

Inflation-Linked Bonds

Source: 1996 2Q *TIFF Funds*

No part of the Quarterly Reports published since TIP's inception in 1994 has elicited more feedback or requests for reprints than Why Not 100% Stocks? — a dialogue on the pros and cons of an all-stock approach to asset allocation that appeared in this space 15 months ago. Conversations with those requesting reprints suggest that the dialogue's popularity stems from both the universality of asset allocation as a policy concern and from our conspicuously transparent effort to present multiple points of view. This quarter we revert to the dialogue form to discuss a topic that has generated perhaps more heat than light since it crossed the threshold of investors' consciousness earlier this year: the U.S. Treasury's proposal to issue inflation-indexed (aka inflation-linked or I/L) bonds. As with our earlier dialogue on stocks, the following conversation attempts to synthesize the chief arguments for and against the proposed bonds — from both an investor's and a taxpayer's perspective. Patriotic sentiments aside, these two perspectives are diametrically opposed: if the I/L bonds prove to be superior investments, then by definition they will have increased the government's borrowing costs, and vice-versa. To be sure, not everyone equates Uncle Sam's pending issuance of I/L bonds with the start of a new and very high stakes zero sum game, least of all our first disputant Mr. Nibur, a foundation trustee who supports enthusiastically the Treasury's proposal. Our second disputant, Mr. Tekram, is a money manager (and non-American) who seeks more information before deciding whether the new bonds are a good idea for investors or Uncle Sam. [1]

N = Mr. Nibur (trustee); T = Mr. Tekram (money manager)

A New Asset Class?

N: Throw out the rule book on asset allocation — the Treasury's new inflation-linked bonds are going to change forever the way serious money gets invested.

T: That assumes that the Treasury will actually fulfill its promise to issue I/L bonds later this year — and that it will issue a lot of them over time.

N: What makes you think the Treasury won't follow through?

T: Some people think the Treasury's proposal is just an election year trick aimed at alleviating baby boomers' growing fears that Social Security won't be there when they need it.

N: Nonsense. If the Treasury were trying to buy votes in November, why would it postpone the first I/L auction until after the election?

T: I heard the first auction could actually occur as soon as October. But perhaps the Administration won't want to risk undermining whatever political support the Treasury's

proposal has elicited by conducting the first I/L bond auction prior to the election. It could go very badly.

N: How could it go badly? For long-term investors, I/L bonds are the greatest thing since sliced bread.

T: How do you know? They haven't been priced yet.

N: True, but in theory you're talking about a new and very exciting asset class.

T: Not by my lights. Depending on how they're structured, the new bonds may not satisfy any of my three tests for determining whether an asset class belongs in my clients' portfolios on a more or less permanent basis.

N: What are the tests?

T: First, to avoid getting tangled up in a market that can be readily manipulated, the asset in question has to be available in large quantities. Second, it has to be priced in a manner that provides a competitive rate of return to my clients, all of whom are tax-exempt investors. Third, the asset must have fundamental attributes that lead me to believe that its correlation with the other asset classes in which we invest is low or negative.

N: I can see why you don't invest in paintings or baseball cards. But if you truly practiced what you preached, you wouldn't invest in conventional Treasuries either, at least not on a permanent basis.

T: What makes you say that? There's certainly enough of them out there; they're priced to provide a competitive return to tax-exempt investors — unlike municipal bonds, for example; and they provide important diversification benefits.

N: The heck they do! The best studies I've seen indicate that when equities do poorly conventional bonds tend to do poorly also. [2] That would be fine if bonds produced decent returns, but they don't. Over the last 30 years, for example, conventional domestic bonds have produced an average real return of just 2.7%, and the 2.7% itself has been anything but stable: one-third of the time it either plummeted into negative territory or soared above 6%. That's not a very impressive risk/return ratio, especially when you consider that stocks have produced almost twice as much growth in purchasing power terms. [3]

T: You sound like the fellow from Missouri who wants to stop buying earthquake insurance on grounds that there hasn't been an earthquake there in decades.

N: Missouri? Why would someone living there waste money on earthquake insurance?

T: Because Missouri happens to be one of the highest risk spots in the U.S. for a truly major quake, and the longer the quake is delayed, the worse it will be when it hits.

N: I can't believe Missouri is earthquake-prone. But even if it is, what does that have to do with bonds?

T: A properly structured bond portfolio is the best hedge available against a major deflation like the 1930's. Of course, to provide a reliable hedge, the bonds have to be intermediate or longer-term, high quality and non-callable.

N: You mean they have to be precisely the types of bonds that have hung like millstones around institutions' necks for decades.

T: Perhaps, but that's because the event they're designed to hedge against — a deflation-induced collapse in stock prices and dividend yields — hasn't occurred for sixty years. Unfortunately, the more improbable deflation becomes in investors' eyes, the more probable it will become in fact, because people will arrange their affairs as if it could never happen.

