

The

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The End of an Era?

Years from now, when we look back on 2009, it's likely that the Reserve Bank of Australia's October 6 announcement of a 25-basis-point interest rate hike will go down in history as the moment when the Great Easing ended.

Granted, Australia is but one country, ranking 19th in the world in terms of GDP, according to the CIA World Fact Book. But it's hard to miss the larger significance of its monetary decision this month, when the boys down under became the first central bank among the G20 nations to raise interest rates since the financial crisis began. And where there's one rate hike there's sure to be another, and another.

This isn't the end of the world, but we can't help thinking that a grand moment has arrived in the broad historical sweep of the money cycle. To which we pose the question: Did we just hear the faint thud of interest rates hitting a long-term secular bottom? The chronology of recent central banking actions around the world suggests the answer is "yes."

Consider that little more than two months before Australia's action, Sweden's Riksbank was the first central bank to drop the price of money into negative territory, breaching the so-called zero-bound line. By that standard, the two events represent book ends of monetary extremes. Indeed, Sweden's experiment with negative interest rates

will likely stand as the finale of a general decline in rates that began in the early 1980s. Meanwhile, barring an unexpected turn for the worse in the global economy, it also seems likely that Australia's modest tightening won't be the world's last.

The ramifications of what may be the start of a secular rise in the price of money remain fairly negligible at the moment. Certainly in the U.S. the odds are low for an imminent rate hike by the Federal Reserve. But neither is the zero-to-0.25% Fed funds target rate set in stone. Fed funds futures are currently priced in anticipation that Bernanke and company will slowly begin raising rates next year.

What's the relevance for managing multi-asset class portfolios? As we write, there's no obvious implication other than to be generally aware that the age of falling interest rates appears to be coming to a close. As forecasts go, that's hardly a radical notion. The trend of receding yields, after all, has been running for nearly 30 years, as Chart A on the next pages shows. Although Sweden reminds that hitting zero needn't derail the trend, the world economy is no longer in danger of succumbing to a global wave of negative interest rates.

At the same time, expecting rates to start moving up around the world is still expecting too much. A more likely scenario is the persistence of the status quo: low rates stay low...for now. But as the

Reserve Bank of Australia reminds, this too shall pass, and perhaps sooner than the crowd expects.

To some extent, low and falling rates have contributed to rising asset prices and otherwise offered cover for ill-advised financial decisions over the past three decades. The assistance has come erratically, sometimes fading altogether. Secular trends in the price of money are a bumpy affair.

Chart A



What's different now, in looking ahead into medium and long-term horizons, is the likely absence of low and falling rates as a general proposition. True, the markets have known periods of rising rates over the last 30 years, but they were short-lived episodes. Nor do we mean to suggest that the future will bring steadily rising rates, ascending to the old highs of the early 1980s.

But markets can no longer count on a broad, extended retreat in the price of money. The shift will change the profile of investing, perhaps only in subtle ways. Nonetheless, it seems likely that the margin for error in owning various types of risk will shrink, if only slightly.

Investing, in other words, will get tougher from here on out. But you already knew that. And if you didn't, the Reserve Bank of Australia's latest press release is a timely wake-up call. β

ANOTHER MONTH OF FUN

Everything was up in September...again.

September brought another barrel of stellar gains for the major asset classes, but the ink was barely dry on the month when doubts about the future revived. U.S. stocks shed roughly 2.5% on the first day of October, the steepest bout of selling since July.

Was all the talk of green shoots and economic revival a mirage? Were the bulls hoodwinked into thinking that the worst had past? No, not quite. In fact, the selling wave that opened the fourth quarter quickly evaporated in the days immediately following. As we write, the bears of October have made a hasty retreat after making some initial noise.

Nonetheless, the crowd's risk appetite may be vulnerable at some point after seven months of virtually non-stop fun. As we've been discussing for some time, what's needed to keep prices moving higher is convincing evidence that the economic recovery is fueled by more than government stimulus. As it stands now, the jury is very much out on leave and so a verdict could take a while.

As for September, well, it doesn't get much better. All the major asset classes scored gains last month, ranging from about 1% (U.S. investment-grade bonds) to nearly 9% for emerging market equities. With only a handful of exceptions, across-the-board gains have prevailed since March. The net result is a recent run of history that's long on hefty gains.

Consider our benchmark—BIR's Global Market Index, a passively weighted mix of all the major asset classes. GMI has climbed nearly 34% through September from the end of February. That's an extraordinary run for index that holds everything in a passive mix. All the more so when you remember that GMI's trailing 10-year total return is a relatively modest annualized 4.5%.

The implication: the spacious gap between the recent 34% surge and the longer-term 4.5% rise will narrow. The burden of this closing, we believe, will come from the 34% side of the ledger. In short, the foreseeable future looks set for something less flashy relative to the recent past.

As we wrote in the August issue of BIR, "the danger is mistaking an economy that's no longer imploding for one that's poised for a vigorous rebound." The caveat still applies, although it's still debatable if the crowd agrees or even recognizes the challenges that await in the recovery process.

The main problem remains the labor market, which at last count continues to shrink. The September employment report struck a familiar chord by dispensing a negative number: last month's nonfarm payrolls retreated by 263,000—the 21st consecutive month of red ink.

The negative aura in the latest jobs report stands in contrast to our broad economic measures that suggest recovery is underway (see Chart D on p. 18). Why the disconnect? That explanation is partly one of recognizing that employment tends to be among the last of the major economic series to rebound. Since the 1960s, the first monthly increase in nonfarm payrolls has come one to three months after the formal end of recessions, as dated by the National Bureau of Economic Research. By that standard, we might expect to see a monthly increase in payrolls before the year is out if—*if*—the recession is declared null and void as of September 2009, give or take.

But we should be cautious on this outlook for at least two reasons. One, it's not yet clear that the recession is over, even if the argument in support of this assumption has gained strength in recent months. Nonetheless, overt turning points in the business cycle are obvious only in hindsight.


Two, let's not forget that the Great Recession of late is notable for the unusually deep pullback in economic activity. Even if the recession ended today, reasonable minds might wonder if employment growth will return as quickly as it did in the post-recession periods of previous decades.

Our view is that employment will recover slowly, sluggishly and otherwise remain susceptible to retreats of some duration. That's hardly a radical forecast if you consider that the job destruction that began in January 2008 is the longest string of consecutive losses since the 1930s. More than 7 million employees have evaporated, or about 5% of

nonfarm payrolls as of December 2007, when the recession began.

This is a big hole in a consumer-dependent economy. It will heal, but not nearly as quickly or as easily as the potent market returns during March through September suggest.

The case for lowering expectations is all the stronger when we remember that nonfarm payroll growth had been slowing relative to post-recession runs of yore. Five years after the end of the 1981-82 downturn, nonfarm payrolls jumped by more than 16% (a gain of 14.6 million jobs). Five years after the end of the 1991 slump, payrolls were higher by 9.5% (a rise of 10.4 million). In the wake of the 2001 recession, nonfarm jobs advanced by less than 3% (or up by 3.8 million) after five years. If someone's advanced a persuasive case for expecting a break in the trend this time, we haven't heard it.

Does this mean that it's time to run for cover and dramatically pare back on risk exposure in our model portfolios? No, at least not yet. For the reasoning, read on. 

MODEL PORTFOLIOS

A bit of pruning in REITs.

September was another potent month of upside performance for all the asset classes. REITs were especially strong. In fact, after emerging market stocks, REITs have gained the most since we launched our model portfolios on January 31, 2009. That's one reason why we pared exposure in REITs at the close of September.

