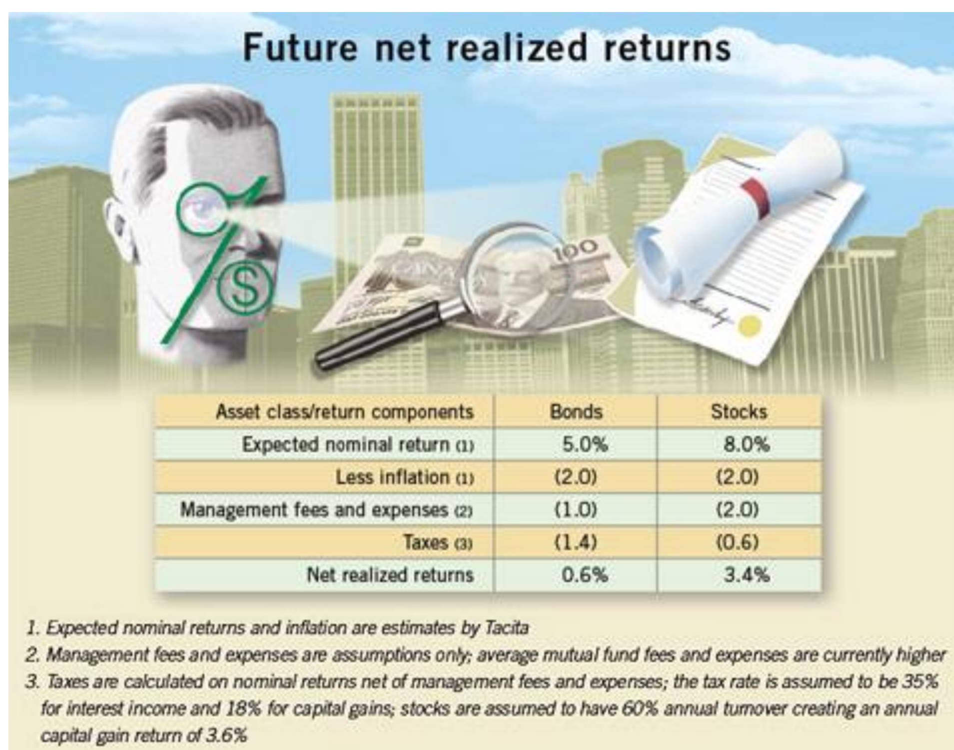
Core and satellite

By Michael Nairne and Joanne Swystun December 2007

The funding challenge for aging boomers can be troubling, but then there is a portfolio that is tax and cost-effective

The sizzling returns of the Canadian stock market over the past few years have obscured the looming investment challenge facing retirement-bound baby boomers. With lifestyle funding needs that can stretch over decades and the ever-rising cost of late-stage elderly care, realizing adequate returns on baby boomers' investments becomes vital. Unfortunately, although no one has a crystal ball that can precisely forecast what tomorrow will bring, there are clear indications that future bond and stock returns will be much lower than those experienced over the past 25 years.



Future net realized returns

Asset class/return components	Bonds	Stocks
Expected nominal return (1)	5.0%	8.0%
Less inflation (1)	(2.0)	(2.0)
Management fees and expenses (2)	(1.0)	(2.0)
Taxes (3)	(1.4)	(0.6)
Net realized returns	0.6%	3.4%

1. *Expected nominal returns and inflation are estimates by Tacita*
2. *Management fees and expenses are assumptions only; average mutual fund fees and expenses are currently higher*
3. *Taxes are calculated on nominal returns net of management fees and expenses; the tax rate is assumed to be 35% for interest income and 18% for capital gains; stocks are assumed to have 60% annual turnover creating an annual capital gain return of 3.6%*

Return reduction and corrosion

The trend of falling interest rates triggered by prolonged disinflation since 1981 has passed and with it went the easy capital gains from bonds that so richly augmented income yields. In today's inflationary environment, investors must now grapple with funding their retirements on expected

bond returns of 4% to 5%. Similarly, valuation multiples for stocks — which hit a dismal low of seven to eight times earnings in the early 1980s — have risen to the high teens as inflation has been squeezed out of the economy. The return enhancement from this massive upward revaluation is yesterday's news. Future long-term stock returns will be predominantly determined by earnings growth and dividend yields and since it is an iron-clad law that corporate earnings cannot grow faster than the economy in perpetuity and that dividend payout increases cannot grow faster than earnings in perpetuity, annual economic growth of 5% to 6% plus dividend yields of about 2% suggests future annual average stock returns in the 7% to 8% range.