N: True. But isn't cash a pretty decent deflation hedge? More to the point, won't the Treasury's new indexed bonds be a decent deflation hedge also? Indeed, the reason that I and others who've looked at the Treasury's proposal find the new bonds so appealing is because they'll undeniably protect investors if inflation is high and accelerating, and they'll likely do at least as well as cash if inflation is subdued or even negative.

T: If what you've just said is true, then issuing such bonds has got to be one of the dumbest things the government has ever done. But let's come back to the political aspects of issuing I/L bonds later. What makes you think they'd hold up so well in a disinflationary or deflationary environment?

N: I'm not saying that they'd soar in price under such conditions — as a conventional deflation-hedging bond portfolio would — but they'll do at least as well as cash, which will help cushion losses on the equity portion of the portfolio.

T: Not necessarily. Keep in mind that the essence of an inflation-linked bond is the theoretical guarantee that its owner will earn a positive real or inflation-adjusted yield. For example, Uncle Sam might issue 10-year I/L bonds entailing the payment of periodic interest plus a terminal payment summing to a positive spread of, say, 3% over CPI inflation for the decade in question. Assuming the government doesn't default, someone who buys the bond when it's issued will earn the specified 3% real return, just as they were guaranteed to earn a nominal return of, say, 7% on a conventional 10-year Treasury issued when 7% was the going rate on 10-year Treasuries a few months ago. But — and it's a big but — just as a conventional Treasury bond fluctuates in price in response to changing nominal bond yields, an I/L bond will fluctuate in price in response to changing real bond yields.

N: I see what you're driving at: when inflation is lower than investors have anticipated — as it would be during a disinflation or deflation — the real yields generated by conventional bonds would soar, and I/L bonds could get hammered.

Other Countries' Experiences with I/L Bonds

T: Hammered might be too strong a term, but there's no question that I/L bonds would underperform conventional bonds under such conditions. Look at what's happened in the U.K. since the Brits began issuing I/L bonds back in '81.

N: They have I/L bonds in the U.K.?

T: As the Brits would say, 'Quite so' — and in Australia, Sweden, Canada and New Zealand too. [4] About 15% of the U.K. government's debt is inflation-linked, a figure that would undoubtedly be higher if I/L gilts hadn't proven so disappointing to investors over the last 15 years. [5]

N: No surprise there: interest rates throughout the world have fallen dramatically since 1981, so you'd expect I/L bonds to have performed poorly.

T: True. Putting the point somewhat differently, the U.K. government made a big bet in the early '80's that the inflation premium demanded by bond investors at that time was unjustifiably high. It was high because the 1970's were disastrous for bond investors, with real yields — defined as the difference between nominal yields and actual inflation — plummeting as inflation spiraled upward. Indeed, bond investors were so skittish when the U.K. first issued I/L gilts in 1981 that, when they first began trading, the implied real yield was just 2.5% — well below the real yield that conventional gilts had provided historically.

N: What is it now?

T: About 3.75%. Since an I/L bond's price is inversely related to its real yield, what this means in practice is that the total return which original holders of I/L gilts have earned has been hampered by a secular increase in real yields. As if that weren't enough, the inflation premium embedded in bond prices has plummeted since 1981, and these twin forces have caused I/L gilts to dramatically underperform conventional gilts.

N: How much pain have original holders of the U.K.'s I/L gilts suffered?

T: Again, pain is perhaps too strong a term, because they haven't actually lost money. However, over the fifteen-and-a-half years since January 1982, they've earned a total return of about 190%, or about 7.1% per year, versus a total return on conventional gilts of about 480%, or about 12% per year.

N: Ouch! What you're saying is that the U.K. government won its bet — big time.

T: It sure did. In fact, the I/L gilts that the Thatcher government issued back in the early '80's were so richly priced when first issued that they've proven to be a lower cost source of financing for the U.K. government than the British equivalent of T-bills.

N: You mean the I/L gilts have underperformed what we would call "cash"?

T: Indeed they have, by about 2.7% per year. Of course, that's not surprising, given the unexpectedly steep decline in inflation since 1981.

N: By "unexpected," you mean that the poor folks who bought I/L gilts in the early '80's expected inflation to keep spiraling upward.

T: More to the point, the nominal yields demanded by folks investing in the U.K. equivalent of short-term T-bills over this time period proved to be unjustifiably high (about 9.8% annualized return since 1982) in relation to actual inflation (about 4.3% annualized). By the way, over the same 15 1/2 years, U.K. stocks produced an annualized total return of about 17%. [6]

N: Let me get this straight: I/L gilts have underperformed not only stocks and conventional bonds but so-called cash also?

T: Yes, which explains why they represent only about 15% of the U.K.'s outstanding debt. No one wants to own the things!

N: Come now — someone has to own them.

T: Of course. In fact, that's one of the problems: I/L gilts are so well suited to the needs of some investors — folks who care only about matching liabilities with assets, without regard to opportunity costs — that most of them are locked away in vaults. Consequently, the so-called free float (freely traded securities as a percentage of all I/L gilts) is very small, and they trade very unpredictably.