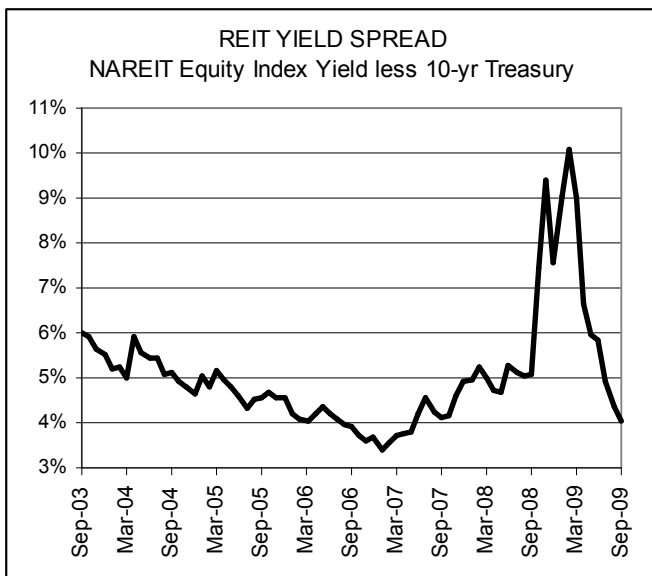
To be precise, we modestly lowered the allocation of REITs in our Aggressive/High Risk portfolio to 4.0% from the 5.6% that prevailed at the end of September before our adjustment. Recall that as of April 30, 2009, we raised the REIT allocation to 5.0% in this portfolio from the unadjusted 2.0%. As we explained at the time, the "richer yields" in REITs were attractive.¹

By comparison, REIT yields at the end of last month were at a modest spread over the benchmark

¹ "Model Portfolios," May 2009, BIR, p. 4.

10-year Treasury, as Chart B shows. The allure, in short, is gone. We still like REITs as a long-term holding, but we have no great expectations that returns will be extraordinary any time soon now that the dividend yield has returned to financial terra firma.

Chart B



The strength of the rally in real estate securities this year elevated the weight of REITs in the Aggressive/High Risk Portfolio to a degree that we're not comfortable exceeding, at least not at this juncture. The proceeds were moved to cash in this portfolio, which represented 5.4% of assets after the REIT sale.

Meantime, REIT allocations were left untouched in the Moderate/Medium Risk and Conservative/Low Risk Portfolios. Why? Primarily because the REIT allocations were already quite humble—under 3% in both cases. We're inclined to always hold a position in REITs in all portfolios and so we're not willing to cut already low allocations further.

Otherwise, we've left the asset allocations as is. Why? Because our analysis leans toward the view that the rebound in asset prices since the spring is primarily an adjustment reflecting the increasingly popular view that the economy dodged a bullet. Recall that back in the early 2009 the fear was widespread that a second Great Depression was in

the offing. Prices generally reflected that expectation. Investors were demanding higher returns (a.k.a. lower prices), to which we responded, to a degree, with allocations to risk.

Table 1

Total Returns through September 30, 2009				
Ranked by 1 month % total return				
Asset Class (index)	1 month	1/31/09 to 9/30/09*	YTD	3 yr*
Emerging Market Stocks (MSCI EM)	8.9	72.9	61.5	5.6
REITs (Wilshire REIT)	7.1	43.9	17.8	-13.7
High Yield Bonds (iBoxx High Yield)	6.0	30.3	38.6	4.3
Emerging Market Bonds (Citigroup ESBI-C)	4.8	26.2	28.5	7.0
U.S. Stocks (Russell 3000)	4.2	32.3	21.2	-5.1
Foreign Developed Mkt Stocks (MSCI EAFE)	3.8	43.0	29.0	-3.6
Foreign Dev Mkt Bonds (Citigroup WGBI ex-US)	2.7	11.9	6.7	10.1
Foreign Gov't Inflation-Linked Bonds (DB Global Gov't ex-US Inflation Linked Bond)	2.4	24.5	18.5	...
TIPS (Barclays Treasury TIPS)	2.1	7.7	9.5	5.6
Commodities (DJ-UBS Commodity)	1.6	15.2	9.0	-4.9
U.S. Bonds (Barclays US Aggregate Bond)	1.1	6.7	5.7	6.4
Cash (3-month T-bill)	0.0	0.2	0.1	2.9
Aggressive/High Risk Model Portfolio‡	3.6	26.5
Moderate/Medium Risk Model Portfolio‡	3.0	21.7
Conservative/Low Risk Model Portfolio‡	2.5	17.5
Global Market Index†	3.5	25.7	18.6	1.1

* 1/31/09 is the launch date of the model portfolios and so for comparison purposes this start date is offered for all the asset classes as well.

‡ Model Portfolios launched 1/31/09

† GMI is a passive, market-value weighted index of global asset classes (excluding cash), designed and calculated by The Beta Investment Report

• annualized

Today, of course, the outlook for the economy has improved. There are still concerns, as we discuss in Macro Machinations (see page 17). But certainly in relative terms, the vantage of early October 2009 is an improvement from the consensus view from this year's first quarter. As a result, risk spreads generally have returned to something approaching normal levels. That's true for REITs and it applies to other asset classes as well, as the various yield spreads on page 25 show.

Risk, in short, is no longer priced at extremes. Combining this state of asset pricing with our expectation that the economy, no longer on the brink of disaster but still facing challenges, leads us to more moderate asset allocations. Doesn't that imply that it's time to reduce risk allocations across the board? No, because we never went to extremes in our asset allocations in the first place. Cash, as a result, remains a substantial piece of the mix. With the benefit of hindsight, we should have been

aggressive. But ours is always a question of what to do today. Our general response for the moment: stand pat.

Table 2

MODEL PORTFOLIOS		
Asset Allocation as of September 30, 2009		
Aggressive/High Risk	Allocation %*	Change*
U.S. Equities	17.8	0.1
Foreign Developed Market Equities	24.9	0.1
Emerging Market Equities	6.9	0.3
U.S. Bonds	12.6	-0.4
Inflation-Indexed Treasuries	2.6	0.0
High Yield Bonds	3.1	0.0
Commodities	5.8	-0.1
Real Estate Investment Trusts	4.0	-1.4
Foreign Devlp'd Market Gov't Bonds	13.1	-0.1
Emerging Market Bonds	1.9	0.0
Foreign Gov't Inflation-linked Bonds	1.9	-0.1
Cash	5.4	1.5
Moderate/Medium Risk	Allocation %*	Change*
U.S. Equities	15.2	0.2
Foreign Developed Market Equities	23.5	0.2
Emerging Market Equities	5.7	0.3
U.S. Bonds	13.1	-0.3
Inflation-Indexed Treasuries	4.4	-0.1
High Yield Bonds	3.2	0.1
Commodities	3.8	0.0
Real Estate Investment Trusts	2.4	0.1
Foreign Devlp'd Market Gov't Bonds	6.4	-0.1
Emerging Market Bonds	2.1	0.1
Foreign Gov't Inflation-linked Bonds	2.0	-0.1
Cash	18.1	-0.5
Conservative/Low Risk	Allocation %*	Change*
U.S. Equities	13.5	0.2
Foreign Developed Market Equities	18.3	0.3
Emerging Market Equities	4.4	0.2
U.S. Bonds	13.6	-0.2
Inflation-Indexed Treasuries	4.6	0.0
High Yield Bonds	2.2	0.1
Commodities	2.9	-0.1
Real Estate Investment Trusts	2.4	0.1
Foreign Devlp'd Market Gov't Bonds	4.8	0.0
Emerging Market Bonds	2.1	0.0
Foreign Gov't Inflation-linked Bonds	2.1	0.0
Cash	29.0	-0.7

† Total allocations may not equal 100% due to rounding
 * Change from previous month, measured in percentage points: an allocation change from 10% to 11% would be a change of 1.0

Our asset allocations remain modest. Although all our holdings have run up in price over the last seven months, the diversification in our portfolios is broad.

The monetary and fiscal stimulus for the economy, meanwhile, remains potent. But the primary impact of this stimulus has already arrived. Asset prices have popped, although we shouldn't

confuse rescuing the economy from implosion with an imminent return to the golden days of pre-2007.

The scenario we anticipate is one of slow/sluggish growth in the months and quarters ahead for the economy, perhaps interrupted with something worse for a time. The recovery, in other words, will be weaker than the norm in the post-recession periods of past decades. That's a problem for asset classes if valuations are excessive. Instead, they're closer to fair value, perhaps modestly above.


