

Global Tactical Asset Allocation for Institutional Investment Management

Leo de Bever, Ph.D.

Jagdeep Singh Bachher, Ph.D.

Roman Chuyan, CFA

Ashby Monk, Ph.D.

Introduction

The Alberta Investment Management Corporation (AIMCo) was established in 2008 to manage approximately C\$70 billion on behalf of 26 pension, endowment, and government reserve funds in the Province of Alberta. The fund's over-arching goal is to earn incremental return on risk over what our clients could achieve by passively implementing their policy asset mix with equity and fixed income index funds. One way to add return in excess of passive portfolios is through our Global Tactical Asset Allocation (GTAA) strategy.

Success in this domain, however, is not easy to achieve in practice. It requires four key ingredients: 1) a team with the skill to identify the relatively more attractive asset classes opportunities; 2) clean position and valuation data running on robust business information systems; 3) clear accountability for strategy implementation; and 4) it requires timely management feedback though accurate and robust performance attribution.

In this brief note, we provide a description of the ways in which AIMCo has developed and executed its GTAA process over the past few years, focusing our discussion along the four key themes highlighted above. In so doing, we offer our views for other institutional investors that are considering or preparing to launch similar GTAA or tilting policies. We conclude that executing a successful GTAA requires developing world-class talent, systems, process and governance.

Investment Beliefs

Before we describe AIMCo's GTAA process, it's useful to first offer some background on the thinking and investment beliefs that underpin this strategy.

- In a pension context, plans should use asset-liability risk. In practice, however, we are often prevented from doing so by restrictions on "leverage", or "borrowing", which is (usually erroneously) viewed as adding to asset-liability risk.
- A passive policy index fund's returns, net of implementation costs, should be the performance benchmarks for measuring management's effect on performance.
- A strong team, backed up by clean data and robust systems, can generate persistent outperformance relative to benchmarks.
- There are three ways active management can add to passive returns:
(1) Security selection, i.e. shifting capital within a passive asset class universe to assets that are expected to have a higher return on risk than passive investment in the benchmark,

- (2) Re-allocation from the nearest listed return/risk asset class combination to unlisted assets such as real estate, private equity, timberland and infrastructure, to capture an illiquidity premium, and
- (3) GTAA, moving asset weights away from those specified by the policy to capture time-varying returns on asset class risk.

It's also important to note that between 85% and 90% of the risk and return for a typical balanced stock-bond portfolio comes from policy asset allocation (Brinson, Hood, Beebower (1986, 1991), Ibbotson and Kaplan (2000)). Average active risk (the remaining 10%-15%) is small relative to passive risk. Concordantly, average return on active risk is expected to be small as well, which means that it is difficult to add significant return through management of active risk.¹

These investment beliefs and facts have played an important role in our decision to first seek approval for and then launch GTAA. In the sections that follow, we will describe how this GTAA strategy has been executed successfully.

Business Systems and Data Quality Pre-requisites for GTAA.

Investment managers often neglect the need for high quality business systems and data. At AIMCo, we believe that we have to know where we are today in order to make effective decisions on where we should be tomorrow. As such, good investment systems and accurate data are necessary requirements in order for GTAA to have a reasonable chance of success.

AIMCo began its life in 2008 with business and risk systems that were either obsolete or non-existent. This is by no means an exception among institutional investors. As frightening as it may sound, it is not uncommon for organizations with hundreds of billions in AUM to be held together by spreadsheets. Multi-client organizations have to be especially careful that economies of scale in decision-making are reflected accurately in all client portfolios.

In 2009, we started addressing our system's issues. We soon realized that good systems are of no use without clean data. As astonishing as this may sound, the investment world lacks high quality vendor data. In an absurd twist away from how an efficient data delivery system should work, many institutional investors perceive their "superior" data cleansing algorithms as comparative advantages.

AIMCo's systems and data upgrades should be complete in late 2013. However, we already have "good enough" data and systems to be comfortable that we have a fix on where we are and can make effective decisions on where we should be going. The main weakness of our process is that – like most of our peers – we are still fixated on marginal asset allocation, as opposed to marginal risk allocation.

¹ To keep things simple in this note, we use standard deviation as a measure of risk, although in practice, we recognize the non-normality of tail risk by using Value at Risk and Expected Tail Risk. The appetite for incremental risk for active management can be established by measuring the risk associated with the most and the least risky acceptable asset mix from the range around asset mix. Incremental active risk is typically small, but because of significant diversification between active and passive investment decisions, the implied "standalone active risk" or tracking error is typically 2%-4%. If one can put together a team that has an annual asset class information ratio of 0.25 (persistent active return on risk (typically a second quartile manager), the addition to passive return can be 1%-2%, given an empirical 2:1 risk diversification across asset classes.