N: What about the other countries that you mentioned — how have I/L bonds fared in them?

T: As I said, several other countries have played around with I/L bonds, although in such small quantities and for so short a time period that the data aren't very meaningful. Excluding the U.K.'s roughly US\$57 billion of outstanding I/L gilts, the I/L bond market worldwide is between US\$8 and US\$13 billion, which is tiny. [7] Canada, for example, has about US\$3 billion of I/L bonds outstanding, but it started issuing them just five years ago, and the returns have been distorted by Quebec separatism and other political as distinct from monetary factors. The data from Australia, New Zealand and Sweden are equally sparse or suspect, although they do tend to confirm one unsurprising fact: relative to conventional bonds, I/L bonds tend to be less positively correlated. The evidence to date indicates that, relative to the stock markets of the countries in which they're traded, I/L bonds have a short-term correlation of 0.2 to 0.4, where 1.0 represents perfect

correlation. Conventional bonds exhibit higher short-term correlations with stocks — at least 50% higher in most countries.

N: In other words, I/L bonds satisfy at least one of your three tests for determining whether an asset class belongs in your clients' policy portfolios — a low or negative correlation with other major asset classes. As for the other two tests — a competitive rate of return for tax-exempt investors, and adequate liquidity — the scuttlebutt I hear is that the Treasury is very sensitive to these two concerns also.

T: Maybe so, but you wouldn't know it from the Treasury's public utterances. The Treasury's public position is that issuing I/L bonds will reduce Uncle Sam's borrowing costs. That will be true only if the real yield offered to investors by the new bonds is less than the real yield the government would otherwise pay if it borrowed via conventional means over a comparable time period.

Risks and Expected Returns of U.S. I/L Bonds

N: What you're saying is that, just as it is was impossible to state with certainty in 1981 that the U.K. would reduce its borrowing costs by issuing I/L gilts, it's impossible to state with conviction today whether the Treasury's move is well or ill-timed.

T: Exactly. Also, keep in mind that the concept of a so-called real yield is a very slippery one indeed. If I buy a conventional Treasury that yields 7% at a time when inflation is running at 3%, my apparent real yield is 4%. But my actual real yield will depend on cumulative inflation over the bond's life.

N: Of course, but that's exactly why the Treasury's new I/L bonds will do well: they shift purchasing power risk from the investor to Uncle Sam.

T: Yes and no. If you buy one of the new bonds at their initial auction price and hold it to maturity, your returns will almost certainly keep pace with inflation — unless, of course, the Treasury picks as its inflation index a barometer whose composition differs materially from the liabilities you're trying to hedge against.

N: If the Treasury's aim is to appeal to the broadest array of investors, won't it use the Consumer Price Index (CPI) as its inflation barometer?

T: Using the CPI might very well maximize the number of investors willing to give I/L bonds a fair hearing, but it won't necessarily maximize the dollars allocated to such bonds. A lot of folks think the CPI is seriously flawed.

N: How so?

T: For one thing, the CPI is highly susceptible to short-term revisions, which could make administration of an I/L bond scheme linked to the CPI a nightmare. More importantly, a lot of folks think the CPI dramatically overstates the country's true inflation rate. If one of

the chief arguments in favor of I/L bonds is their potential to reduce Uncle Sam's borrowing costs, it makes no sense to use an index that overstates inflation.

N: I'm surprised to hear you say that. Won't the all-knowing, all-seeing "market" that you so fervently worship simply adjust for an overstated index?

T: Good point. If the index is overstated, investors will simply price the bond's implied real yield at a lower level. Of course, if you extend your logic to the extreme, you could pick just about any index: CPI (technically, the CPI Urban Areas Index); Core CPI (CPI-U less energy and food); the Employment Cost Index; the GDP Deflator; you-name-it. The key point is that, whatever index it adopts, the Treasury has simply got to make sure that I/L bond payments are not subject to ex-post revisions, because that would drive investors and traders absolutely crazy.

N: All this talk about indices is driving me crazy! [8] Before we got off on that tangent, you were arguing that someone could plunk their dough into I/L bonds and actually lose purchasing power. How?

T: Even if the inflation barometer that the Treasury selects mimics an investor's liabilities fairly closely, selling I/L bonds prior to their maturity could produce a negative real return. All it would take for this to happen would be an ill-timed purchase at a time when the implied real yield is depressed (i.e., I/L bond prices are high) followed by an equally ill-timed sale when the implied real yield is inflated (i.e., I/L bond prices are low). I/L bonds do not repeal the first law of investing: buy low, sell high.

N: I agree that I/L bonds could bounce around a bit — perhaps even more than theory suggests if the Treasury issues a small amount at the outset — but they're going to be a lot less volatile than conventional bonds.