The future, by our estimate, is one where asset prices tend to meander about a trading range. It's not yet obvious that the crowd recognizes that the recovery phase will be longer and slower than usual, but valuations don't look sufficiently elevated to warrant broad selling at this point. Meantime, price momentum and volatility trends still suggest that we should be looking for buying rather than selling opportunities if our time horizon is medium-to-long term. Thanks to some cash on hand, we're ready to capitalize on any corrections.

Table 3

GLOBAL MARKET INDEX		
Asset Allocation as of September 30, 2009		
	Allocation %*	Change*
U.S. Equities	24.6	0.2
Foreign Developed Market Equities	25.6	0.2
Emerging Market Equities	3.8	0.2
U.S. Bonds	20.8	-0.5
Inflation-Indexed Treasuries	1.2	0.0
High Yield Bonds	0.7	0.0
Commodities	0.2	0.0
Real Estate Investment Trusts	0.6	0.0
Foreign Devlp'd Market Gov't Bonds	18.9	-0.1
Emerging Market Bonds	0.8	0.0
Foreign Gov't Inflation-linked Bonds	2.7	-0.1
Cash	0.0	0.0

† Total allocations may not equal 100% due to rounding
 * Change from previous month, measured in percentage points: an allocation change from 10% to 11% would be a change of 1.0

But let's not underestimate the strategic challenge that awaits. Deep recessions are a rare event, and so too are the periods that follow. All the more so given the extraordinary run that led up to our current economic ills. With limited foresight in normal business cycles, our capacity for divining the future is all the more impaired these days. That leads us toward a middle ground in the model portfolio, albeit within a trio of risk levels within that general goal.

Speaking of goals, remember that our benchmark is the unmanaged market portfolio, as defined by our Global Market Index. We're confident that GMI will generate middling performance relative to its components in the years ahead. Our mandate is to enhance GMI's performance with little if any additional risk. That's likely to mean that portfolio changes are far and few between. That may change, of course, at any time, depending on what unfolds from month to month. But for the moment, we're holding steady. We're not expecting much in the way of returns in the months ahead, but neither are we overly concerned with risk. We are, however, sleeping with one eye open. 

YESTERDAY, TODAY & TOMORROW

Forecasting equilibrium-based risk premiums requires looking to the past and thinking about the future without becoming a slave to either view.

History tells us one thing; looking into the future hints at something else. Somewhere in between is the truth.

That sums up the challenge of calculating equilibrium estimates of risk premiums for the major asset classes, individually and collectively. The task is the first step in managing asset allocations for our model portfolios.² With risk premium projections in hand, we then survey other variables, such as how recent levels of return correlation and volatility compare with the historical record. We also consider yields, interest rate spreads, the recent trend in return momentum among the various asset classes, along with other factors. And we filter this information through the prism of the business cycle, with one eye on estimating where we appear to be relative the ebb and flow of macroeconomic expansion and contraction.

² For a relatively detailed discussion of how we calculate equilibrium estimates of return premia, see "In Search of Equilibrium-Based Forecasts," Parts I & II, in the June 2009 issue of BIR.

The primary task is deciding if the near-term outlook for the individual asset classes deviates substantially from our long-run equilibrium forecast. If so, the divergence implies changing the asset allocation relative to the passive, i.e., market-value weight.

For example, our current forecast of the equilibrium-based risk premium (i.e., in addition to the risk-free rate) for the U.S. stock market is roughly 4.2% for the medium-to-long-term horizon. Meanwhile, the U.S. equity market's weight in our benchmark—the Global Market Index—is 24.6%. If we had no view on domestic stocks and accepted GMI's passive U.S. equity allocation, the U.S. stock market contribution to our portfolio's aggregate risk premium outlook is a touch over 100 basis points. That is, GMI's U.S. stock allocation is 24.6%, and so that percentage of our 4.2% equilibrium risk premium forecast for domestic equities translates to a return contribution to GMI of ~1% (24.6% x 4.2%). That's nearly one-quarter of GMI's expected risk premium.

But let's say we're wildly bullish on U.S. equities relative to the equilibrium-implied return forecast for domestic stocks (we're not, but let's imagine otherwise). To make things simple, assume that we expect twice the equilibrium performance and so we're looking for stocks to generate an 8.4% risk premium. The implied change to our U.S. equity weight in GMI would be a doubling of the equilibrium weight to 49.2% in our portfolio from the 24.6% in the passively allocated GMI.

***The* BETA INVESTMENT REPORT**

James Picerno, editor

Elizabeth Bennett, managing editor

732.710.4750 BIR@BetaInvestment.com

www.BetaInvestment.com

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At the other extreme, if you had no particular view on any asset class, pro or con, you'd accept GMI's asset allocation of 24.6% for U.S. stocks. Of course, our model portfolios' conceit is that we have a view. It's not necessarily a strong view on each and every asset class at all times. Nonetheless, the catalyst for remixing GMI's passive asset allocation is thinking that we can generate superior risk-adjusted returns over time, if only slightly.

What in the world convinces us to think that? The short answer is two-fold. One, financial economic research over the years has made a persuasive case that expected returns over the medium/long term are partly predictable, based on a careful reading of various macroeconomic and financial variables. Two, the market portfolio may be optimal for the average investor with an infinite time horizon, but practical considerations (shorter time frame, different risk tolerance, etc., relative to the market) suggest crafting asset allocation strategies that vary from GMI.³

What about error? As you may have guessed, we're only human, which introduces the possibility—make that *high* probability—that our estimates will suffer miscalculation of some degree. Yes, we anticipate no less, which leads to our first line of defense: own everything and back out the strategy from there.

Next, we prefer to err on the side of caution in our forecasting. Our reasoning: if we're destined to be surprised, we prefer shock and awe of the positive variety.

Another risk-management tool is forecasting risk premia with some historical perspective mixed into the output. By that we mean looking into the future in context with a) understanding the past; and b) surveying the literature in search of economically logical foundations for making predictions. As one example we've discussed in the past: the yield curve has a habit of dispensing valuable information about the business cycle, which helps us put current valuation and recent market trends into perspective.

In any case, we proceed cautiously. Markets are usually at or near equilibrium. As such, expected equilibrium risk premia are usually pretty good forecasts, or at least a good starting point for considering alternative projections. But sometimes risk aversion shifts dramatically and investors discount expected cashflows at a new level. That was the case in late-2008, early 2009, when revaluation of risk was all the rage.

Shocks that move valuations away from equilibrium, as Robert Litterman has written, create opportunity.⁴ But shocks—or at least shocks of some magnitude—are relatively rare. Most of the time, market prices reflect a "normal" state. Or perhaps a better way to phrase it is that most of the time it's not obvious why expected returns will or should deviate from equilibrium.

Our confidence in forecasting, in sum, waxes and wanes. Sometimes the future looks a bit less cloudy for one or more asset classes. In that case, we may be inclined to second guess equilibrium returns and portfolio weights for a given asset class. Otherwise, Mr. Market's portfolio mix looks alluring.

Regardless, we're always reviewing equilibrium-implied returns and weights. Our investing decisions may lead us far and wide over the years, but the first step is always checking the benchmark—GMI.

Speaking of which, GMI's expected risk premium is ~2.5%, more or less unchanged from recent history. (Remember, we're talking of a risk premium here, meaning that it's over and above the risk-free rate, i.e., 3-month T-bills.) That forecast is

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³ The long versions of these explanations unfold monthly on these pages and in an upcoming book from your editor—*Dynamic Asset Allocation*—to be published in Feb. 2010 by Bloomberg Press.

