OMERS

BACKGROUND PAPER ON OMERS INVESTMENT STRATEGIES

MANAGING RISK TO EARN MORE CONSISTENT LONG-TERM RETURNS

FEBRUARY 2014

THE OMERS ORGANIZATION

Established in 1962, OMERS provides defined pension benefits to local government employees throughout Ontario. The OMERS Primary Pension Plan is a jointly sponsored, multi-employer pension plan with approximately 1,000 employers and 440,000 plan members. Employers range from large cities, including Toronto, to numerous local agencies with only a handful of employees. Plan members include union and non-union municipal workers; police, firefighters and paramedics; the non-teaching staff of school boards; and employees of children's aid societies, transit systems and electrical utilities.

Plan members and employers contribute equally to the Plan and share equally in funding gains or losses. With $73.0 billion of pension obligations and net assets of $64.4 billion, the Plan ended 2013 with a funding shortfall of $8.6 billion, compared with a shortfall of $9.9 billion in 2012. Subject to investment returns, the Plan should return to surplus position between 2021 and 2025.

In 2006, Ontario legislation replaced the Ontario government as sponsor of the Plan with a statutory corporation called the OMERS Sponsors Corporation ("SC") and continued the administrator as a statutory corporation called OMERS Administration Corporation ("OAC"). The SC and OAC each has its own mandate and board of directors.

OMERS Sponsors Corporation ("SC") is responsible, among other duties, for plan design, including setting benefit levels and contribution rates. The 14 members of the SC Board are nominated by designated groups representing employers and Plan members.

OMERS Administration Corporation ("OAC") is responsible, among other duties, for administration of the Pension Plans, preparation and approval of the actuarial valuations and investment of the pension funds. OAC is governed by a board of directors consisting of 14 members nominated equally by sponsors representing employers and sponsors representing Plan members. As a result of the implementation of key recommendations of the scheduled review of the OMERS Act in 2012 by Tony Dean (who was appointed by the Minister of Municipal Affairs and Housing in May 2012), the SC Board and the OAC Board worked collaboratively to appoint an independent chair for the first time in 2013 as the 15th OAC Board member.

Delivering the Pension Promise

OAC manages the assets in the Pension Plan to deliver defined benefits to plan members when they retire.

OAC has five core investment platforms, operating in Toronto, London and New York City, that execute the investment strategies within the regulatory framework of a fiduciary responsible for prudently investing the single most important asset of most Plan members. The investment strategies are implemented under the oversight of the OAC Board and senior management, consistent with a rolling five-year enterprise-wide strategic plan that is updated, reviewed and approved annually. The total investment enterprise has the executive leadership, corporate culture and in-house expertise to compete as a principal investor, implement robust risk and other management policies and procedures and comply with international best standards of financial reporting and disclosure. All employees are eligible for short-term and certain employees are eligible for long-term performance-based financial incentives. As a principal investor, OAC is committed to directly owning and actively asset managing the vast majority of investments.

Actuarial, government relations, pension policy and communications teams deal with plan growth, regulatory issues, member services, public pension reform and stakeholder relations.

Implementing Prudent Pension Plan Investment Strategies

OAC began to transform the investment strategies of the Pension Plan in 2004 with the decision to reduce public market investments from 82% of the total fund to approximately 53% over time and increase private market investments from 18% to approximately 47%. The shift in asset mix policy reflected the concerns of sponsors that the Pension Plan was over exposed to volatile stock markets. An unexpected large loss of capital is the biggest threat to performance. Stock market shocks have occurred more frequently since 2002 with declines by 10% or more on five occasions, including the 33% meltdown due to the 2008 global credit crisis. Large stock market surprises to the upside were less frequent. The first priority of a prudent pension plan investor is to preserve capital, recognizing that a 33% decline on $1 billion in a single year would require a 50% return to get back to $1 billion.

A second priority is to shift from a concentration of assets in Canada, which represents less than 3% of world market capitalization. Today, OAC invests 53% of Pension Plan net assets outside Canada, compared with less than one-third historically, with investments diversified by asset classes, economic sectors, geographies and income streams.