T: Not necessarily. A lot depends on the specific form or forms of I/L bonds that the Treasury issues. One model would be Canada's, which uses an intuitively appealing method to make I/L investors whole: if an I/L bond's coupon at issuance is set at 4% — reflecting the market's required real return — and inflation is 3% in Year 1, then the bond's principal value is adjusted upward from \$100 to \$103 at the end of Year 1, and the 4% coupon is adjusted upward also (from \$4 in Year 1 to 4% of \$103 or \$4.12 in Year 2).

N: Simple enough. I assume that the U.S. will follow in Canada's footsteps.

T: If it does, it will undermine one of the chief arguments in favor of issuing I/L bonds: that they will help policy-makers more accurately gauge financial markets' expectations of inflation.

N: I thought that one could already gauge such expectations by studying the yield curve for conventional bonds — the term structure of interest rates.

T: Not so, for a host of reasons that I won't bore you with. The chief problem is that comparing yields on conventional bonds that have different coupon rates is like comparing apples to oranges. Savvy investors can deal with the problem by referencing prices in the so-called swap market, but it's not an easy task, and the problem doesn't go away if the Treasury issues I/L bonds modeled along Canadian lines. However, the problem does go away if, in addition to Canadian-style I/L's, the Treasury issues a continuous series of so-called zero coupon inflation-linked bonds. Without getting too technical, what policy-makers would then do is compare the real yields implied by the market prices of these zero coupon I/L issues to the nominal yields implied by the market prices of so-called Treasury strips (bullet payments created by stripping periodic interest payments from conventional Treasury notes and bonds).

N: Strike what I said about copying the Canadian model. Sounds like the zero coupon I/L's would be a better idea.

T: Not so fast. As you may know, zero coupon bonds pose problems for taxable investors, because the accretion in value that they generate creates taxable income unaccompanied by cash flow to pay the tax man. Of course, zeroes aren't the only inflation-linked issues that pose tax problems, because any inflation adjustment that is not actually paid out by the Treasury must nonetheless be taxed, or else a tax deferral opportunity could be created. Also, it's important to note that even if the Treasury's new inflation-linked bonds are not structured as zeroes, their duration or sensitivity to changes in real yields will be unusually long relative to their stated maturities. That's because the most important inflation adjustment comes when the bond matures, effectively elongating the time period investors must wait to be made whole.

N: Goodness, this is more complicated than I thought.

T: You ain't heard nothin' yet. In addition to the Canadian model and so-called zeroes, the Treasury is also considering a model that would appeal especially to retirees: an I/L bond that would pay both interest and principal regularly, all on an indexed basis. A self-amortizing instrument, if you will.

N: Gee, I like that idea best of all — it'll work well for people saving for retirement, and also for institutional investors who need steady cash flow: endowments, foundations — that sort of thing.

T: Perhaps, but there's no way that kind of bond could be stripped, and the tax problems associated with it are mind-boggling.

N: What about a very straightforward floating rate note whose principal value would be reset to par, say, every year?

T: That's exactly what the folks at J.P. Morgan Securities have proposed to the Treasury: an inflation-linked floater whose coupon would be reset to some spread over inflation.

The spread would represent the real yield, and the coupon would therefore provide the holder with both an inflation adjustment and a real return.

N: With that kind of protection, the bonds probably won't fluctuate very much in price.

T: True, but the flip side of that argument is that, with so much risk shifted from the investor to the Treasury, indexed floaters probably won't provide much of a real return either. Institutions might consider holding them as cash substitutes, but they're not going to hold them as bond or stock substitutes, and the Treasury could do a real disservice to the public by encouraging citizens to shift their retirement assets into instruments that don't have a snowball's chance in hell of providing the growth needed to finance a comfortable retirement.

Potential Demand for I/L Bonds

N: Wait a minute. I thought the Treasury's new I/L bonds are targeted primarily at individual investors.

T: I hope this isn't the first time you've encountered an investment being marketed to folks who don't need it!

N: What about Social Security deposits? If the government lets taxpayers assert greater control over how their Social Security deposits are invested, won't I/L bonds fit the bill quite nicely?

T: I doubt it. As we've discussed, it's very difficult to structure I/L bonds in a manner that will make them appealing to both institutions and individuals, unless of course the offering prices are set so low that whoever is lucky enough to buy them right out of the box will earn windfall profits regardless of their tax status.

N: You mean someone could earn windfall profits on newly issued Treasuries? I thought the only IPO's that produce windfall profits are stock offerings, and that the best of those are reserved for congressmen and senators!

T: Don't laugh. One of the reasons the U.K. has had such a rough time with its I/L bonds is because a lot of people got burned when they first came to market. They were priced way too richly at the outset, and traded down rather sickeningly after not too many months. The same thing happened in Canada and New Zealand when those governments first issued I/L bonds.

N: But that's the exact opposite of what happens with a hot IPO: folks lucky enough to get an initial allocation make windfall profits because the initial offering price is too low — not too high — and the shares trade sharply higher in the secondary market. I can't believe the Treasury wouldn't do what astute CFO's do and leave a little something on the table so that early investors won't get burned.