⁴ See *Modern Investment Management: An Equilibrium Approach* (Wiley, 2003), by R. Litterman.

a byproduct of our individual risk premium projections for the medium/long term horizon:

Table 4

Expected Equilibrium Risk Premia	
U.S. Equities	4.2%
Devlp'd Mkt Equities	4.0%
Emerging Market Equities	6.0%
Global REITs	3.4%
U.S. Investment-Grade Bonds	0.3%
U.S. Inflation-Indexed Treasuries	0.4%
High Yield Bonds	1.3%
Foreign Devlp'd Mkt Gov't Bonds	0.7%
Emerging Market Bonds	0.6%
Commodities	1.2%
Foreign Gov't Inflation-Linked Bonds	0.6%

The above estimates are then weighted based by their relative market values, as per GMI, which gives us the following weighted sum outlook for GMI:

Table 5

Expected Equilibrium Risk Premia weighted by market value via GMI	
U.S. Equities	1.0%
Devlp'd Mkt Equities	1.0%
Emerging Market Equities	0.2%
Global REITs	0.0%
U.S. Investment-Grade Bonds	0.1%
U.S. Inflation-Indexed Treasuries	0.0%
High Yield Bonds	0.0%
Foreign Devlp'd Mkt Gov't Bonds	0.1%
Emerging Market Bonds	0.0%
Commodities	0.0%
Foreign Gov't Inflation-Linked Bonds	0.0%
Global Market Index	2.5%*
* Risk premia don't sum exactly to 2.5% because of rounding.	

Why so many zeroes? That's the result of slight risk premiums and small relative weights in the global marketplace. Foreign government inflation-linked bonds, for instance, currently harbor a projected risk premium of just 0.6%, by our estimate. Because these securities carry a tiny weight in the global marketplace—about 2.7%—there's virtually no risk premium to speak of after

weighting the asset class passively in GMI. Indeed, a 2.7% weight for a 0.6% risk premium becomes a 0.0162% risk premium, which rounds out to zero for one decimal point.

The question, of course, is whether we want to accept the market's weight. If we overweight foreign inflation-linked bonds, we'll raise the risk-premium contribution to the portfolio. Why would we hold an above-market weight allocation? The main reason is that we expect that the risk premium for the asset class will exceed what's implied by the equilibrium estimate.

Of course, it's possible that we've underestimated the equilibrium estimates of risk premia, in which case an investor may think differently about what a given asset class is likely to deliver. Then again, all estimates are, well, estimates and only time will determine which ones are in the ballpark vs. way off base.

Where does that leave us? Assuming our equilibrium risk premia estimates are reasonable gives us a good starting point to consider asset allocation. Invariably, the estimates will change through time, which is one reason why asset allocation is dynamic. But as a general proposition, here's how we begin the analysis for what ends up as the allocations in our model portfolios.

Do we second guess the market weights? Yes, we do, although we do so cautiously. The higher our confidence that that near term looks sufficiently different from what medium/long-term equilibrium implies, we adjust the model portfolios accordingly. For example, U.S. stocks have a passive GMI weight of nearly 25%. By contrast, we're underweight U.S. equities in all three of our model portfolios. Why? For the moment, we believe that U.S. stocks in the next several years may fall a bit short of their longer-term 4.2% equilibrium risk premium.

Is this an infallible method for designing and managing asset allocation? No, although no other approach rises to nirvana either. But starting with an equilibrium-based outlook, if it's done reasonably well, offers a powerful framework for thinking about the future and integrating a particular investment view into the mix.

On that note, we'll close with our favorite quote on the subject, courtesy of Robert Litterman, the great quantitative strategist:

We need not assume that markets are always in equilibrium to find an equilibrium approach useful. Rather, we view the world as a complex, highly random system in which there is a constant barrage of new data and shocks to existing valuations that as often as not knock the system away from equilibrium. However, although we anticipate that these shocks constantly create deviations from equilibrium in financial markets, and we recognize that frictions prevent those deviations from disappearing immediately, we also assume that these deviations represent opportunities. Wise investors attempting to take advantage of these opportunities take actions that create the forces which continuously push the system back toward equilibrium. Thus, we view the financial markets as having a center of gravity that is defined by the equilibrium between supply and demand.⁵



REAL ESTATE INVESTMENT TRUSTS

The diversification power of REITs has dimmed recently, but don't dismiss the asset class just yet.

Real estate is one of four principal building blocks among the broadly defined major asset classes in the land of conventional investing (stocks, bonds and commodities are the other three). But property suffers complications in securitized form, as do commodities. That shouldn't deter strategic-minded investors from owning real estate investment trusts (REITs), although it wouldn't hurt to stay mindful of the rough edges.

Equity REITs are proxies for the underlying real estate—commercial real estate, to be precise. (For a look at residential real estate beta, see MacroShares story on page 20.) When you hold equity REITs, you don't own property directly; rather, you own an

equity share in companies that manage a portfolio of commercial real estate. Because of the special tax status assigned to REITs—they must pay out at least 90% of taxable profits to shareholders in the form of dividends—these shares are considered by many to be the next best thing to owning the underlying properties outright. This payout structure, which provides a relatively clean transmission of income produced by the properties to shareholders, is part of the reason why REITs are considered separate from other industry securities for asset allocation purposes. The fact that real estate proper is clearly a distinct asset class from equities, bonds and commodities seals the deal.

Even so, no one should confuse the investment results of a given portfolio of properties with their REIT equivalent. REITs vs. direct ownership of the component assets—office buildings, retail outlets, etc.—are related in terms of income streams and investment results, but the two aren't one and the same.

REITs, after all, are *managed* portfolios of real estate. As such, management skill, or the lack thereof, is a factor in the risk and return profile, along with the performance of the underlying real estate. Another distinction: REITs are liquid securities that trade throughout the day, which also changes the return and risk behavior vs. the underlying properties, which are far less liquid.

REITs, in short, constitute a real estate beta but a modified one relative to the actual brick-and-mortar assets. But while REITs aren't real estate proper, these shares are still strategically valuable in a multi-asset class framework. REITs, to cut to the chase, offer powerful diversification benefits over time. Why? Because as a proxy for real estate—albeit an imperfect one—REITs offer access to a separate and distinct asset class from stocks, bonds and commodities. And as decades of financial research suggests, as does quite a bit of common sense and real-world track records, owning different asset classes enhances the odds of generating higher risk-adjusted returns over time.

Proclaiming REITs as viable real estate proxies is one thing, but what's the evidence? Quite a bit, actually. There's a small library of supporting

⁵ *Modern Investment Management: An Equilibrium Approach* (Wiley, 2003), by Robert Litterman, p. 3.

research in favor of the idea that REITs are productive vehicles for replicating some, perhaps most of the attributes of commercial real estate proper over time. And since we want to own a broad array of assets to maximize our risk-adjusted performance, owning REITs looks reasonable and quite possibly essential for this strategic objective.

A 2006 study by Ibbotson Associates, for instance, advises:

When developing a strategic asset allocation to commercial real estate, investors should consider REITs and listed real estate stocks as well direct commercial real estate. For a large number of investors, REITs and listed real estate stocks are the only reasonable way to gain exposure to the commercial real estate equity asset class. REITs and the worldwide growth of listed real estate stocks give all investors an effective and efficient method of obtaining exposure to commercial real estate equity.⁶

A number of other studies have made similar recommendations over the years. For example, Lee and Stevenson (2005) argue that the evidence is persuasive that real estate boosts risk-adjusted results in a multi-asset class portfolio. Summarizing their analysis, they advise that "REITs' attractiveness as a diversification asset increase as the holding period increases."⁷

More recently, MacKinnon and Al Zaman (2009) make a similar argument in favor of holding securitized real estate, albeit indirectly by advising that REITs are a proxy for actual real estate because holding both appears "redundant."⁸

Despite the rich academic basis for seeing REITs as a proxy for real estate, there are new doubts in

the wake of 2008's sharp market losses. REITs were especially hard hit in the bear market, suffering a 39.2% loss last year, based on the Wilshire REIT Index, or slightly worse than the 37.3% total return decline for U.S. stocks (Russell 3000).

