

# The Index Investor

*Why Pay More for Less?*

## Model Portfolio Update

The objective of our first set of model portfolios is to deliver higher returns than their respective benchmarks, while taking on no more risk. The benchmark for the first portfolio in this group is an aggressive mix of 80% domestic equities, and 20% domestic bonds. Through the end of November, this benchmark had returned (7.5%) in Canadian dollars, while our model portfolio had returned (15.4%). For the sake of comparison, we have also compared our model portfolios to a set of global benchmarks. In this case, the global benchmark is a mix of 80% global equities, and 20% global bonds. Through the end of November, it had returned (11.3%).

The benchmark for the second portfolio in this group is a mix of 60% domestic equities and 40% domestic bonds. Through the end of last month, it had returned (4.0%), while our model portfolio had returned (11.9%), and the global benchmark had returned (5.7%).

The benchmark for the third portfolio in this group is a conservative mix of 20% domestic equities and 80% domestic bonds. Through the end of last month, it had returned 3.1%, while our model portfolio had returned (7.3%) and the global benchmark 5.5%.

The objective of our second set of model portfolios is to deliver less risk than their respective benchmarks, while delivering at least as much return. The benchmark for the first portfolio in this group is an aggressive mix of 80% domestic equities, and 20% domestic bonds. Through the end of last month, this benchmark had returned (7.5%), while our model portfolio had returned (9.1%). For the sake of comparison, we have also compared our model portfolios to a set of global benchmarks. In this case, the global

benchmark is a mix of 80% global equities, and 20% global bonds. Through the end of last month, it had returned (11.3%).

The benchmark for the second portfolio in this group is a mix of 60% domestic equities and 40% domestic bonds. Through the end of last month, it had returned (4.0%), while our model portfolio had returned (3.7%), and the global benchmark had returned (5.7%).

The benchmark for the third portfolio in this group is a conservative mix of 20% domestic equities and 80% domestic bonds. Through the end of last month, it had returned 3.1%, while our model portfolio had returned 1.5% and the global benchmark 5.5%.

The objective of our third set of model portfolios is not to outperform a benchmark index, but rather to deliver a minimum level of compound annual return over a ten-year period. Thus far this year, our 12% target return portfolio has returned (11.7%), our 10% target return portfolio has returned (9.0%) our 8% target return portfolio has returned 1.4%, and our 6% target return portfolio has returned 3.0%.

## Equity Market Valuation Update

As we have previously noted, our valuation analysis rests on two fundamental assumptions: that over the long term, labor productivity growth in our six major regions will converge at 3.5% per year, and that the long term real equity risk premium is 4.0% per year. Given those assumptions, here is our updated analysis at 29 November, 2002:

Country	Real Risk Free Rate	Equity Risk Premium	Required Real Rate of Return on Equities	Expected Real Growth Rate*	Current Dividend Yield
Australia	3.23%	4.0%	7.23%	4.3%	3.7%
Canada	3.40%	4.0%	7.40%	4.1%	2.1%

Country	Real Risk Free Rate	Equity Risk Premium	Required Real Rate of Return on Equities	Expected Real Growth Rate*	Current Dividend Yield
Eurozone	2.88%	4.0%	6.88%	3.5%	3.2%
Japan	2.26%	4.0%	6.26%	3.2%	1.0%
U.K.	2.35%	4.0%	6.35%	3.5%	3.4%
U.S.A.	2.20%	4.0%	6.20%	4.4%	1.7%

\*This reflects not only 3.5% productivity growth, but also expected labor force growth.

Country	Implied Index Value	Current Index Value at 10/31	Current/Implied (productivity growth @3.5%)	Current/Implied (productivity growth at 2.5%)
Australia	264.20	209.22	79%	106%
Canada	129.96	204.23	157%	205%
Eurozone	113.59	119.98	106%	137%
Japan	25.57	78.24	306%	406%
U.K.	311.67	261.25	84%	113%
U.S.A.	361.88	383.17	106%	165%

In the table above, we have also included a column showing the valuation impact of reducing our long-term real productivity growth assumption from 3.5% to 2.5%. As you can see, depending on your view of future productivity growth, two of our six key equity markets still may be in undervalued territory, while Japan, despite its many falls, still seems overvalued, given its low dividend yield and expected growth rate.