A third priority is to directly own and actively manage virtually all investments. Today, OAC investment professionals manage approximately 90% of total fund assets, substantially reducing investment costs compared with outside fund management.

The overriding objective of these strategic priorities is to earn more reliable and consistent investment returns to match assets with liabilities over the long term.

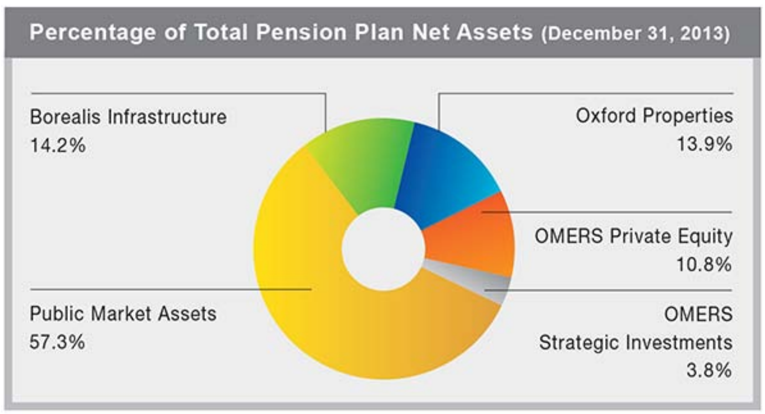
The investment strategies implemented at the total fund level involve:

- investing half of each new dollar in public market assets and half in private market assets to balance volatile liquid publicly-traded securities with stable and relatively predictable illiquid privately owned assets;
- prudent use of leverage to mitigate risk and enhance returns; and
- investing in non-traditional pension fund asset classes to earn recurring long-term returns.

Working toward this balanced approach has contributed $21.7 billion of cumulative investment to the Plan in the five years since the 2008 global credit crisis and stock market meltdown. The 8.4% five-year gross annualized return was substantially above the 6.5% net return estimated by the Plan's independent actuary as being necessary on an ongoing basis to eliminate the current funding deficit and match assets and liabilities over a longer period of time. Our 10 year gross annualized return was 7.64%.

Strategies for Investing in Private Markets

Private market investments are a key contributor to OAC's strategy to secure consistent and reliable long-term returns. Today, 43% of the Pension Plan net assets are invested in the private markets and managed on behalf of the OAC by four investment platforms. The large-scale private market assets that OAC prefers are illiquid compared with stocks and bonds. OAC believes that owning these assets long term compensates for illiquidity by delivering strong cash flows and value gains over time, and as such these assets are a good match for the Pension Plan's liabilities.



Borealis Infrastructure (Borealis) is the infrastructure investment arm of OMERS. Borealis identifies, pursues and manages investments in large-scale infrastructure businesses on behalf of OMERS and other large institutional investors and has assets under management exceeding $20 billion. The infrastructure portfolio consists of assets that are generally protected by revenue, inflation and other guarantees which generate reliable income that is an ideal match with the Pension Plan's long-term liabilities. Recent deals include equity positions in a Czech Republic natural gas transmission operator; a Michigan-based gas co-generation plant; expansion of Canada's LifeLabs medical testing clinics through a major acquisition; and four U.S. wind farms. Bruce Power, Canada's largest nuclear power generation facility and the Pension Plan's largest single investment, returned to full operating capacity in 2013 as the result of follow-on investments by Borealis and its co-investment partner.

Oxford Properties (Oxford) invests on behalf of OAC in a portfolio of high-quality income-producing properties in world-class cities in Canada, the United States and Britain with assets under management exceeding $24 billion. The Oxford portfolio is a reliable source of investment income. Oxford carefully manages leasing risk within the portfolio. Currently, the properties in the portfolio are close to being fully leased with contract terms averaging eight to ten years and leases staggered to avoid a disproportionate amount of renegotiations in any given year. More than 15 major development projects are underway in Toronto, Calgary, Vancouver, London, New York City and Washington. Recent deals include a joint venture to develop London's upscale St. James Market district; co-development of a major office property in London's financial district; acquisition of a prestigious shopping plaza in London; development of a major bank tower in downtown Toronto; and co-development of 12 million square feet of multi-use space in New York's Manhattan.