In addition, REIT correlations have drifted higher with stocks in recent years, inspiring some to abandon the asset class. "The very act of listing real estate on an exchange just made REITs behave like stocks," opines a recent Morningstar article on the firm's U.K. web site. The article goes on to opine,

...while real estate might diversify an institution's portfolio, we can't say the same for REITs in an individual investor's portfolio. With higher cost of debt likely weighing down real estate equity returns in the coming years, we are no longer convinced that REITs provide enough diversification benefits or return prospects to make up for the risk of holding them.⁹

We disagree. It's true that REIT correlations have risen in recent years, but this isn't fatal. In fact, it's not surprising or unprecedented when surveying asset classes generally. Financial research tells us that correlations across asset classes are unstable and prone to cyclical fluctuations with some degree of sympathy relative to the ebb and flow of the business cycle.

For example, a 2005 study analyzes 150 years of history for the world's major equity markets and reports that correlations vary through time. As a result, the diversification benefit of investing in stocks on a global basis waxes and wanes.¹⁰ Meanwhile, Kaplanis (1988) shows that correlations are mean reverting: high correlations tend to lead to low correlations, and vice versa.¹¹ What's more, this to and fro in correlation appears to be partly predictable based on dividend yield, interest rates

⁶ "Commercial Real Estate: The Role of Global Listed Real Estate Equities in a Strategic Asset Allocation," by T. Idzorek, et al., (prepared by Ibbotson for the National Association of Real Estate Investment Trusts), 2006.

⁷ "The Case for REITs in the Mixed-Asset Portfolio in the Short and Long Run," by S. Lee and S. Stevenson, *Journal of Real Estate Portfolio Management*, (Vol. 11, No. 1) 2005.

⁸ "Real Estate for the Long Term: The Effect of Return Predictability on Long-Horizon Allocations," by G. MacKinnon and A. Al Zaman, *Real Estate Economics*, (Vol. 37 No. 1) 2009.

⁹ "Do REITs deserve a place in your portfolio?," by B. Kay and M. Corwin, June 24, 2009, www.morningstar.co.uk

¹⁰ "Long-Term Global Market Correlations," Goetzmann, et al., *Journal of Business*, (Vol. 78, No. 1) 2005.

¹¹ "Stability and Forecasting of the Comovement Measures of International Stock Market Return," by E.C. Kaplanis, *Journal of International Money and Finance*, (Vol. 7, No. 1) 1988.

and other metrics.¹² And a recent study reports that portfolio-return covariances are closely linked with recessions.¹³

REITs are hardly insulated from the global economy. No wonder, then, that the asset class is subject to all usual cyclical forces. That includes a correlation profile that fluctuates through time. Consider how REITs have fared over the past 3 vs. 10 years in terms of return correlations relative to the major asset classes. Table 6 reminds that correlations in recent years have risen for REITs vis-à-vis the usual suspects among the major asset classes. That's hardly surprising, given the bear market last year that afflicted nearly everything save government bonds. But even a relatively higher correlation that's still below perfect positive correlation (1.0) still offers diversification benefits, albeit to a lesser degree. By that standard, REITs still look compelling.

Table 6

Correlations of REITs and... (ranked in descending order for trailing 3-year results)	3 years	10 years
US Stocks	0.83	0.59
Foreign Devlp'd Mkt Stocks	0.74	0.58
High Yield Bonds	0.73	0.61
Emerging Market Stocks	0.60	0.48
Emerging Market Bonds	0.35	0.33
Foreign Gov't Bonds	0.34	0.24
US Bonds	0.32	0.16
Commodities	0.32	0.21
TIPS	0.27	0.21

based on correlation of total returns through Aug. 2009
Source: Morningstar Principia

Yes, recent history suggests that diversification via REITs has faded a bit compared with five or 10 years ago. But that's an unpersuasive argument for abandoning REITs. Indeed, correlations overall are higher, across the matrix of asset class

¹² "Is the Correlation in International Equity Returns Constant: 1960–1990?" by F. Longin and B. Solnik, *Journal of International Money and Finance*, (Vol. 14, No. 1) 1995.

¹³ "An Analysis of Covariance Risk and Pricing Anomalies," *Review of Financial Studies*, by T. Moskowitz, (Vol. 16, No. 2) 2003.

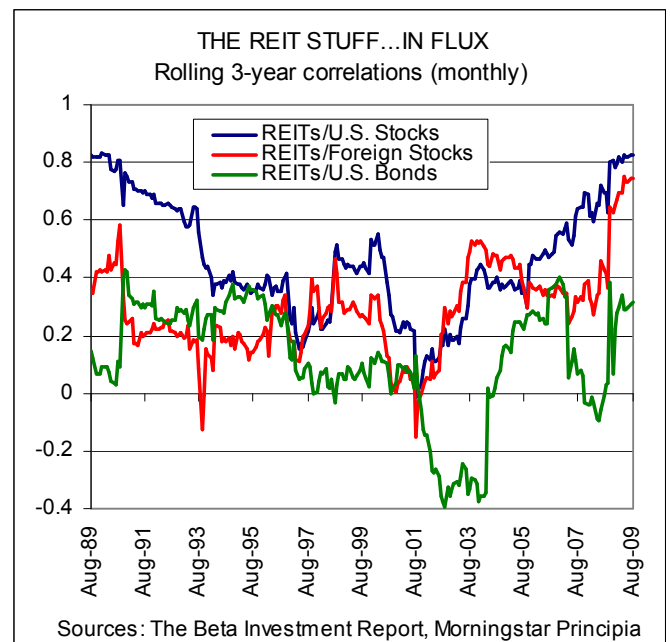
combinations, although that's hardly a reason to jettison the case for multi-asset class investing.

As Table 6 shows, even higher REIT correlations in recent years still look vigorous from a strategic perspective, especially if you look beyond domestic stocks. In short, REITs remain a productive tool for enhancing diversification in portfolios comprised of commodities, domestic and foreign bonds and stocks from around the world.

And that's assuming that recently elevated correlation levels will prevail. But if history's a guide, along with the small but growing body of correlation research, REIT diversification is likely to improve in the years ahead.

Consider Chart C, which graphs 20 years worth of 36-month rolling correlations between the Wilshire REIT index and three asset classes: U.S. stocks (Russell 3000), U.S. bonds (Barclays Aggregate Bond), and foreign developed-market stocks (MSCI EAFE). Correlations are higher these days, roughly in line with levels from the late-1980s. Will they stay elevated? No, or so financial research and the empirical record suggest. Timing, as always, is unknown. But having spent the better part of the last decade inching higher, correlations between REITs and other asset classes look inclined to drift lower in the years ahead.

Chart C



Will correlations fall back to the depths of previous years? Probably not. REITs are more closely aligned with the capital markets generally and so the distinctions of yore have faded. That's true of asset classes generally. The march of globalization brings the world closer on multiple fronts. Correlations between U.S. and foreign stock markets, for instance, are higher now compared with 1980s. Does the trend abolish the case for international equity investing? No, of course not, although the trend reminds that the potential for harvesting diversification-related benefits has diminished somewhat relative to the past.

Investors should make a distinction between diminished and permanently missing. Granted, it's getting harder to squeeze risk premiums out of multi-asset class portfolios. As capital flows freely across political borders and the financial industry figures out new ways to enhance access to assets for investors, the expected risk premium for our Global Market Index recedes. Slowly, perhaps, but steadily through time. That's hardly surprising. What's more, modern portfolio theory anticipates no less.

Expected equilibrium risk premiums for the individual asset classes and the resulting combinations will—must—decline as the global economy becomes more integrated. The capital asset pricing model predicts as much and researchers have been telling us so for years. For example, a 1993 research monograph published by the CFA Institute explains that as investors diversify across political borders and asset classes, "the market pressure of portfolio globalization should drive global risk premiums down."¹⁴


Yes, that means that returns as a general proposition will likely fall overall after adjusting for risk in the decades ahead. Disheartening as that is, results will suffer even more if investors abandon the diversification benefits offered in the global marketplace.

¹⁴ "Global Investment in a CAPM framework," by D. Karnosky in *The CAPM Controversy: Policy and Strategy Implications for Investment Management*, 1993, published by the Association for Investment Management and Research (currently known as the CFA Institute).