## **Are We Headed Toward Global Deflation?**

Deflation is defined as a sustained decline in a broad measure of prices in a country, such as the consumer price index, producer price index, or gross domestic product deflator. Deflation's impact on an economy can be brutal. Falling prices increase the real cost of borrowing, thus causing cutbacks in both business investment and consumer purchases of durable goods and housing. Deflation also increases the real value of outstanding debt, on both business and household balance sheets. Some companies and people won't be able to service this increased debt load, and will go bankrupt. A wave of debt defaults in turn weakens those institutions that hold the debt, including banks and insurance companies. As a result of these impacts, domestic private sector spending declines. Financial markets are also adversely affected by deflation, with equities, corporate bonds, and real estate all tending to decline in value. Only government bonds benefit, as fear drives households and institutions to place more of their investment funds in this asset class. Finally, once an economy has entered the vicious circle of deflation, recent experience (particularly in Japan) suggests that reversing the process is no easy task.

With nominal interest rates at zero, real interest rates are negative – in other words, a dollar will be worth more tomorrow than it is today. Under these conditions, monetary policy loses much of its effectiveness (traditionally, rate reductions are expected to reduce the attractiveness of holding on to money, and thus to promote increased consumption, as well as to reduce the cost of new investment spending). This is known as a “liquidity trap” (for more information, see the article on liquidity traps in our May, 2001 issue). In a deflationary economy, the effectiveness of fiscal policy (that is, government tax and spending) may also be reduced. Specifically, in a deflationary economy, people receiving tax cuts may choose to save them or to use the funds to reduce their debt, rather than spending them on increased consumption or investment. Under these circumstances, effective fiscal policy needs to take the form of direct government spending on goods and services.

The great question confronting policymakers and investors today is whether or not the world economy is about to enter a period of global deflation. Before confronting that question, let's first take a quick look at the chain of events that has brought us to this point.

Through most of the 1990s, U.S. and European governments were focused on reducing inflation and maintaining economic growth in their respective economies. Deflation was thought to be a problem peculiar to Japan, where it was caused by that nation's unique economic problems and the political obstacles to resolving them.

During the 1990s, at the outset of the Clinton Administration, U.S. anti-inflation strategy switched from a loose fiscal policy/tight monetary policy approach, to tight fiscal policy/loose monetary policy. It was believed at the time that cutting the U.S. government budget deficit would lead to a fall in interest rates, and an increase in economic growth. Subsequent events proved that this assumption was correct. Had the resulting economic expansion followed the usual path taken by other business cycles after World War Two, faster economic and money supply growth eventually would have triggered increases in goods and services prices, and then in wage costs. To curb this increase in inflation, the Federal Reserve would have raised interest rates, which would have slowed the growth of economic demand.

But this time, however, underlying economic conditions had changed, and the path the expansion took was fundamentally different from anything that had been seen in the post-war years. To begin with, as a result of declining computing and communications costs, as well as trade reforms, many more U.S. industries found themselves exposed to global competition. Prices in these industries were no longer set by domestic supply and demand conditions, but by global ones. And global demand in many of these industries was growing much more slowly than it was in the United States. Moreover, many industries were also seeing new supply coming into the market, particularly from low cost producers such as China and other East Asian countries, where productivity was growing, and exports beginning in a broad range of higher value added industries (in

other words, more industries than ever before were finding themselves exposed to low cost competition from Asian producer).

These fundamental industry conditions severely limited the ability of U.S. producers to raise their prices, even as the U.S. economy grew at rates not seen in over twenty years. And the foreign exchange markets only reinforced this pressure. During the 1990s, foreign investors purchased large quantities of U.S. financial assets, believing that they would deliver higher total returns than their counterparts in Europe, Japan, or the emerging markets. The resulting net inflow of foreign savings was the counterpart to the net inflow of foreign goods and services into the United States, and together they drove up the value of the U.S. dollar versus many other currencies.