T: Easier said than done. Given the ease with which even massive positions in essentially default-free Treasuries can be hedged, you can be pretty sure that if the Treasury does indeed leave some extra plums on the table for early buyers of its new I/L bonds, the extra plums will get eaten primarily by investment banks and hedge funds. My sources tell me that the Treasury is thinking of an initial package of I/L bonds totaling about \$8 billion. That may sound like a lot of money, but with appropriate hedges in place the entire \$8 billion could be absorbed by just a handful of institutions — if the bonds are priced low enough to make the trade interesting to them.

N: That might've been true a few years ago, but after the Orange County and Piper Jaffray debacles I doubt that there are many players out there willing to take a massive leveraged position in bonds, even if they're Treasuries.

T: The reason Orange County went bust is because the "manager" running its portfolio flunked Math 101: if you lever a portfolio of volatile assets to a sufficient extent, you're guaranteed to go bust even if the assets are destined to outperform your cost of capital by a large margin over the long term. It's a mathematical certainty. The intriguing thing about I/L bonds is that their low volatility relative to conventional bonds could create a huge arbitrage opportunity for some investors: borrow at the short end of the yield curve — at real rates that, based on historical norms, should be lower than the real rates generated by I/L bonds — and invest the proceeds in the newfangled bonds we've been talking about.

N: That strategy won't work unless the investor is a triple-A credit, because the risk premium built into the short-term borrowing cost could wipe out most of the spread that the investor hopes to pocket.

T: You'd be surprised at how cheaply some institutions can borrow money, especially if their creditors know they have good risk controls in place. The real question isn't whether people will arbitrage the new bonds, but whether the Treasury will structure its new bonds in a manner that will enable savvy investors to earn consistent arbitrage profits.

N: Which of the models we've discussed is the Treasury leaning towards?

T: The Treasury won't say, and its views have been known to change rapidly, but I understand it's leaning toward the Canadian model. Of course, whatever model the Treasury adopts, it's going to have to permit its I/L bonds to be stripped (or reconstituted), so in practice at least two and perhaps more forms of I/L Treasuries will exist simultaneously.

N: Would the Treasury's adoption of the Canadian model be good or bad for your tax-exempt clients?

T: Not clear — not until we have more details. Because the Canadian model may be less appealing to retirement investors than alternate schemes, I/L Treasuries structured along

Canadian lines could better satisfy one of my three tests for determining whether an asset class merits a more or less permanent place in my clients' policy portfolios.

N: You mean the pricing test — is the asset priced in a manner that will generate a competitive rate of return for long-term tax-exempt investors?

T: Exactly. We're willing to own just about any asset on a short-term basis if the price is low enough — muni bonds, for example — but it makes no sense for a tax-exempt investor to make a permanent commitment to assets whose prices are set primarily by taxable investors. [9] And it makes no sense to make a permanent commitment to an asset class expected to produce a zero or even negative real return unless you're certain that its correlation with other assets you hold is negative.

I/L Bonds vs. Alternate Inflation Hedges

N: You're not suggesting that inflation-linked bonds will produce a negative real return, are you?

T: No. I was taking a veiled stab at institutions who've included physical commodities in their policy portfolios based on the assumption that such assets will produce positive real returns over the long term.

N: Actually, some boards on which I sit are considering a policy allocation to commodities, possibly to the exclusion of an allocation to I/L bonds. What makes you think commodities produce a negative real return over time?

T: They had better do so, or the real return assumptions underlying every institutional investment program I've ever seen will be violated. Unless you're expecting active management to produce a lot of value-added relative to a passive commodities pool, commodities are lousy long-term investments. They're lousy because productivity rises over time. Agriculture is a good example: crop yields per acre fluctuate from year to year, but the secular trend is up, up, up. Also, commodities suffer from substitutions (e.g., oil for coal) and inventions (e.g., fiber optics are displacing copper). If commodities broadly defined didn't fall in real terms over the long haul, it would be very difficult for the other things we care about (e.g., wages, profits and stock prices) to rise. So commodities flunk the returns test, even if inflation-linked bonds pass it, which we don't yet know. [10]

N: What about your other tests — adequate liquidity and correlations with other assets?

T: With respect to correlations, the answer is by no means clear: my own gut feel is that the correlation between I/L bonds on the one hand and stocks on the other is likely to be highly unstable, especially over the short term. If I had to guess, I suspect that the short-term correlation with stocks will be higher than those touting I/L bonds allege, while the longer-term correlation will be low or even negative. On balance, I'd be inclined to give I/L bonds at least a "B" grade on the correlations test — and possibly a much higher rank — versus a "C_i½" for conventional bonds. With respect to liquidity, we'll also have to

wait and see. The Treasury has said that if it issues I/L bonds it will issue enough of them to create a legitimate market, but issue size and liquidity are two very different things. If the Treasury's I/L's are structured in a manner that makes them appeal primarily to buy-and-hold investors, a lot of players who would otherwise trade them actively are going to stay on the sidelines, especially investment banks. That has certainly been the U.K. experience.