REITs and other asset classes have suffered a period of stinging losses, soaring volatility and generally heightened correlations. Some would tell us that it's now time to pare back on broader asset allocation designs. But as we discussed last month, and reaffirm here, now's the time to embrace multi-asset class investing. Correlations aren't likely to go much higher, and there's a compelling case for arguing that they're headed lower, if only slightly.

Arguing that REIT correlations are set to remain high is arguing that all of asset class history will be turned on its head this time. Sure, it's possible that the economics of real estate is set to be decisively and permanently divorced from its partially independent history relative to stocks, bonds and commodities. But we've yet to hear a fundamentally convincing case as to *why* that future looms. Instead, we've heard only that the elevated correlations of recent history are a self-evident argument for reconsidering REITs. Strategic-minded investors should pay no attention.

Correlations, like prices and volatility, fluctuate. The time to worry about REITs was in 2007, when they were riding high from an extraordinary run of bull market success. Correlations were much lower then and returns were far higher. Now the opposite is true. That's not going to change next Wednesday, but neither is it set in stone. We could be wrong, of course, although that's true as a general caveat in the wider world of investment analytics. No wonder, then, that our first line of defense is never straying too far from the market portfolio, broadly defined by our Global Market Index. As it happens, REITs are part of the mix.

The only question, then, is choosing a fund or two to capture the REIT beta. For some perspective on this task, read on. 

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REIT INDEX FUNDS

The choices are more complicated than it appears.

There's no shortage of real estate funds, and that's part of the problem. An initial accounting of the available choices turns up numerous products, but separating the wheat from the chaff is tricky in this corner of finance.

An initial screen using Morningstar Principia software dispenses 29 "real estate" index funds. But on closer examination, only nine survive the BIR gauntlet (see Table 7).

Our analysis divides the funds into three categories: domestic, foreign ex-U.S. and global (U.S. inclusive). But there's a postscript for the foreign and global categories: neither offers a pure REIT portfolio, at least not as of this writing. As a result, REIT-only index funds are available exclusively in the domestic list and our U.S. choices focus only on these funds. In the foreign space, REIT-only products aren't available, at least not yet. That's not fatal, but neither is it obvious until you spend some time reading the fine print in this sector.

Real estate funds that venture offshore are a mix of foreign REIT and non-REIT real estate securities, such as real estate operating companies (REOCs). REITs share some common traits with REOCs, but there are differences as well, including REOCs' ability for reinvesting a large share of earnings back into the business. That contrasts with REITs, which typically pay out most of their earnings to shareholders. As a result, one can make a case that REITs are a better proxy for real estate as an asset class, courtesy of the relatively clean redistribution of property revenues to shareholders.

Meanwhile, our first requirement, as always, is a reasonable expense ratio, a condition that immediately pares the initial list. Our limit here is 50 basis points for domestic funds and 65 basis points for foreign portfolios. In either case, the maximum price tag looks expensive when compared with the low-cost leader in the bunch: Vanguard REIT ETF (VNQ), running at an expense ratio of just 15 basis points.

VNQ is our favorite REIT fund and as an all-around general-purpose vehicle for tapping the asset

class. If you're looking for a mutual fund, VNQ's open-end equivalent is our top choice—Vanguard REIT (VGSIX). Alas, you'll pay a small premium for the mutual fund structure: 11 basis points over its ETF equivalent.

Table 7

U.S. REIT Funds ranked by trailing 12-month total return					
Fund (Ticker) Target Index	1 yr Total Return %	3 yr Ann'l'd Total Return %	Net Assets (\$ mm)	Exp. Ratio %	12-mo yld %
Vanguard REIT (VGSIX) MSCI U.S. REIT	-31.2	-13.3	3,249.4	0.26	4.82
Vanguard REIT (VNQ) MSCI U.S. REIT	-31.5	-13.3	3,352.1	0.15	6.80
First Trust S&P REIT (FRI) S&P U.S. REIT	-33.2	n/a	8.1	0.50	2.59
SPDR Dow Jones REIT (RWR) Dow Jones U.S. Select REIT	-33.8	-15.01	1,164.9	0.25	5.27
FOREIGN ex-U.S. REIT/Real Estate Funds ranked by trailing 12-month total return					
Fund (Ticker) Target Index	1 yr Total Return %	3 yr Ann'l'd Total Return %	Net Assets (\$ mm)	Exp. Ratio %	12-mo yld %
iShares FTSE EPRA/NAREIT Developed Real Estate ex-US (IFGL) FTSE EPRA/NAREIT Dev RE ex-US	-14.8	n/a	279.4	0.48	3.96
SPDR Dow Jones International Real Estate (RWX) DJ International Real Estate	-19.2	n/a	842.4	0.59	4.14
GLOBAL (including U.S.) REIT/Real Estate Funds ranked by trailing 12-month total return					
Fund (Ticker) Target Index	1 yr Total Return %	3 yr Ann'l'd Total Return %	Net Assets (\$ mm)	Exp. Ratio %	12-mo yld %
Northern Global Real Estate Index (NGREX) FTSE EPRA/NAREIT Global Real Estate	-23.1	-11.7	443.3	0.65	4.18
First Trust FTSE EPRA/NAREIT Global Real Estate (FFR) FTSE EPRA/NAREIT Global Real Estate	-23.6	n/a	13.0	0.60	3.14
SPDR Dow Jones Global Real Estate (RWO) DJ Global Real Estate	-26.8	n/a	65.2	0.50	5.27
Data as of August 31, 2009 Source: Morningstar Principia					

Otherwise, Table 7 is populated by ETFs. How does the competition stack up against VNQ? In the domestic space, there are two ETF competitors that pass muster for us. But given the modestly higher expense ratios, we're reluctant to stray from VNQ, which tracks the MSCI U.S. REIT Index. The target benchmarks for the competing ETFs are no less

worthy—S&P REIT and Dow Jones U.S. Select REIT. At the same time, our analysis turns up no compelling reason for paying a premium to tap one vs. the other. Indeed, all three indices do a reasonable job of capturing the REIT beta, which convinces us to favor the lowest-cost portfolio: VNQ. And as the previous column reminds, squeezing risk premia from asset classes isn't going to get any easier in the years ahead and so we'll need every advantage. That starts with minimizing costs. Short of a credible case for paying more, we prefer to be a cheapskate.

The question, then, is whether owning foreign REITs is worth the higher cost? In a perfect world, we'd own a global REIT fund with a rock-bottom expense ratio, or the domestic and foreign equivalents. But as we've learned over the past years, ours is a world that's well short of perfection, which sometimes compels us to make choices that are less than academically ideal.

With that in mind, let's recognize that the least-expensive offshore REIT/real estate fund carries a 48-basis-point expense ratio—iShares FTSE EPRA/NAREIT Developed Real Estate ex-US (IFGL). Is it worth it?

Let's start by recognizing again that offshore REIT/real funds aren't pure REIT portfolios, as our labeling suggests. As of this writing, there are no pure REIT index funds that target foreign markets, either exclusively or in combination with U.S. REITs. There's nothing wrong with REOCs, but they're not a mirror image of REITs. The big difference is that management and security structure cast a bigger influence over REOC results. As we've discussed, that adds an extra twist to the real estate beta. For purposes on these pages, that's a twist that we'd just assume sidestep, but that's not possible in foreign real estate funds at present.

Then again, ignoring foreign REITs equates with overlooking a large slice of the asset class. Surveying REITs globally, the U.S. vs. foreign mix is nearly an even split in terms of market capitalization, as of August 31, 2009, according to S&P Global BMI numbers. Meanwhile, nearly 98% of REIT capitalization beyond U.S. shores resides in developed markets.

Given the available choices, our preference for replicating the world REIT market inspired by recent market cap data is a 50/50 mix of Vanguard REIT (VNQ) and the iShares FTSE EPRA/NAREIT Developed Real Estate ex-U.S. ETF (IFGL). Our bias for the iShares ETF is driven by its lower expense ratio vs. the SPDR Dow Jones International Real Estate (RWX) ETF—0.48% vs. 0.59%. On the other hand, the RWX offering embraces emerging markets as well as developed ones in the foreign space whereas IFGL focuses on developed nations. The wider net alone probably isn't worth the higher expense ratio, given the slim market cap of emerging-market REITs.