Thus, on the goods and services side of the economy, the U.S. appeared to have found the holy grail, the recipe for endless high growth with low inflation. This, along with the sharp fall in interest rates, led to an increase in U.S. equity valuations that eventually gained momentum and turned in a bubble (that is, valuation ratios far in excess of what “rational” models suggested was fair). To many people, this didn’t look like such a bad state of affairs. Corporations found their cost of capital sharply reduced, and they boosted their capital investment spending as a result. Households boosted their consumption and investment spending as the value of the financial assets in their portfolios rose. Countries outside the U.S. saw their exports rise, freeing them from the immediate need to make painful structural adjustments to their economies to increase domestic demand growth (e.g., labor market rigidities in Europe and bankruptcy reforms in Japan). As long as U.S. businesses and consumers kept on spending, everyone was happy. And then the whole game changed.

Maybe it was when newly public internet companies began reporting results that fell way short of the assumptions that underlay their lofty valuations. Or maybe it was when people began to notice that the telecommunications companies would not be able to finance the level of capital investment that was assumed in the valuations of the companies that supplied them. Or maybe it was the scandals. Whatever set it off the

change, the consequences came quickly. U.S. corporations moved aggressively to cut capital spending and shore up their balance sheets. Household spending growth slowed, but did not stop, as Federal Reserve interest rate cuts caused an increase in real estate valuations. Still, this was enough of a change to reduce export growth in other regions, and the European, Japanese, and emerging markets economies slowed down as a result. Given excess global supply conditions in many industries, the impact of this slowdown in global demand was quickly reflected in price levels. Japan's deflation worsened, Germany's annualized rate of inflation dropped to 1.1% (though the Eurozone's as a whole was still at 2.2%), and U.S. producer prices moved into deflationary territory. Clearly we are at an important juncture in the history of the world economy.

In the United States, the Federal Reserve (central bank) is very much aware of the problems that could be caused by a prolonged period of deflation. In June of this year, the it published a research paper titled "Preventing Deflation: Lessons from Japan's Experience in the 1990s" (Federal Reserve, International Discussion Paper 729). This paper noted that "failure to anticipate Japan's deflationary slump poses a cautionary note for policymakers". It went on to suggest that, "as interest and inflation rates move closer to zero, policymakers need to be especially sensitive to downside risk...and take out sufficient insurance through monetary and fiscal policy actions." If anything, the paper suggested it was better to err on the side of too much rather than too little stimulus, as "the impact of policy error is asymmetric; much greater on the downside than on the upside." As an example, it noted that "Japan's fiscal and monetary policy, while aggressive by traditional standards in the early nineties, should have been even more aggressive in an effort to prevent a deflationary slump." The Fed's recent history of aggressive rate cuts suggest that it has been taking these lessons to heart.

More recently, on November 21<sup>st</sup>, Federal Reserve Governor Ben Bernanke gave a speech to the National Economists Club titled "Deflation: Making Sure "It" Doesn't Happen Here." In his speech, Governor Bernanke noted that he was "confident the Fed would take whatever means necessary to prevent significant deflation in the United States, and, moreover, that the U.S. central bank, in cooperation with other parts of the

government as needed, has sufficient policy instruments to ensure that any deflation that might occur would be both mild and brief.” He went on to point out that, “the basic prescription for preventing deflation is straightforward, at least in principle: use monetary and fiscal policy as needed to support aggregate spending, in a manner as nearly consistent as possible with full utilization of economic resources and low and stable inflation.” He also confirmed his view that, “when inflation is already low, and the fundamentals of the economy suddenly deteriorate, the central bank should act more preemptively and more aggressively than usual in cutting rates.”

Finally, with respect to an economy which has, despite the best efforts of its policymakers, entered into a deflationary period, Governor Bernanke pointed out that, “a central bank whose accustomed policy rate (e.g., the federal funds rate in the United States) has been forced down to zero has most definitely not run out of ammunition,” and went on to cite a range of other policy instruments that could be used, including open market operations at long end of the yield curve (assuming those rates weren’t zero too), using non-govt instruments (such as private sector debt) in open market operations, and the purchase foreign government debt (which could lead to a fall in the U.S. dollar’s value in the foreign exchange markets).