N: The last time I checked most investment banks were doing quite nicely, thank you.

T: Careful! You can criticize Wall Street all you want, but you can't have it both ways. If I/L bonds are going to play their hoped-for role as an accurate gauge of inflation expectations, then they must be "strippable" — and I need not tell you who will do the stripping.

N: Fleecing is more like it.

T: Don't be so quick to criticize private sector initiative.

N: I yield to no one in my commitment to free enterprise, but even you will admit that Wall Street has foisted on the public a lot of lousy investments over the years.

T: As if Uncle Sam hasn't! Ask someone who bought long Treasuries right after World War II and held them until maturity how eager they are to buy that issuer's securities again. [11]

N: That's precisely why the smart folks at Treasury are proposing to issue indexed bonds — to neutralize investors' lingering fears that the government will confiscate their wealth through inflation. Aren't you impressed that the Treasury is willing to put its money where its mouth is?

T: Its money? Try "the taxpayers' money."

The Political Aspects of I/L Bonds

N: What I meant to say is that the current Administration deserves credit for taking a bold step that could save the government billions of dollars in interest charges over the years.

T: That's not the way I view the Treasury's proposal. Keep in mind how the new bonds will likely work. Over the short- and perhaps even medium-term, they will undeniably lower Uncle Sam's interest tab. They'll do this by swapping the nominal yields paid by Uncle Sam today — yields that reflect a real yield requirement plus a sizable uncertainty premium — for the real yield alone. So far, so good.

N: And if the Federal government gets its fiscal house in order, then the Treasury's gamble will pay off big time, just as it did for the U.K.

T: True. But the more likely result is that the new bonds will merely continue a sorry practice that the government has pursued for decades: shifting the costs for today's deficits on to the shoulders of future generations.

N: Why do you say that?

T: Because the real genius of the Treasury's scheme — in a political as distinct from economic sense — is that it shifts into the distant future the costs of paying investors the uncertainty premium they will inevitably demand. More specifically, under the model most likely to be adopted by the Treasury, the new bonds would have the government compensate bondholders for inflation not on a primarily pay-as-you-go basis but rather when the bonds come due. In other words, if fiscal discipline wanes and inflation ratchets upward again, the invoice so to speak won't arrive for many years.

N: But that assumes the new I/L bonds will have a fairly long maturity.

T: Yes, but if they don't, why bother with them in the first place? Weren't you the one who was arguing earlier that the new I/L bonds are well-suited to the needs of long-term investors? I don't know many truly long-term investors who fancy the idea of taking a lot of rollover risk (i.e., the risk of being forced to invest in lower yielding instruments when the bond or bill in question matures). Of course, the Treasury knows all about rollover risk, having materially reduced the average maturity of the government's debt at what appears in hindsight to have been an outstanding opportunity to lengthen it (i.e., 1993)!

N: That may seem like a dumb move to you, but it was actually brilliant: it took a lot of pressure off the long end of the yield curve, which everyone agrees is the key determinant of how fast interest-sensitive parts of the economy like housing and capital goods can grow. Look at how many new jobs the Clinton Administration has created. The beauty of I/L bonds from a public policy perspective is that they'll give a further boost to economic growth by increasing our national savings rate.

T: I doubt it. Indeed, it's possible that the new bonds will reduce the economy's growth rate by diverting into the Treasury's coffers money that would otherwise flow into private investment.

N: Hold on — that makes no sense: the Treasury is going to borrow a set sum of dollars anyhow — whether via conventional instruments or its new I/L bonds — so how can the new bonds possibly siphon money out of the private sector?

T: You're right, they won't. What I meant to say is that if the new bonds appeal to enough investors, they could cause the cost of capital for for-profit business to increase, which could hamper rather than enhance economic growth. Moreover, even if the new bonds produce a net increase in savings — as the Treasury apparently hopes they will — private investment typically has a larger multiplier effect on GDP growth than government spending — even if such spending is on infrastructure and other so-called investments. Reduce private investment, and you reduce tax revenues, pure and simple. Reduce tax

revenues, and Uncle Sam's money woes get worse, not better. As the famed investor George Soros likes to remind people, the key to investment success is to understand not only the first order effects of likely events, such as the Treasury's issuance of I/L's, but the second and third order effects also.

N: You don't say? No wonder Soros is more successful than you! What your dim view of the Treasury's proposal ignores is that the inclusion of I/L bonds in portfolios will permit investors to invest a larger fraction of their wealth in equities, which has got to be good for the economy longer term. In other words, while the first order effect might be negative for private savings and investment, the second and third order effects should be sharply positive.