But the SPDR ETF (RWX) also claims a substantially higher trading volume than IFGL—average daily volume of around 200,000-plus vs. 50,000 for the iShares fund, according to early October data from Yahoo Finance. If you plan on trading your foreign REIT position with any frequency, the extra liquidity in the SPDR portfolio may compensate for RWX's modestly higher expense ratio.

Why not simply buy one global REIT/real estate ETF? As a core position for real estate, there's some logic to the idea, particularly for a large portfolio. There are three funds that span the world of REITs and that also pass our initial screen, as Table 7 shows. This trio combines U.S. and foreign securities and thereby offers one-stop shopping. But the issue of cost keeps us wary with the current menu of global choices. Two of the three funds are the most expensive REIT funds surveyed in our list, which leaves us cool on the prospect of buying these products.

Another challenge is that owning REITs/real estate securities in one fund eliminates the opportunity for rebalancing when domestic and foreign markets diverge.

Overall, a domestic/foreign pairing of two funds looks reasonable for most portfolios. Our two favorites: Vanguard REIT (VNQ) and iShares FTSE EPRA/NAREIT Developed Real Estate ex-U.S. ETF (IFGL). B

BOOK NOTES

This Time Is Different: Eight Centuries of Financial Folly

(Princeton University Press)

by Carmen M. Reinhart and Kenneth S. Rogoff.

Kindleberger labeled it a "hardy perennial."¹⁵ Minsky developed a theory called the "financial instability hypothesis."¹⁶ And now comes a monumental new book on the subject of financial crises, dispensing a data-rich review of an affliction that recognizes no political border, time period or (apparently) policy prescriptions aimed at preventing such events.

Admonitions of this sort presumably need no introduction at this juncture. The world is once again in tune with the finer points of a financial crisis and what it means for markets and economies. Although these debacles are a chronic scourge through time, it seems that every generation must relearn a fundamental truism: The potential for calamity on a broad scale is always lurking in the future, which means that thinking otherwise lays the groundwork for the next disaster.

Few will argue the point at this late date, but if you're looking for supporting details (or you simply enjoy poring over the statistical artifacts of financial crises through time) you're in for a treat with *This Time Is Different*. As the title suggests, the book analyzes the various financial contortions that have harassed economies over the centuries. Penned by economics professors Carmen Reinhart (University of Maryland) and Ken Rogoff (Harvard), the tome is an academic *tour de force*. Analyzing the history of financial crises, including the current one, the authors bring some much-needed perspective to a corner of economic history that's too often ignored or misunderstood.

Although *This Time Is Different* abounds in statistical analysis, the chief lesson is unambiguously succinct. "No matter how different the latest financial frenzy or crisis always appears,"

¹⁵ *Manias, Panics, and Crashes: A History of Financial Crashes*, by C.P. Kindleberger (1996, 1978, Wiley).

¹⁶ "The Financial Instability Hypothesis," working paper #74, by H. Minsky.

Reinhart and Rogoff write in the opening, "there are usually remarkable similarities with past experience from other countries and from history." The remaining 400-plus pages dispatch the details in all their astonishing if terrifying grandeur.

The fundamental catalyst for the crises is debt, the authors conclude. There are many paths that deliver the red ink, including the finance industry's innovations, aided and abetted by our friends at the central banks. But the end result is usually the same. To be fair, debt alone doesn't create the problem; an equally pernicious condition of underestimating debt's potential for creating havoc is part of the equation too. As the book explains,

...excessive debt accumulation, whether it be by the government, banks, corporations, or consumers, often poses greater systemic risks than it seems during a boom. Infusions of cash can make a government look like it is providing greater growth to its economy than it really is. Private sector borrowing binges can inflate housing and stock prices far beyond their long-run sustainable levels, and make banks seem more stable and profitable than they really are. Such large-scale debt buildups pose risks because they make an economy vulnerable to crises of confidence, particularly when debt is short term and needs to be constantly refinanced.

A related case of this-time-is-different thinking afflicts decision-making in the halls of central banks. For a time, it seemed like the Federal Reserve and its counterparts around the world had tamed inflation and the business cycle with no apparent side effects. Recessions became less frequent and milder; inflation was stable if not falling. The Great Moderation, as it was dubbed, appeared to be the new new thing. This, alas, was a temporary condition; the critical error was thinking it was permanent and that central bankers had discovered the secret for managing the economy.

Assuming it was different this time isn't new, of course. Martin Wolfson, in *Financial Crisis* (published in 1986) writes that the 1966 credit crunch "came as a shock" to the financial elite. Why? The previous calm was almost certainly part

of the answer, he explains. "During the period immediately following World War II, when financial crises seemed to have disappeared forever from the economic scene, mention of them also disappeared from the economics literature," Wolfson reports. "Nearly an entire generation of economists was trained without ever studying the origins and causes of financial crises."¹⁷

Crises don't drop unannounced from the sky. Clues are dropped along the way, through every boom and over every extended period of economic calm. It's not always obvious that the crowd is watching, but it's hard to argue that the seeds of a given crisis are invisible.

Accepting the idea that economic cycles had been banished in the golden days just ahead of 2008, for instance, required ignoring the accumulating warning signs. A few examples noted in *This Time Is Different*:

The extraordinary rise in inflation-adjusted housing prices. The reversal of fortunes in real estate, of course, was a central catalyst in the financial crisis of 2008.

The dramatic rise in U.S. government deficits—deficits that were increasingly financed with foreign monies.

What's the relevance for our agenda at BIR? First, the business cycle endures, sometimes to extremes. Second, careful observers can find hints about prospective turning points in the business cycle, although the implications for timing are invariably obscure. Three, economic research increasingly identifies and analyzes the connection between the business cycle and risk premia, which suggests that studying the details of each is essential for managing asset allocation.¹⁸

The great challenge, as always, is deciding when to act and to what degree? Some observers of the

¹⁷ *Financial Crises: Understanding the Postwar U.S.*


Experience, by M. H. Wolfson (M.E. Sharp, 1986), p. 3.

¹⁸ For example, see "Reading Yield Curves" (April 2009, BIR) and "A Wider View" (July 2009, BIR) for two perspectives on using business cycle trends for projecting/anticipating risk premiums.

economic scene were warning that the housing market was an accident waiting to happen just ahead of 2007-2008. But saying so in 2006 and pulling the plug on risk meant leaving quite a bit of return on the table over the ensuing quarters.

What's a strategic-minded investor to do? For our money, asset allocation should be adjusted modestly but routinely. If the warning signs, or opportunity signals, are unusually potent, there's a case for acting decisively. Most of the time, however, the indicators tend to lie in a gray area and so dramatic, sudden changes to asset allocation are generally inappropriate.

Then again, by holding a broad array of asset classes, and watching how they perform in absolute and relative terms, we establish a front line of defense against uncertainty. The market's telling us something when one asset class soars or stumbles by an unusual degree over a period of time. In those cases, rebalancing opportunities arise.

But it's worth repeating that opportunity and risk aren't usually at extreme levels, which strengthens the case for a relatively mild-mannered asset allocation as a general rule. Sometimes, however, something more dramatic is called for, and the reason is usually linked to the macroeconomic trend. Such strategic insight isn't always obvious; in fact, it's rarely obvious if you can't see the forest for the trees. For those whose financial vision is strategically challenged, practice in the art of taking a more expansive view is one solution. Spending some time with *This Time Is Different* is a productive first step. 

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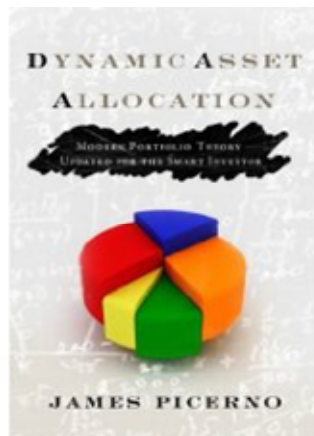
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Dynamic Asset Allocation

Modern Portfolio Theory Updated For The Smart Investor

By James Picerno

Published by Bloomberg Press (February 2010)



MACRO MACHINATIONS

Between the rock and the hard place.