The Federal Reserve is clearly very much aware of the challenge it is facing. So too are other central banks (for example, witness today’s 1/2 point rate cut by the European Central Bank, and the papers on the liquidity trap recently published by the Bank of England and the Bank of Canada). The question we must now address is whether or not they will succeed in keeping us out of a global deflation, and, if we fall into one, whether or not they will be able to get us out of it.

To do this, we’ll try to make strong arguments on either side of the issue. We’ll start with the arguments in favor of the proposition that the world is going to end up in a global deflation.

Let's start with the people who have been leveraging themselves higher and higher (based on the rising value of their homes) to enable themselves to keep spending at levels above their incomes, and in so doing keep the global economy growing: the U.S. consumer. With federal funds rates already close to zero, there is precious little room for rate cuts using "traditional" policy instruments. At the same time, the business sector shows no sign of increasing its spending; in fact, faced with higher health care and pension contributions, spending and staffing may be further cut back. In short, people whose houses have stopped rising in value, and who are nervous about whether or not they'll have a job in a month, never mind a wage increase, aren't going to keep spending. And if the U.S. private sector (businesses and households) doesn't keep spending, and the ability to service growing real debt burdens becomes harder, a fall in asset values (equities, corporate bonds, and real estate) can't be far behind. Not only will this further weaken asset values, but it may also seriously damage institutions (such as banks) that are critical to the implementation of monetary policy. Today, American bankers confidently say that we will avoid Japan-type problems, because they have enough capital, and have been careful enough in their risk management. We say: what about the problems that lurk in your derivatives portfolios, which will only get worse as the economy turns down, and traditional pricing relationships between asset classes go out the window (anybody remember Long Term Capital Management?).

Will an increase in foreign demand for U.S. exports make up for this slowdown in private sector spending? We believe this is unlikely, for two reasons. First, relative to Gross Domestic Product, U.S. exports are much, much smaller than consumer spending. Second, we assume that Japan's growth will be constrained by a continuing impasse over how to deal with all the bad loans still on the books of its banking system, while European governments will continue to resist passage of the structural reforms that are critical to increased domestic demand in this region. Moreover, their ability to undertake significant government deficit spending is constrained by the Stability and Growth Pact, which limits government deficits to a maximum of three percent of GDP. The Eurozone's largest economies are already close to this limit. Finally, cuts in interest rates may be of limited effect, for two reasons. First, even at low interest rates, businesses will

not undertake investments if they don't believe there will be demand for their products. Second, consumer spending is less responsive to housing market valuations in than it is in the U.S., for a variety of structural reasons (e.g., a higher percentage of renters in Europe, and less bank second mortgage lending by banks). In other words, if the U.S. heads into deflation, this scenario assumes that the Eurozone countries won't be able to increase demand in order to avoid the same fate.

But what if the U.S. simply tries to force this change upon its trading partners, so to speak, by talking down the value of the U.S. dollar versus their currencies? We believe this is unlikely to work, for three reasons. First, for all its problems, global investors are still likely to perceive U.S. dollar investments as more attractive than those in other currencies, particularly if we are facing global deflation. Second, when it comes to buying dollar assets, the key foreign investors are located in the same countries whose exports go largely to the U.S., and whose currencies are tied to the U.S. dollar. Unless you can convince investors in Asian countries outside of Japan and in China that a drop in the dollar's value makes sense, you are unlikely to achieve one. But let's assume that they do agree. This brings us to our third point: a drop in the value of the U.S. dollar would not only cause a fall in European and Japanese exports to the U.S. (and thereby cause a slowdown in their economies), but it would also expose their domestic companies to even greater import competition from Asian and Chinese producers. The net effect would be a strong negative shock to aggregate demand in Europe and Japan. Faced with this prospect, we believe it is far more likely that governments in these two regions would move toward some type of trade controls, rather than passively accept the pummeling of their economies.

This leaves deficit spending by the U.S. government as the best way to keep the U.S. economy from a sharp drop in demand, and a plunge into deflation. Under this scenario, we assume that even if the Republican U.S. Congress accepts the need for large scale deficits (something which ideology suggests is far from assured), they will only agree to provide it via tax cuts. We further assume consumers will save rather than spend these

tax cuts (or use them to pay down debt), and that they will therefore fail to keep demand high enough to avoid deflation.

Now let's move on to the arguments in favor of the proposition that we will be able to avoid a plunge into global deflation.