Building a Strong GTAA Team

Markets may not be efficient, but it is hard to make money with GTAA from their bi-polar tendencies. It is pointless to engage in GTAA without strong participation from the senior investment team, backed by good economic analysis and quantitative modeling skills. Ours is called the Tactical Risk Allocation Committee (TRAC), and it meets weekly to discuss new findings and consider and approve trades. TRAC is composed of the CEO, the EVPs for Public assets, Private assets, Venture and Innovation, as well as the Chief Risk Officer, the head of the Client Relations group, and our Research and Economics team.

Within TRAC, the rules of engagement are simple: all ideas are openly debated; proposals have to be backed by solid analysis, and even then mistakes are seen as an inevitable part of the process; and not everything has to pay off right away. In general, the TRAC team favors strategies that combine predictive factors into consistent statistical models to produce return forecasts, which can be tested historically for effectiveness in predicting market returns. This approach assumes systemic consistency over time, which is clearly an imperfect belief. But as one of our former colleagues put it: Models are to be used but never fully believed.

Risk has to be an input into the risk-return GTAA decision. We consider “normal” asset class risk and stress-testing, and spend considerable time pondering “unknown” risks. These evaluations of risk combined with return expectations form the basis for GTAA decisions that amount to spending money on insurance, while hoping the insurable event will not occur so our portfolios do well.

We also use a scorecard of economic, sentiment, and valuation indicators. Some of these measures lack timeliness. Some get more attention than they deserve, some combinations of indicators can give conflicting signals. This effort is still a work-in-progress for us at AIMCo.

Measuring Outcomes

To be sure, assessing the success of GTAA strategies necessitates the capability to accurately measure the outcomes from any GTAA decisions. At AIMCo, we achieve this by decomposing ex-post performance into the total active return above benchmark into the asset allocation and security selection effects. Overweighting asset classes with above-average benchmark performance results in a positive allocation effect. Any deviations from policy will result in a non-zero allocation effect, whether these positions were explicit TAA decisions or short-term asset mix valuation drift.

Meaningful calculation of the allocation effect can be achieved using well-known Brinson-Fachler decomposition. For one day, for an asset class, we have

$$\text{Allocation effect} = (\text{Pf weight} - \text{Bm weight}) \times (\text{Bm return} - \text{Fund Bm return}).$$

The formula is simple, but many details must be carefully considered for proper attribution, including dollar-weighted attribution, multi-level allocation decision attribution, and compounding.

Further, a significant portion of the AIMCo fund is comprised of illiquid asset classes – real estate, private equity, infrastructure, and timberland investments. Our clients want more of them, so policy weights are higher than the actual amounts invested in these assets. But, changing portfolio allocations quickly is not under AIMCo’s control, so calculating the allocation effect for these asset classes would be

meaningless. Our solution to this problem is “illiquid banking” – periodically making benchmark weights for illiquid assets equal to actual weights, and re-distributing the difference between stock and bond benchmarks where the actual assets are temporarily invested (“banked”). This results in an allocation effect close to zero, while still allowing us to keep all assets in the total fund attribution.

In sum, explicitly reporting the allocation effect gives critical feedback on whether this process is delivering value, reveals opportunities for improving performance, and offers a basis for incentive compensation. Recognizing the importance of timely investment performance reporting at AIMCo, we’ve established daily performance attribution, covering periods from one day to year-to-date.

Does It Work?

Most of the time, market valuations are not extreme enough to provide unambiguous signals (as they did in 1999) that a directional shift was a question of when, not whether. In those average environments, GTAA can add some value (nickels and dimes) by taking advantage of short-term imbalances and mispricing. However, once every decade or so, as in 2000 and 2007, GTAA can pay off in a big way, provided the right talent, systems, data and processes can provide the GTAA team with enough conviction to overcome fear of career risk in making decisions big enough to count.

At AIMCo, we used to lose money on GTAA because of weak systems, weak data, and slow attribution feedback. Today, we are adding 0.15% to 0.2% to total return, and feel comfortable taking bigger positions should a once in ten year extreme event present itself. In our experience, the key factor driving the success of our GTAA stems from the hard work we have done develop world-class talent, systems, investment decisions-making process and governance capabilities. Ironically, it’s these “mundane” factors that have helped to create some of the most value in our investment operations.

References

- Brinson, Gary P., Randolph Hood and Gilbert L. Beebower (1986) “Determinants of Portfolio Performance.” *Financial Analyst Journal*, Vol. 42, No. 4 (July/August):39-48.
- Brinson, Gary P., Brian D. Singer and Gilbert L. Beebower (1991) “Determinants of Portfolio Performance II: An Update.” *Financial Analyst Journal*, Vol. 47, No. 3 (May/June):40-48.
- Grinold, Richard C. and Ronald N. Kahn (1999) *Active Portfolio Management: A Quantitative Approach for Producing Superior Returns and Controlling Risk*. 2nd ed. McGraw Hill.
- Ibbotson, Roger G. and Paul D. Kaplan (2000) “Does Asset Allocation Policy Explain 40, 90, or 100 Percent of Performance?” *Financial Analyst Journal*, May/June 2000, Vol. 56, No. 3:16-19.