T: Maybe not. What you say is true only if several conditions hold. First, you assume that most investors allocate their assets with an eye primarily to short-term volatility. That may be true of some bureaucratic institutions that believe what their so-called efficient frontier models are telling them, [12] but most investors are more sensible than that. Second, to the extent investors (as distinct from savers) worry about risks, they tend to focus primarily on inflation risk. In doing so, sooner or later they talk themselves into a major commitment to stocks, because stocks are perceived as a good inflation hedge over the long haul. Offer them an alternative that's an even more reliable inflation hedge, and some of them are going to buy it, even if doing so entails an opportunity cost in the form of reduced real returns. That said, I have to give you credit for concocting a wholly new rationalization for today's lofty stock valuations — the argument that waves of new money will flow into the stock market when the Treasury introduces a competing instrument targeted at the baby boomers who have themselves pushed stocks to new heights! I haven't heard that one before!

The Bottom Line

N: One last question for you: are you going to buy some of the Treasury's new bonds for your clients, or not?

T: In all seriousness, I honestly don't know. With respect to that portion of my clients' portfolios allocated to bonds for deflation-hedging purposes, I'm not going to buy the new I/L bonds unless the Treasury adds a provision that allows me to "put" them back to the government (i.e., sell them) for at least par value in the event of a major deflation. Some people think such a "put" isn't worth much, because they don't expect to see the CPI drop at a faster rate than the real yields that I/L bonds will likely generate (i.e., 3-3.5%). But I like knowing that my insurance policy will pay off under true worst case conditions — that my I/L bonds will be worth at least par under deflationary conditions — and I suspect the Treasury will see the wisdom of including this safeguard in its I/L bonds. So some of them will undoubtedly wind up in so-called deflation-hedging bond portfolios, even though the long-term returns on I/L's will likely be lower than those generated by conventional Treasuries with comparable maturities.

With respect to that portion of my clients' portfolios held for total return purposes, whether we buy the new bonds or not depends entirely on their price, or rather on how their prospective returns stack up against competing alternatives at any given point in time. I can imagine circumstances where the new bonds' price precludes our involvement, and I can imagine circumstances in which they represent an opportunity to compound wealth comparable to the opportunity George Soros seized when he did battle with the Bank of England over the British pound in 1992. Indeed, given the ease with which savvy investors can lay off relevant risks, I'm virtually certain that the Treasury's introduction of I/L bonds will represent a terrific opportunity for at least a few skilled investors to make a huge amount of money.

N: Even if the initial offering price is high, as it was when the U.K. first issued I/L bonds in 1981?

T: Yes, even if the price is high, because the players I have in mind are equally adept at selling short or buying long, and all they really need to make big profits off I/L bonds is for I/L yields to differ materially from yields on conventional Treasuries with known attributes such as maturity and callability. That said, I don't expect the U.K.'s and other countries' initial experience with I/L bonds to be repeated here in the U.S. If anything, the economic environment in which the Treasury is launching its I/L bonds is the mirror image of the one in which the U.K. floated its first I/L 15 years ago. Plus, if the Treasury is foolish enough to auction the first I/L bonds this October — as rumors suggest it might — it might discover to its chagrin that uncertainty about the outcome of November's elections will outweigh the hoped-for enthusiasm of baby boom investors (and voters) for these new instruments.

N: You mean the first auction could go badly?

T: For the Treasury? Perhaps. For my clients? Probably not. Unlike the government, which must borrow, my clients do not have to lend, at least not to Uncle Sam. But we intend to monitor the situation carefully, and we hope to be ready to act if a compelling opportunity arises. As an aside, having spent a lot of time thinking about I/L bonds, we may make some opportunistic forays into this area even if the U.S. Treasury doesn't issue such bonds. U.S.-based investors buying non-dollar-denominated I/L bonds have to think carefully about the incremental currency risks — whether to accept it or hedge it — but if you can't get a handle on currencies you have no business playing in global bond markets, because they're opposite sides of the same coin.

N: Anything else to add?

T: Nope. That's the long and the short of it, if you know what I mean.

Endnotes

1. Our efforts to synthesize the arguments for and against I/L bonds have been aided materially by the many TIP money managers who responded enthusiastically to our

request for their opinions on such bonds, especially Aronson + Partners, Atlantic Asset Management, Fischer Francis Trees and Watts, Seix Investment Advisors, and Smith Breeden Associates. We also benefited greatly from conversations with Daniel Bernstein of Bridgewater Associates, a bond and currency manager that has done considerable work on I/L bonds. He can be reached at 203-762-8511 or bernstein@bwater.com.

2. The keenest student of such data, and the most thoughtful critic of investment policies entailing a permanent commitment to conventional bonds, is the NYC-based economist Peter Bernstein. Mr. Bernstein notes that in the 90 quarters since its inception that the S&P 500 stock index has produced a negative return, so too did conventional bonds 43% of the time (i.e., 41 times). The failure rate for conventional bonds as a diversifier rises to 54% for the 51 quarters since 1954 that stocks have produced negative returns (28/51), and to 54% (9/16) for the sixteen quarters since 1981 when the S&P 500 has produced a loss.