The easiest scenario is one in which the United States and other nations go to war with Iraq. This would force a sharp increase in direct government spending on goods and services, which would have a positive knock-on effect on business investment, employment, and consumer spending. To the extent that a war led to a sharp increase in oil prices, demand growth would be lower, but, beneficially, inflation would be higher (which would help move us away from the deflationary danger zone). Faster growth in the U.S. would lead to increased exports from Europe and Japan, not to mention Asian countries and China, which would lead to faster growth in these economies. In short, war with Iraq would probably help us avoid global deflation, but would still leave unresolved the underlying problem of having only a single growth engine (the U.S.) for the world economy.

The second scenario is more difficult to see actually coming to pass, although elements of it are already being floated as trial balloons in the press. In this scenario, the U.S., Eurozone, and Japan agree to a concerted increase in their respective money supplies (reflation), accompanied by a series of critical structural reforms, including steps to reduce European labor market rigidities, increase deficit spending there, reform the Japanese banking and saving systems, and revalue Asian currencies versus the U.S. dollar. At least in the United States, this approach has the political attraction of helping large number of voters and businesses sharply reduce the real value of the debt burden they have taken on over the past decade. It will therefore get an enthusiastic hearing in some quarters. Getting all the other parties to agree to this, however, seems very much a long shot. It seems more likely to us that such an approach will not work until after the world's economies have had a caustic taste of deflation. And absent a war with Iraq, it seems increasingly likely that that is what we are going to get.

## **The Financial Scandal Nobody Wants to Talk About**

[The following is an editorial written last month by Susan Lee Miller. We thought our subscribers would find it interesting, and useful to give to their friends who still insist on the virtues of active management...]

Amid all the talk and reporting over the past year about Enron, WorldCom, and Wall Street analysts, one of the biggest financial scandals has gone almost unnoticed. By encouraging the use of actively managed mutual funds instead of index investments, the financial services industry is costing investors almost forty billion dollars each year in the United States alone. On a global scale, the cost is even higher.

To better understand this problem, think of a person sitting at the kitchen table trying to decide where to invest their retirement savings. He or she is faced with a mountain of advertising and marketing information about different mutual funds, much of which focuses on their respective investment objectives and historical returns. Some of them are index funds, whose objective is to match the average return for a given class of assets (for example, U.S. equities). Most of the funds on offer, however, are actively managed, which means that they attempt to deliver returns that are greater than their asset class average, through some combination of market timing (switching the fund's assets between equities and cash) and security selection (picking investments that will perform better than the asset class average).

To decide between investing in an actively managed fund or an index fund, our friend at the kitchen table has to ask herself two questions. First, how likely is it that the actively managed fund will outperform the index fund over the next ten or twenty years? Second, is it possible to identify future actively managed winners today?

Most studies that have examined the first question have found that very few actively managed funds outperform index funds over long periods of time. A recent study\* looked at the causes of this underperformance. To active managers' credit, it found that on

average, the stocks held by mutual funds outperformed the broad market index by about 1.3% per year between 1975 and 1994. However, the mutual funds themselves actually underperformed the broad market index by an average of 1.0% per year. What accounts for this 2.3% difference? First, the broad index, by definition, is always fully invested in stocks while mutual funds are not. This "cash drag" accounts for 0.7% of the funds' underperformance. The remaining 1.6% is due to the expenses charged to manage and market mutual funds, (1.0%) and transaction costs related to their buying and selling of shares (0.6%).

However, compared to the average mutual fund, index funds are much cheaper to run. The operating expenses charged by the largest equity index funds amount to around .20% of their assets, or .80% less than the average mutual fund. Index funds also have lower transaction costs, because they don't buy and sell shares as often as actively managed funds. In this case, the difference amounts to about .50% per year. At the end of August 2002, the market value of U.S. equity mutual funds was about 2.8 trillion dollars. The 1.3% difference in operating expenses and transaction costs therefore amounted to about 36 billion dollars per year. If this analysis isn't bleak enough, remember that it doesn't include the impact of front end sales loads (which are charged on many actively managed funds, but very few index funds) or taxes (actively managed funds typically generate higher taxable income for investors because they trade the assets they hold more frequently than index funds). In summary, investors in actively managed funds on average pay more and get lower long term returns than investors in index funds.