OMERS Private Equity (OPE) focuses on acquiring, on behalf of OAC, majority ownership of private companies in North America and Europe. Today it has $7 billion of assets under management. Recent investments include UK-based VUE Entertainment, one of the largest cinema operators in the world; Civica Group, also headquartered in the U.K., a leading provider of systems and business process services software for the public sector; and Caliber Collision Centers, a U.S.-based leader in providing auto collision services. The investments are expected to be owned for 4 to 7 years and this year completed the exit of three companies which resulted in a combined annual compound return in excess of 40 per cent and over four times the amount of the capital invested.

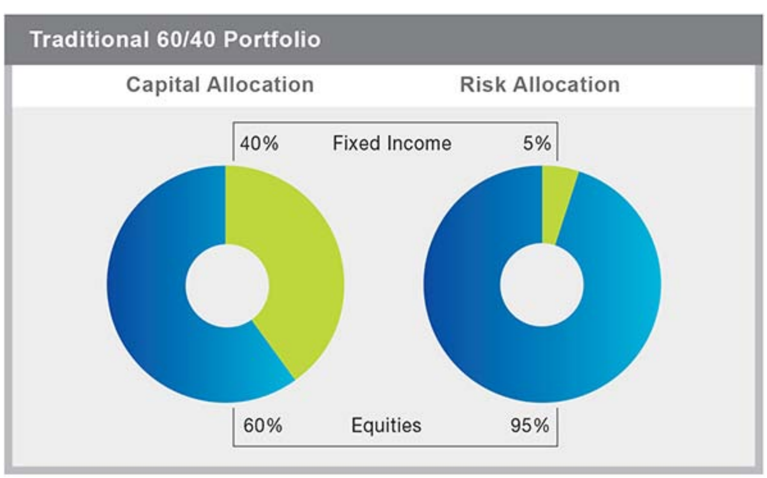
OMERS Strategic Investments (OSI) has assets under management of $3 billion, consisting of a Calgary-based oil and gas production company that produced the largest portion of investment income in the OSI 2013 portfolio as natural gas prices began to recover; a U.S.-based global airport management company; and a Canadian technology venture capital firm. OSI also forms relations with like-minded institutional investors around the world to invest with Borealis in large-scale infrastructure assets.

Assets under manarement are determined as described in our Annual Report.

Strategies for Investing in Public Markets

Restructuring the public markets portfolio to earn more consistent long-term returns is the final piece of the total fund investment strategy put in place by **OMERS Capital Markets** (OCM) in 2013.

Like most pension plans, OCM historically invested 60% in equities and 40% in bonds. While a 60/40 portfolio appears diversified in allocating capital, it actually has 95% of its risk allocated to equities. As a result, the 60/40 portfolio does well when stock markets increase, as occurred in the 1990s and periodically since, but suffers substantial losses when stock markets fall.



To improve earnings power, OCM has adopted risk-balanced strategies for investing in public markets:

1. A **beta portfolio** captures market returns, invests in a wide selection of market opportunities and has less equity concentration. We use modest economic leverage to enhance returns over time. The portfolio is rebalanced on a regular basis to maintain a target total portfolio volatility of 10% annually.

2. An **alpha portfolio** uses active management strategies to find and exploit market opportunities in any market in the world, earn absolute returns and expand overall return potential.