Meagre as these diminutive figures are, they are only part of the problem. Future consumption is funded from real not nominal returns. If one assumes future inflation in the 2% range, real expected bond returns plunge to a meagre 2% to 3% while real stock returns drop to 5% to 6% per annum. Outside tax-deferred plans, taxes will further erode realized returns.

Leakage also occurs due to the costs associated with investment management. These can vary depending on whether someone is a self-directed investor investing on his or her own (although such an investor still faces commissions, bid-ask spreads and bond desk markups) or whether, like many people, one uses financial advisers or investment counselors whose mutual funds, investment pools or separate accounts typically cost anywhere from 1% to 3% of assets annually.

The table on p. 54, "Future net realized returns," illustrates the funding challenge created by lower future expected returns when the corrosive impact of inflation, fees and taxes is considered.

As the numbers show, taxable investors face a mammoth investment challenge. Nearly 90% of the return on bonds is eroded while even stocks, despite the deferral on unrealized gains and capital gains treatment on realized gains, lose more than 55% of their value to the corrosion of the toxic troika of inflation, costs and taxes.

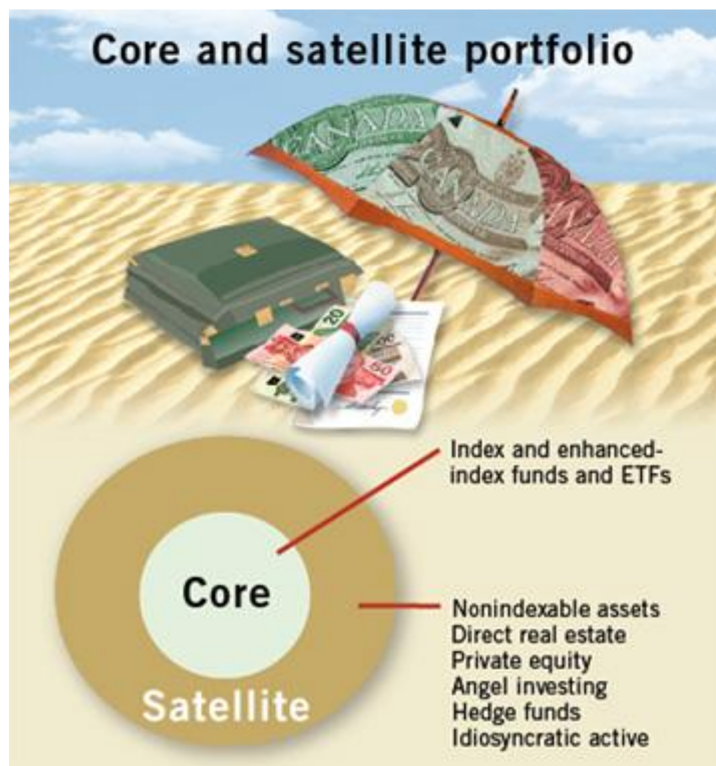
Cutting costs and taxes through core and satellite

What is clear from this analysis is that taxes have to be kept to a bare minimum while unnecessary investment management costs must be eliminated. These are fees and expenses of investment managers who cannot earn returns net of their total costs in excess of their market benchmarks. Or, in the lingo of the investment world, managers who do not provide positive alpha net of costs. Take, for example, a large company growth manager who is focused on US stocks: to add value to the portfolio, he or she would have to be able to beat the Russell 1000 Growth Index (an index designed to provide a comprehensive barometer of large growth company stocks) by a sufficient margin to cover fees and expenses.

