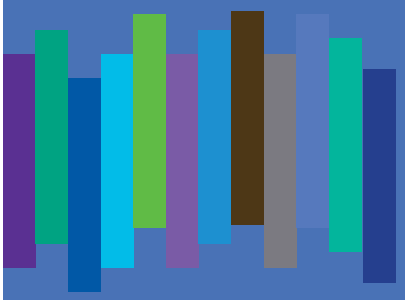
CFA Montréal

INVESTMENT PRINCIPLES

INFORMATION SHEET FOR INVESTORS

BUILDING PORTFOLIOS



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IMPORTANT NOTICE

The term "financial advisor" is used here in a general and generic way to refer to any duly authorized person who works in the field of financial services, including the following:

- Investment brokers
- Mutual fund brokers
- Scholarship plan dealers
- Exempt market dealers
- Portfolio managers
- Investment fund managers
- Life insurance agents
- Financial planners (F.Pl.)

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BUILDING PORTFOLIOS

Since Canadian and US investors have different diversification requirements, we need to build portfolios from both perspectives. Two portfolio allocations are considered: a riskier 70/30 (equity/fixed income) and a less risky 30/70. For each risk level, there are two portfolio structures: a simple structure with two or three assets and a more comprehensive structure designed to provide greater geographic and style diversification. The US portfolios will be more US centric, since the US equity local market provides substantially more diversification than the Canadian market. In total, there are eight potential portfolios.

ALLOCATIONS FOR CANADIAN AND US INVESTORS

The two following tables present different allocation options.

US INVESTORS					
		Simple Portfolios		Comprehensive Portfolios	
Asset	Description	Low Risk	High Risk	Low Risk	High Risk
Russell 1000	Equity - US Large CAP	30%	70%		
Russell 1000 Value	Equity - US Value Style			10%	20%
Russell 1000 Growth	Equity - US Growth Style			10%	20%
Russell 2000	Equity - US Small CAP			10%	10%
MSCI EAFE	Equity - International Large CAP				15%
MSCI Emerging	Equity - Emerging Markets				5%
S&P/TSX	Equity - Canadian	-	-	-	-
Treasury 10 Years	Bonds - Governments	70%	30%	20%	
Barclays Aggregate Credit	Bonds - Governments and Corporations			42.5%	25%
Barclays High Yield	Bonds - Corporations of Lower Quality			7.5%	5%

CANADIAN INVESTORS					
		Simple Portfolios		Comprehensive Portfolios	
Asset	Description	Low Risk	High Risk	Low Risk	High Risk
Russell 1000	Equity - US Large CAP	10%	30%		
Russell 1000 Value	Equity - US Value Style			5%	12.5%
Russell 1000 Growth	Equity - US Growth Style			5%	12.5%
Russell 2000	Equity - US Small CAP			5%	5%
MSCI EAFE	Equity - International Large CAP				15%
MSCI Emerging	Equity - Emerging Markets				5%
S&P/TSX	Equity - Canadian	20%	40%	15%	20%
Treasury 10 Years	Bonds - Governments	70%	30%	20%	
Barclays Aggregate Credit	Bonds - Governments and Corporations			42.5%	25%
Barclays High Yield	Bonds - Corporations of Lower Quality			7.5%	5%

The following table presents the performance and some risk statistics for all eight portfolios between August 1992 and October 2015, assuming a monthly rebalancing.[1] The US portfolios are in US$ while the Canadian portfolios are in C$.

Portfolios (% Equity / % Bonds)	Return	Volatility	Maximum Drawdown	Date Maximum Drawdown Ends
US 30/70 Simple	7.4%	5.9%	-10.4%	February 2009
US 30/70 Comprehensive	8.1%	6.6%	-21.0%	February 2009
US 70/30 Simple	8.6%	10.6%	-35.2%	February 2009
US 70/30 Comprehensive	8.6%	11.1%	-42.9%	February 2009
CAN 30/70 Simple	7.6%	5.6%	-7.9%	November 1994
CAN 30/70 Comprehensive	8.3%	5.9%	-16.1%	February 2009
CAN 70/30 Simple	8.8%	8.5%	-24.8%	September 2002
CAN 70/30 Comprehensive	8.8%	8.9%	-32.3%	February 2009

Some results are puzzling but easily explainable.