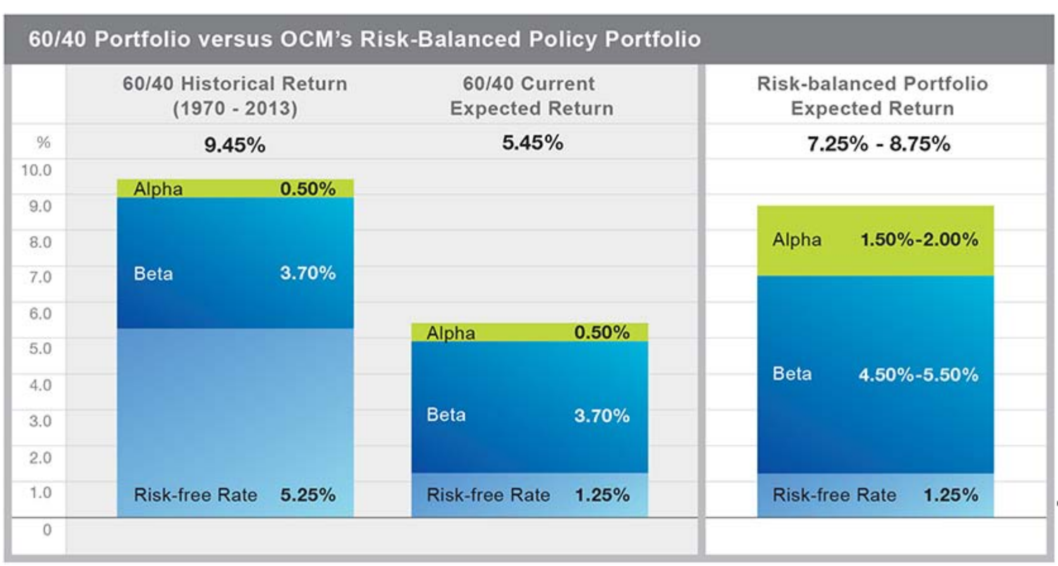
A significant change in our approach is that we have separated the management of the beta and alpha portfolios under different teams, breaking with our previous practice of the same team managing both beta and alpha in an asset class.

Replacing the highly concentrated equity approach with diversified risk-balanced strategies has a higher probability of earning the level of consistent long-term returns required to meet the pension promise.

Rebalancing the portfolio was a complex process that required OCM's traders to size and time transactions to be cost-effective in implementing the strategies and minimizing the impact on market pricing. The result of the transition is a portfolio with better risk balance to public equities, nominal and inflation-linked bonds and a broader selection of commodities.

Building the New Strategies

The following graph identifies the building blocks of the new investment model. It compares a hypothetical 60/40 portfolio's historical annualized return from 1970-2013, which had an average risk free rate of return of 5.25% with a hypothetical portfolio where the risk-free rate is only 1.25%. The column on the right in the graph sets out the expected return of the risk-balanced portfolio, the new investment model.



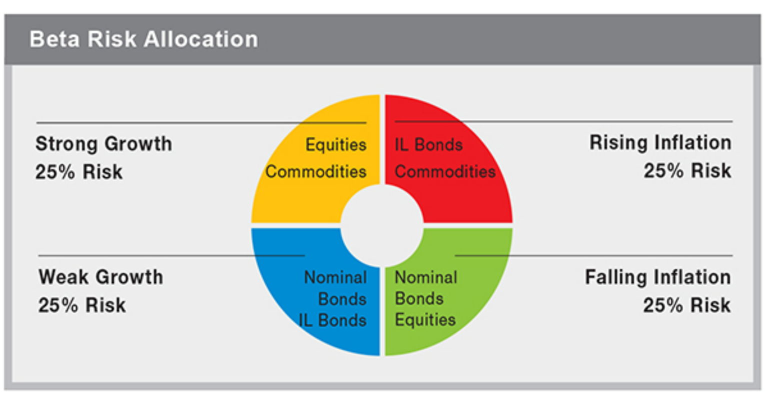
The first building block of each illustrated portfolio return is the risk-free rate (the return on cash) represented by the three-year Government of Canada bond yield. Currently, this return is 1.25%. To do better than 1.25% requires structuring a policy portfolio using different asset classes to generate higher potential returns. This is commonly known as a beta portfolio. The 60/40 portfolio has a long-term average historical beta return of 3.7%. This is the second building block in the chart.   Investors generally expect a positive return from beta over the business cycle. The third block is the portfolio's alpha, the additional return earned by skilled investors.