It is this compelling need to minimize both taxes and unnecessary fees and expenses that make the core and satellite portfolio structure the preferred framework for prudent investment management in the future. A core and satellite portfolio structure is founded on a highly diversified core comprised of index and enhanced-index managers that seek asset-class returns in a highly cost- and tax-effective manner. The core is then augmented by a satellite ring of managers hired to seek superior, better than benchmark returns, improved portfolio diversification or, often, both. The satellite ring can contain a range of options including select

active investment managers, hedge funds, private equity and direct real estate investment. (See illustration above, right.)

This framework is flexible and allows the particular allocations to core asset classes and satellite holdings to be customized to an investor's individual needs and preferences.



The role of the core

The core is designed to provide the returns available from the markets; the pursuit of alpha is delegated to the satellite component. Core investments use index and enhanced-index funds that focus on deep markets that are highly competitive and where there is less mispricing of securities and less opportunity for active managers to add value. The subasset class of large company stocks in the US, the most competitive sector in the world's capital markets, is a prime example. Core investments earn returns from exposure to the systematic risks of the particular market such that company-specific risks are diversified away. The core affords the investor a number of advantages:

1. *Broad asset class diversification.* Diversification is the one free lunch guaranteed at the investment table and the core ensures this lunch is served. Diversification is meant in its broadest sense, entailing a proper complement of domestic and international asset classes, each comprised of a full spectrum of securities that sufficiently captures the dimensions of return and risk from that class. The core is globally diversified and the investment in any given asset class through an index or enhanced-index fund will usually contain hundreds, if not thousands, of individual stocks or bonds.

2. *Tax efficiency.* The much lower turnover of many index investments results in lower realized capital gains and the enhanced deferment of taxes. In a recent study comparing the tax efficiency of major equity exchange traded funds (ETF) against the largest comparable Canadian mutual funds, the ETFs were found to be more tax efficient. In particular, wealthy families engaged in multigenerational planning can use tax-efficient, low-cost index products to defer taxes over many decades. Many active investment management organizations have inherent instability (for example, individual managers can quit or retire; assets can swell to untenable levels; ownership and philosophies can change), which makes them poor choices for plans centered on tax deferral over multiple generations.
3. *Cost effectiveness.* Given the index-based nature of core in-vestments, management fees and expenses are lower than those of traditional active management. There is no reason to pay unnecessary management fees to access the returns available from the market as the advent of more and more ETFs tracking major indices has created a competitive marketplace. Investors can now buy ETFs with annual fees and expenses as low as 0.07% of assets, a total management and expense ratio so paltry that it is less than the GST on many Canadian mutual funds and private investment pools.
4. *Liquidity.* Core investments are focused on easily accessible, investable markets where the broad and ongoing participation of many buyers and sellers creates liquidity for investors. Liquid asset class investments also make the rebalancing of portfolios a simple, low-cost activity.
5. *Transparency.* Core investments are transparent because they are based on rules-based systems that incorporate certain securities and set the parameters for buying and selling. The “black box” that obscures the strategies and attendant risk of many active managers and hedge funds does not exist in the core. The recent blow-up of Amaranth Advisors hedge fund is a telling example of this black-box risk.

Avoiding active management risk

The core also avoids the risks faced by investors who rely solely on active managers for investment management. The primary risk is that active managers will not outperform their benchmarks by a sufficient margin to recover their higher fees and expenses leading to relative underperformance and needlessly hindering wealth accumulation. Unfortunately, the probability for most Canadian investors is that this risk will come home to roost. There now are more than 40 years of academic and industry studies that conclusively demonstrate that active managers as a group underperform the market.

Thinking logically, how could this be otherwise? As Nobel Laureate William Sharpe pointed out in the “Arithmetic of active management,” his classic article in The Financial Analysts’ Journal, the market is really only composed of two groups: index managers and active managers, and together they earn the market return. Since index managers track the market return by adhering to strategies that replicate market indices, active managers as a group similarly must track the market return. And since active managers as a group have higher fees and expenses than index managers, it is inevitable that active managers on average will not only underperform the market but also index managers. Such logic is irrefutable.

Active management gives rise to other risks. Even if managers outperform their index counterparts on a pre-tax basis, they may underperform on a post-tax basis. Large unanticipated tax bills can destroy the most careful household budget if active managers make major sector shifts that trigger significant gains. Style drift (the tendency of some managers to move outside their investment mandate) can add to overall portfolio risk, as well thought-out diversification is hampered if managers move outside the mandate for which they were hired. And more painful yet is terminating a manager after a period of underperformance only to trigger a whack of taxes on switching to a new manager.