Active managers usually respond to this argument by pointing to those investment managers (for example, Peter Lynch or Warren Buffet) who have succeeded in delivering above average returns over long periods of time. Our response is to ask them how much they invested with these managers twenty years ago. This brings us to our second question: is it possible to identify future actively managed winners today? The great majority of evidence suggests that superior past performance does not persist into the future, which makes it extremely difficult, if not impossible, to pick future winners in advance. For example, we reviewed the performance of 446 actively managed U.S.

equity mutual funds over the 1992-2001 period. We wanted to see if a fund's relative performance over the first five years of our sample could be used to predict its relative performance over the second five years. We found that only one fund whose performance was in the top ten percent of all actively managed U.S. funds over the first five years was also in the top ten percent during the second five years. Mutual fund prospectuses aren't kidding when they say that past performance is no guarantee of future success!

When you think about it, this really isn't a surprising result. To deliver above average performance, an active manager must have either information that isn't available to most investors, or a superior model for making sense of information that is widely known. In any given year, it is easy to see how this could happen. However, given the intensely competitive nature of the investment management business, maintaining these advantages over a long period is extremely difficult. Nevertheless, let's say it happens, and a manager delivers a few years of above average returns. What then? These days, the successful manager probably leaves the fund and goes off to run a private investment partnership (also known as a hedge fund) for far more money. But let's assume she stays with the mutual fund. As her success becomes well known, investors' funds pour in and the manager is faced with the challenge of profitably investing more and more money. She soon realizes that large investment opportunities offering above average returns are much harder to find than small ones. As a result, the return on the fund eventually falls back toward the market average (or below it). In short, successful past performance by an actively managed fund frequently brings about its own demise.

Nevertheless, despite the overwhelming evidence to the contrary, people still invest much more money in actively managed mutual funds than they do in index funds. Why does this happen? Three possible explanations come to mind. The first is that people are acting rationally: given their low levels of savings relative to their retirement income goals, they have no choice but to "swing for the fences" and hope that the active manager they entrust with their funds is the next Warren Buffet. The second explanation is that investors aren't acting rationally at all, and invest in active funds because they are

overconfident about their ability to identify managers who will outperform the market average over the long term. The third explanation is that investors' "financial advisors" are leading them astray, perhaps because actively managed funds generate much higher sales commissions than index funds.

A recent review by the U.K. Treasury\*\* made this case quite well. It found "a surprising predominance of active management, notably among advised sales [to individuals], where they comprise ninety seven percent of the total. The contrast with the institutional world is striking: in the UK, around seventy five percent of institutional funds under management are actively managed [the rest are indexed], while in the US it is only sixty percent. This discrepancy is hard to justify, given that institutional investors typically have much greater resources and expertise in the form of professional staff and dedicated investment consultants to devote to identifying superior active managers." In a great bit of British understatement, the report concluded that "it would be implausible to attribute this preference for active management, which is materially greater than that demonstrated by institutional investors, to superior expertise on the part of advisers to individual investors."

Whatever the cause of investors' behavior, their heavy use of actively managed mutual funds imposes a large cost on the economy. Apart from the annual transfer of wealth from individual savers to active managers, we fear that actively managed funds' relatively poor investment results will eventually lead to calls for higher Social Security (public pension) benefits rather than income reductions by disappointed Baby Boomer retirees. Unfortunately, all of us will be called upon to pay the higher taxes this will require. This brings us to the question of why so few people up to now have called attention to this scandal. Cynically, one might think that few publications wanted to offend their big advertisers from the financial services. Alternatively, one could speculate that the euphoria of the bubble years made people less sensitive to the fact that they were vastly overpaying for the average returns being earned by actively managed mutual funds. Whatever the reason, it is now time for this scandal to get the full attention it deserves.

\*"Mutual Fund Performance: An Empirical Decomposition into Stockpicking Talent, Style, Transaction Costs, and Expenses", by Russ Wermers. Journal of Finance, August, 2000.

\*\*The Sandler Review of Medium and Long Term Retail Savings in the UK. Published by HM Treasury in July, 2002.