The 5.45% current expected return from a 60/40 portfolio is substantially lower than the 9.45% historical average return realized since 1970 and is short of the 7.0% gross return (6.5% net) required to meet OMERS pension promise. OCM's risk-balanced portfolio is designed to do better than 5.45% by diversifying beta investments across the full universe of markets, balancing risk across economic scenarios using prudent levels of economic leverage, and implementing alpha strategies that further diversify risk and enhance returns. The beta management team is tasked with generating a 5.75% to 6.75% annual return (including the risk-free rate) over business cycles, and other investment professionals implement alpha strategies designed to generate an additional 1.5% to 2.0% to the total portfolio return.
We have implemented the risk parity strategy with a long term view similar to other pension plans.

The Beta Portfolio

The beta strategy balances risk to the drivers of capital market returns, namely growth and inflation. The beta portfolio is based on the evidence that:

- equities and commodities perform best when economic growth exceeds investor expectations;
- commodities and inflation-linked bonds perform best when inflation rises faster than investor expections;
- nominal bonds and inflation-linked bonds perform best when economic growth falls short of investor expectations; and
- nominal bonds and equities perform best when inflation is below investor expectations.



The beta portfolio does not rely on forecasting the direction of markets and removes the need to predict which of the economic scenarios will prevail when conditions discounted in markets change.

In summary, OAC believes the risk-balanced beta portfolio is better diversified across asset classes and geographies, is less concentrated in equity risk and is expected to experience less capital loss and faster capital recovery during and after periods of recession.

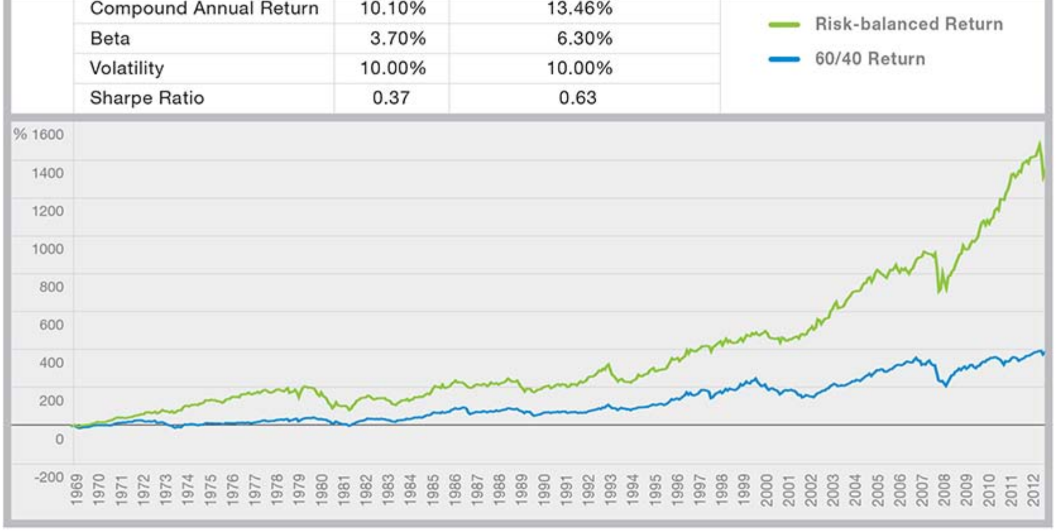
Beta Portfolio Performance versus the 60/40 Portfolio

Our research shows that the risk-balanced beta portfolio will generate superior returns over time. The objective of our beta strategy is an efficient portfolio with a higher Sharpe Ratio, which measures return relative to risk. A portfolio balanced to economic conditions improves the Sharpe Ratio by a factor of almost two when compared with a 60/40 asset mix. Historically, the 60/40 portfolio has a Sharpe Ratio of 0.37 compared with 0.63 for the risk-balanced beta portfolio. This means that every 1% of risk in the beta portfolio earns 0.63% of return.

The chart below tracks the cumulative performance of the traditional 60/40 portfolio and an illustrative risk-balanced beta portfolio if it had been in place since 1970. Five recessions have occurred since 1970. With the exception of the 1979-1982 recession, the hypothetical beta portfolio suffered smaller losses and experienced faster recoveries of capital than the 60/40 portfolio. This is an important feature of OCM's portfolio design as it takes time and exceptional returns to recoup severe losses. The hypothetical risk-balanced portfolio has the same level of risk (10% market volatility) as the 60/40 portfolio, but generates a higher expected return.