Proponents of active management, of course, argue that the solution is simply to pick the world-class managers, ones who outperform the averages. This is a laudable objective, but the odds are stacked against selecting only winners. These advocates believe manager performance is persistent; good managers in the past will tend to outperform in the future. Yet, academic findings generally do not support this belief. In a report prepared for the Australian Securities and Investment Commission in June 2003, a sweeping review of more than 100 studies on investment management persistence conducted in the US, UK and Australia was undertaken. The key findings included:

- Good past performance is an unreliable and weak predictor of future performance. Approximately one-half of the studies found no correlation between good past and future performance; where persistence existed, it tended to be short-term in nature — one or two years.
- Where persistence was found, the margin of outperformance tended to be small and some studies found that the cost of swapping funds could nullify this margin.

In short, picking active managers who can truly outperform over the long-run is extremely difficult and basing one's entire portfolio on the quest for durable alpha is a risky endeavour at which most investors fail. The penalty for such failure is a burden of unnecessary costs and higher taxes that, over time, can seriously impede wealth accumulation.

The role of the satellite

Conversely, with a broadly diversified, cost- and tax-effective core in place, the satellite component can be used to expand the opportunity set of asset classes and investment strategies utilized. This affords the pursuit of enhanced returns, improved overall diversification or frequently both such that overall, a more optimal portfolio can be constructed.

One of the primary roles of the satellite is to access subasset classes that are not available through index-based products and therefore, cannot be part of the core. Emerging market bonds, convertible bonds, mortgage-backed securities and distressed debt are subasset classes that require active management. One of the largest asset classes excluded from an index-based approach is direct investment in real estate. Although it is possible to invest in real estate investment trusts as a subasset class, their liquidity adds to their volatility relative to the variability of the actual values of the underlying real estate. Investing directly in real estate properties offers the potential for lower volatility, higher returns, individualized debt and cash-flow management and additional tax deferral.

Direct business investment also requires an active approach. For many business owners and corporate executives, this includes institutional-style private equity offerings that are now becoming available at a retail level as well as angel investing in private companies. Here, the knowledge, talent and connections of the angel investor can add to the return potential of the investment. That is, the business and industry experience of the angel investor who often sits on the board of a company in which she or he invests can contribute to its enhanced performance. Also, some investment experts believe illiquidity premiums are available from direct real estate and business investments.

There are also a variety of investment tactics that can only be deployed through active managers in the satellite. Hedge funds, which frequently use short-selling, derivatives and leverage, are investment strategies that cannot be accessed through index-based products.

A satellite component also allows the consideration of managers who historically might have been thought of as too exotic or underdiversified to be given a role in a traditionally constructed portfolio. An example is managers who use tactical timing or momentum models to shift assets between country markets or industry sectors. Another is managers who focus on deep-distress securities or micro-stocks but keep their holdings to a handful of incredibly well-researched investments. Also, a number of industry participants argue that these idiosyncratic managers, many of whom are smaller and off the beaten path, are more likely to access mispriced securities than more mainstream managers. Active management risk, meanwhile, is controlled by more modest dollar allocations to these satellite managers and the assurance of asset-class performance from the core holdings.

One vital task of the satellite component is to better diversify the total portfolio by providing different return patterns than those of the core holdings, which are centered on long stock and bond positions. Alternative investments such as direct real estate, private equity and nondirectional hedge funds are excellent for this task. Certain idiosyncratic management strategies such as deep value managers who are prepared to go to cash when valuation levels are frothy can add to diversification. In fact, the selection of particular active strategies and managers should be based on their contribution to overall portfolio diversification.

Conclusion

The magnitude of the funding challenge for aging baby boomers on the cusp of retirement is troubling. With future real returns likely to be diminished, there is no room for unnecessary taxes or fees and expenses that will further erode wealth accumulation. A core and satellite portfolio offers a tax- and cost-effective structure that provides exposure to the full opportunity set of asset classes and investment strategies available today while remaining customizable to the needs of individual investors.

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