3. Careful students of market history recognize the need to adjust even long-term return studies to reflect valuation shifts, e.g., the upward revaluation of U.S. stocks between the S&P 500's inception in 1926 (when the Index yielded 5.4%) and the present (when it yields 2.3%) or the downward revaluation in bonds over the same time period (initial yield of 2.3% vs. present yield of about 7%). Peter Bernstein (see prior footnote) calculates that the "real real return" on stocks is lower than the roughly 6% indicated by unadjusted historical data, while the "real real return" on bonds is inherently unknowable, at least at present. It is unknowable because, in sharp contrast to the return history of stocks, bonds have produced widely variant long-term real returns, even after adjusting for valuation shifts: the real return on bonds was about 3.5% prior to World War I, then dipped to about 1.7% from 1926 to the late 1970's, and has obviously increased quite a bit since bond yields peaked in 1981. Ignoring these secular shifts, the very long-term average real return on bonds has been about 2.7%. This is still quite a bit lower than the "real real return" on stocks as calculated by Mr. Bernstein, albeit by a lesser margin than is reflected in the assumptions underlying most institutional investment programs. Readers interested in obtaining Mr. Bernstein's insightful research directly from its source may subscribe to his newsletter by phoning 212-421-8385. Neither TIFF nor anyone associated with it receives compensation of any kind from Mr. Bernstein or his firm. We're simply big fans of his work.

4. At least two so-called emerging countries have also issued a modest amount of I/L bonds (Argentina and Brazil). Although I/L bonds seem custom-tailored to the needs of regimes with dark inflationary pasts, the tendency of emerging economies to be commodity-based reduces the utility of I/L bonds as cost-reducing devices to the issuing governments. More specifically, yield spreads between emerging market bonds on the one hand and developed market bonds on the other tend to narrow when worldwide inflation is accelerating. They tend to narrow because investors perceive that rising commodity prices will enhance the creditworthiness of many emerging nations.

5. U.K. government bonds are often referred to as "gilts," a term derived from their historic convertibility into gold species or gilt.

6. U.K. returns and inflation data courtesy of Morgan Stanley & Co.

7. By way of comparison, the total outstanding value of U.S. government obligations exceeds \$3 trillion. With the Clinton Administration's decision to shorten the average maturity of this debt, Treasury debt issuance has ballooned to approximately \$2.5 trillion per year. Readers interested in understanding the risks of this strategy might consider renting the movie Rollover from their local video vendor. Cf. also the Mexican debt debacle, circa 1993-94. It is interesting to note that the German government decided only recently to initiate the issuance of short-term debt (i.e., bills and notes with maturities less than five years). Its past practice had been to rely exclusively on five and ten year maturity issues. The German government has long wanted to utilize short-term borrowings, but the Bundesbank objected on grounds that an active treasury bill market would weaken its grip on monetary policy. The counterargument, which prevailed, is that with the pending unification of European currencies, a paucity of short-term German treasuries would cause Euro-denominated funds to flow to financial centers outside Germany.

8. A complete discussion of alternate inflation indices lies beyond the scope of this dialogue. Suffice it to say that the arcane debate among economists about such indices is hardly irrelevant to institutions whose chief financial goal is to maintain endowment purchasing power while spending roughly 5-6% per annum. The magic of compounding ensures that even small data discrepancies — e.g., those caused by slightly variant weighting schemes in the inflation barometers being used — will produce staggeringly different outcomes over sufficiently long time frames.

9. Readers responsible for taxable portfolios should take comfort in knowing that, if inflation-linked Treasuries prove highly popular, state and local governments will likely issue their own I/L bonds, many of which will be tax-exempt.

10. The statement that commodities produce negative real returns over the long-term is sharply disputed by some observers, especially those whose incomes are tied to commodity plays. Proponents of commodities find support for their position in selected return series, which suggest that the continuous "rolling" of long positions in commodity forwards or futures produces decent real returns. But such studies tend to be highly time period-sensitive, and they assume that the backwardations/contagos witnessed over the last 10 or 20 years will recur. Backwardation occurs when the future price of a commodity is less than its current price; in a contago, the opposite is true. Oil excepted, most commodities display contago pricing more often than backwardation — an unhappy fact for investors seeking to earn a positive roll yield (i.e., to profit from backwardation by rolling into futures contracts whose prices are expected to rise relative to spot prices).

11. The annualized real or inflation-adjusted return on 30-year Treasuries purchased in 1945 and held to maturity was roughly -2%.

12. The defects of efficient frontier models are discussed in a TIFF monograph entitled Reflections on Investing. The assumedly low correlation between I/L bonds and stocks,

and the assumedly low volatility of I/L bonds relative to competing alternatives, causes naive efficient frontier models to heavily favor I/L issues. Indeed, if one relaxes the customary prohibition on leverage, most "state of the art" efficient frontier models will recommend a heavily leveraged position in I/L bonds. If such models can be believed, an institution could earn almost as much on a 2:1 leveraged I/L portfolio as it could on a 100% stock portfolio (see footnote 2), with 20% less volatility (16% annual standard deviation vs. 20%). Of course, if all investors acted on such data, I/L prices would increase to a level that would preclude such seductively smooth results.