Beta Portfolio Performance versus 60/40 Portfolio

	60/40	RISK -BALANCED PORTFOLIO
Compound Annual Return	10.10%	13.46%
Beta	3.70%	6.30%
Volatility	10.00%	10.00%
Sharpe Ratio	0.37	0.63



Our historical analysis shows that the beta portfolio outperformed the 60/40 portfolio over various time periods. For example, stress testing shows that the risk-balanced beta portfolio outperformed the 60/40 portfolio 59% of the time on a rolling one-year basis, a modest improvement, or conversely it underperformed 41% of the time. Over rolling 10-year periods, however, the benefits of the beta strategy become significant, outperforming the 60/40 portfolio 75% of the time. The probability of the beta portfolio outperforming the 60/40 portfolio over the long term is persuasive in enabling OAC to underwrite the pension promise to plan members with greater confidence.

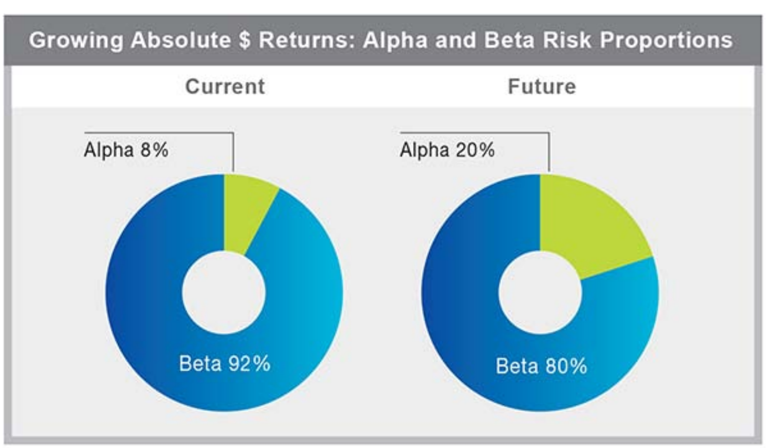
The beta portfolio is not an absolute return strategy. It will incur mark-to-market capital losses when the economy is in recession or there is an unexpected sharp spike in interest rates. This occurred in May and June 2013 when the Federal Reserve announced it would taper its asset purchases and the markets reacted immediately by tightening financial conditions and increasing market interest rates. When interest rates rise at a moderate rate and in an orderly fashion, our research shows that a better-balanced and diversified beta portfolio will still outperform the 60/40 portfolio.

Alpha Strategies

OCM manages its alpha strategies separately from the beta portfolio. This is a departure from the common industry practice of managing beta and alpha together in asset class portfolios with the objective of adding value above a market-based benchmark return. The beta portfolio is a long-term asset mix and does not predict the direction of markets. The alpha portfolio, by contrast, takes views on the direction of investment markets and relies on the skill of internal and external investment teams to deliver absolute returns. The alpha portfolio is uncorrelated to the beta portfolio and, because it is not tied to market returns, adds further diversification at the total portfolio level.

Each alpha team is allocated a risk budget, not capital, and sets a specific absolute dollar return target for the risk assumed. Taking long and short positions gives portfolio managers flexibility to find broader investment opportunities that should improve portfolio returns.

On a risk allocation basis, the alpha strategies currently represent about 8% of public markets risk. OCM will continue to expand alpha risk to as much as 20% of total portfolio risk with the goal of increasing absolute returns from 50 basis points to between 150 and 250 basis points to generate substantially higher dollar profits.



Risk Management

In separating alpha from beta and building the risk-balanced beta portfolio, OCM has implemented stronger risk management practices to monitor, resolve and report daily on market risk, credit risk, counterparty risk, liquidity risk and the prudent use of leverage. A key function of portfolio management is to develop overlay programs to manage risk. Overlay programs adjust currency risk, concentration risk in an asset class and other risks that might arise as a result of business cycle conditions.