- First, the CAN portfolios (in C$) have higher performance than US portfolios (in US$). Part of the reason is the fact the C$ depreciated on average against the US dollar over this period.
- CAN portfolios have lower volatility and lower maximum drawdowns[2] than US portfolios. The fact that the C$ tends to depreciate in tough times explains this.
- Riskier portfolios outperformed less risky portfolios. As discussed previously, there will always be exceptions (such as Japanese equity during more than two decades of underperformance), but over very long periods, we should expect well-diversified riskier portfolios to outperform. However, we must accept larger volatility and drawdowns to increase returns.
- The maximum drawdowns did not necessarily occur at the same time in Canada and in the US. For riskier and/or the US centric portfolio, the period of the financial crisis often represents the worst period. However, in the case of Canada, simple portfolios sustained worse performance during other periods.
- What is more disturbing is the fact that the riskier comprehensive portfolios had larger maximum drawdowns and greater volatility than riskier simple portfolios. Furthermore, they did not generate better returns. However, we must recognize that we are looking at this issue from the point of view of investors located in two countries (US and Canada) whose equity markets outperformed global markets during this period. Again, we do not know what the future holds for us. This why we diversify. Sometimes, even when we rationally diversify globally, our own market could be among those that will perform the best. Hence, it will seem as though it was not worth diversifying, but we only get this result because we are looking in the rear view mirror.
  For example, in the case of Canada, the relatively favorable local performance during this period is explained by the strong commodity cycle and the greater resistance of the Canadian financial sector to the 2008 financial crisis. Again, we cannot expect the future to be like the past. The decline of energy and commodity prices in 2014 and 2015 and the resulting impact on the Canadian equity market certainly illustrate that.

THE COST OF BEING AFRAID AND OF INCONSISTENT INVESTMENT BEHAVIOR

Some investors simply want to avoid all risks. It can be costly to be overly conservative. The following table shows the

[1] As specified in Document #9, rebalancing less frequently, such as every 6 to 12 months, is sufficient, perhaps even more efficient.
[2] The maximum drawdown is the maximum decline from peak to subsequent trough recorded during the period under observation.

cumulative value of an annual investment of $1,000 since 1992 ($24,000 in total) for a US investor using a conservative portfolio of five-year Treasury bonds or any of the four investment options already discussed. Five-Year Treasuries provided a yearly compounded return of about 5% during this period.

	5-Year Treasuries	30/70 Simple	30/70 Comp.	70/30 Simple	70/30 Comp.
Cumulative Value	$40,858	$57,658	$67,109	$63,830	$66,314
Gains in excess of $24K	$16,858	$33,658	$43,109	$39,830	$42,614
Gains in excess of $24K if away from the market for one year (from Dec. 2008 to Nov. 2009)		$27,151	$29,693	$31,425	$27,935
Decline in gains (%)		-19.3%	-25.4%	-27.1%	-34.4%

Even though we have not incorporated fees into the analysis, there is a high price to pay for extreme conservatism even against a low risk 30/70 portfolio. The five-year Treasury portfolio cumulated nearly 28% less wealth than a plain 30/70 portfolio. Furthermore, the nearly 5% return on Treasury bonds was only achieved because of significantly higher interest rates back in the 90s. Such performance is unlikely going forward.

Other investors are not necessarily shying away from investing in equity but are inconsistent. They will invest or take their capital out of the market at the very worst possible time. One way to understand the cost of inconsistency is to recalculate the compounded return of a portfolio simply by eliminating the very best months, one at the time. This illustrates the cost of being away from the market when it is most profitable.

Let's use the example of the US 70/30 simple portfolio. Its annual compounded return over the entire period was 8.6%. If we eliminate the very best months, we are taking away about 0.3% of the total compounded return over this 23-year-period for each such month. For example, the top three months since August 1992 account for nearly 1% of the total performance of 8.6%. Similarly, depending on the portfolio, eliminating the very best 12-month period could wipe out between a fifth and a third of all gains generated over more than 22 years.

THE ROLE OF TARGET DATE FUNDS (TDFs)

We discussed TDFs briefly in Document #2. TDFs have been designed to provide an appropriate asset allocation for participants that are "X" years away from retirement. For example, in 2015, a participant planning to retire in 20 years would buy a 2035 TDF, while another looking to retire in 30 years would look for a 2045 TDF. TDFs are designed to reduce the allocation to riskier assets (such as equity) and increase the allocation to less risky assets (such as bonds) as the participant approaches retirement. The allocation process can even continue post-retirement.

For individuals who need considerable guidance in their investment decisions, TDFs provide an asset allocation that will evolve over time and a rebalancing process. Some are very affordable, while others are much more expensive without necessarily offering a superior strategy. When offered at reasonable fees, this is an acceptable default solution.

There are debates currently as to the pace at which the allocation should be adjusted over time and the types of asset classes that should be included in TDFs. However, notwithstanding this debate, investors who lack a sufficient understanding of investments and react emotionally to what happens in financial markets will find in TDFs a type of product that will enforce greater discipline. It is not a perfect product (what is?), but it is a good alternative in the absence of competent advisory services.

SUMMARY AND CONCLUSIONS

Risk pays off in the long run, assuming we diversify smartly, remain consistent and can stand the volatility and drawdowns. However, it does require substantially more risk to marginally increase returns. Twice as much volatility will not deliver twice the returns. This is why it is important to have a properly diversified portfolio, design a long-term investment plan and pay reasonable fees.

In this document, we continued to work with historical returns to better understand risk, but in the next document we will start using estimates of long-term future returns. Not only forecasts of short-term returns are unreliable, retirement planning must be based on reasonable long-term return and risk expectations. The past is an imperfect guide to future performance, but it does provide clues about risks.