

Holiday Closure

The Pension Administration Office will be closed from noon on December 23, 2011 to January 2, 2012 inclusive. Please submit all member request forms to the Pension Administration Office by December 21, 2011 to ensure it is processed effective month end.

If you have an urgent pension inquiry during the holiday closure, please leave a message at 604-827-3286. These messages will be monitored daily over the holiday period.

FPP Board Members

Mr. Joost Blom, Chair Faculty of Law 604-822-4564

Dr. Robert Heinkel, Vice-Chair Sauder School of Business 604-822-8347

Dr. Joy Begley Sauder School of Business 604-822-8527

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Dr Kaili Sauder School of Business 604-822-8353

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FPP Management & Staff

Mr. Mike Leslie **Executive Director, Investments** 604-822-6429

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	3 Months	YTD	1 year	5 years*	10 years*
Balanced Fund - gross	-4.11%	-1.02%	3.21%	3.29%	6.12%
Balanced Fund - net	-4.24%	-1.44%	2.60%	2.76%	5.62%
Composite Index 1	-2.67%	-0.19%	3.57%	3.25%	5.91%
Bond Fund - gross	3.85%	6.77%	6.72%	6.55%	6.52%
Bond Fund - net	3.78%	6.52%	6.38%	6.24%	6.24%
Composite Index 2	5.11%	7.94%	7.66%	6.33%	6.56%
Canadian Equity Fund - gross	-13.12%	-12.01%	-3.14%	2.91%	9.18%
Canadian Equity Fund - net	-13.22%	-12.31%	-3.59%	2.47%	n/a
Composite Index 3	-12.03%	-11.80%	-3.73%	2.56%	8.05%
Foreign Equity Fund - gross	-10.88%	-7.71%	-1.72%	-4.13%	0.39%
Foreign Equity Fund - net	-11.05%	-8.24%	-2.55%	-4.65%	n/a
Composite Index 4	-8.57%	-6.13%	-0.94%	-3.00%	1.20%
Short Term Investment Fund - gross	0.36%	0.97%	1.22%	2.13%	2.48%
Short Term Investment Fund - net	0.32%	0.85%	1.07%	1.97%	2.30%
Composite Index 5	0.26%	0.76%	0.99%	1.91%	2.36%

*Annualized returns

The Average Rate of Return for the FPP funds are updated on a monthly basis and are available under the QuickFind menu on the FPP website.

Composite Index 1: 32% DEX Universe, 10% S&P/TSX Capped, 5% S&P/TSX, 5% S&P/TSX 60 Capped, 6% S&P 500, 21% MSCI World Ex Canada, 3% Dex 91-Day TB, 10% IPDCPI, 8% DEX Real Return Bonds

Composite Index 2: 80% DEX Universe, 20% DEX Real Return Bonds

Composite Index 3: 25% S&P/TSX, 50% S&P/TSX Capped, 25% S&P/TSX 60 Capped

Composite Index 4: 73% MSCI World Ex Canada, 21% S&P 500, 6% DEX 91-Day TB

Composite Index 5**: DEX 91-Day TB Index until August 2007, DEX 30-Day TB Index from September 2007 to January 2011, DEX 91-Day TB Index commencing February 2011.

** Composite Index 5 has changed as of February 1, 2011 to reflect investment changes within the Short Term Investment Fund.

COMPOSITION OF THE FUNDS AS AT SEPT 30, 2011

63.9

100.0%

Total Bond Fund

	Market Value (\$ Millions)	% of Funds		Market Value (\$ Millions)	% of Funds
BALANCED FUND			CANADIAN EQUITY FUND		
Equities - Canada	208.2	18.9%	Equities - Canada	93.6	98.8%
Equities - Non-Canadian	271.4	24.7%	Cash	1.1	1.2%
Absolute Return Hedge Fund	30.9	2.8%	Total Canadian Equity Fund	94.7	100.0%
Real Estate - Canada	116.5	10.6%	FOREIGN EQUITY FUND		
Fixed Income	370.2	33.7%	Equities - Non-Canadian	33.5	92.8%
Real Return Bonds - Canada	98.3	8.9%	Absolute Return Hedge Fund	1.9	5.3%
Cash	4.2	0.4%	Cash	0.7	1.9%
Total Balanced Fund	1099.7	100.0%	Total Foreign Equity Fund	36.1	100.0%
BOND FUND			SHORT TERM		
Fixed Income	50.0	78.3%	INVESTMENT FUND	<i>(</i> 1 E	100.00/
Real Return Bonds - Canada	13.3	20.8%	Total Short Term Inv. Fund	61.5	100.0%
Cash	0.6	0.9%			