Maybe we should call it the Goldilocks recovery: not too hot, not too cold, but with bears lurking about.

Whatever the label, impatient investors may become frustrated with the post-apocalyptic world that we now inhabit. There's plenty of so-called green shoots in the data, but so far the bouncing isn't fully convincing, welcome though it is.

The great question is whether the various signs of rebounding are a reflection of government stimulus or something more fundamental in the way of a business cycle on the mend? The answer is probably a bit of both, but how much of each is open to debate.

Leaving that issue aside, our leading economic index reminds that upside momentum remained the

dominant theme through August (see Chart D on the next page). But there's one glaring exception, and it threatens to be more than a temporary thorn in the side of economic mending: employment.

No one was arguing otherwise after the September jobs report that was released on October 2. U.S. nonfarm payrolls shrunk by 263,000 last month, slightly worse than August's 201,000 loss. It's not Armageddon, but the reversal in trend isn't exactly encouraging this late in the downturn. As of this month, the recession is officially 22 months old, the longest since the 43-month decline of 1929-33, according to the National Bureau of Economic Analysis.

The good news is that the employment losses have faded in magnitude if not yet in absolute numbers. This past January's 741,000 dive has lessened to 263,000 last month. That's progress, albeit in relative terms. Real progress as defined by

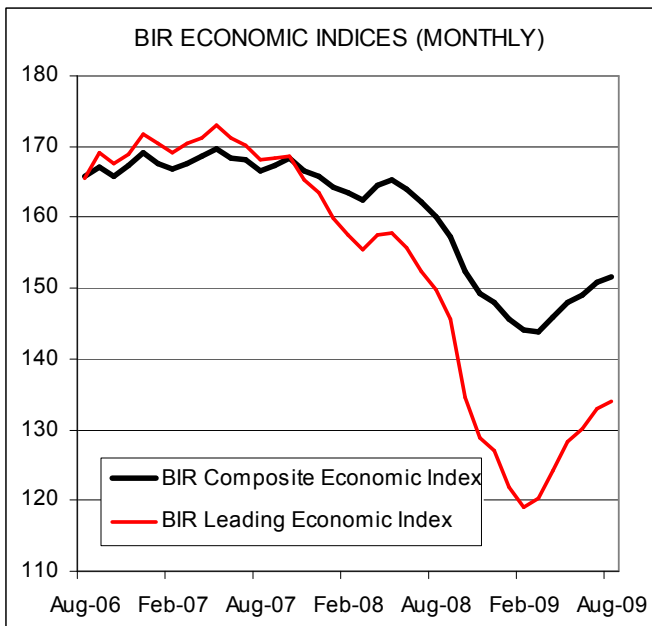
job growth, alas, isn't here yet and even when it arrives it'll take several months of gain before the trend is convincing.

Meantime, what does history tell us in looking to the happy day when employment ceases to shrink? By the standard of the past half century, nonfarm payrolls started growing within three months of the conclusion of each NBER-defined recession. Is such a reversal of fortunes imminent? Perhaps. A number of clues suggest the recession's finish is near if it hasn't already arrived. That suggests that the labor market will soon begin growing. But we should be careful here in assuming too much.

First, it's one thing to anticipate the end of a recession; it's quite another to say definitively that it has ended. Such clarity only arrives with hindsight, much as we're spoiling to think otherwise.

Second, the magnitude of the downturn this time suggests that we should remain wary about how quickly job growth will bounce back. A jobless recovery, to be blunt, may be our fate for the foreseeable future.

Chart D



To the extent that government stimulus can juice the economy, the lion's share of the gains have probably been seen. By injecting large quantities of money over the past year and following up with

various fiscal programs, the government appears to have kept disaster at bay. But the easy rewards are behind us. Government programs may deliver temporary results by lowering interest rates and elevating spending. But launching a sustainable round of job growth in the private sector is probably beyond the powers of Washington. If it were otherwise, payrolls would already be expanding.

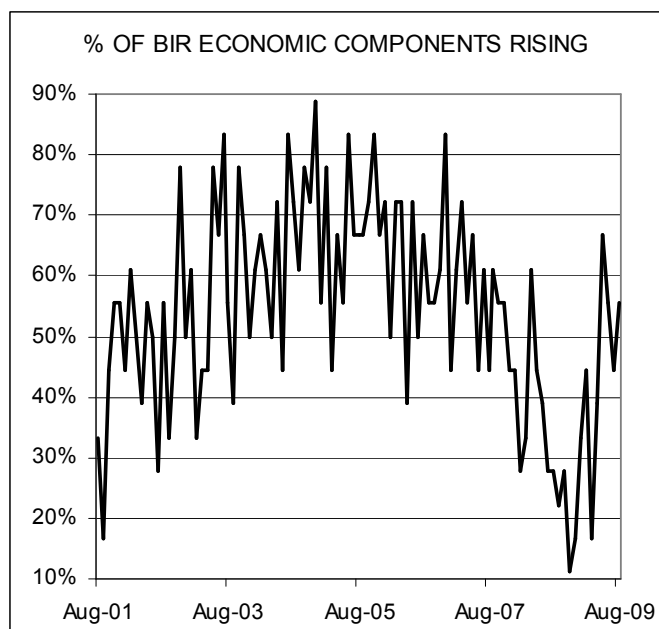
Table 8

BIR Economic Index Components		
August 2009		
	1 year % change	3 month % change
Leading Indicators		
Average weekly hours of production workers	-1.8%	0.0%
S&P 500	-18.3%	11.7%
Money supply (M2, s.a.)	7.8%	-0.6%
Interest rate spread (10-yr Trsry less Fed funds)	81.5%	10.3%
New orders for manufacturing	-20.4%	0.9%
Housing starts	-29.6%	8.5%
University of Michigan Consumer Sentiment	4.3%	-4.4%
New building permits	-32.3%	12.0%
Initial Jobless Claims (inverted)	-30.1%	9.4%
Coincident Indicators		
Nonfarm payrolls	-4.3%	-0.7%
Disposable personal income	0.8%	-1.0%
Personal consumption expenditures	-0.3%	2.3%
Industrial production	-10.7%	1.4%
Industrial capacity utilization	-10.3%	1.6%
Lagging Indicators		
Retail sales	-5.3%	3.4%
New home sales	-3.4%	15.6%
Commercial/Industrial loans	-7.7%	-4.8%
Bank prime loan rate	-35.0%	0.0%
BIR Economic Indices		
BIR Composite Economic Index *	-5.4%	2.3%
BIR Leading Economic Index †	-10.6%	4.3%
* calculated as an equal weighting of all 19 indicators above		
† calculated as an equal weight of all 9 leading indicators above		
Sources: St. Louis Fed, Standard & Poor's		

The truth is that we are in uncharted territory, at least by the standards of the last several decades. The good news: Having weathered the worst economic contraction in 60 years, the economy has stabilized in broad macro terms. Third-quarter GDP will almost surely register a rise in real terms (the government's first estimate arrives on October 29 and we'll be blogging about the numbers that day at CapitalSpectator.com). We can debate if the

expected rise in Q3 GDP is partly due to the government's efforts (or in spite of it?). But no one should assume that the recession's over solely because GDP posted a gain for the first time since the second quarter of 2008. A more sober assessment, regardless of the next GDP number, is simply this: The employment challenge has only just begun.

Chart E



If we're correct and a lengthy period of sluggish growth in the labor market awaits, there may be repercussions for consumer spending, which constitute roughly 70% of U.S. GDP. Then again, if the American consumer is headed toward saving more and spending less, the signs of this trend aren't yet obvious.

The all-time high in personal consumption expenditures arrived in June 2008. By the end of last year, PCE had dropped sharply, falling by 3.4% as of December 2008. But for most of this year, the consumption habit has rebounded. August 2009 PCE was a scant one-third of one percent under the all-time high of June 2008.

That doesn't mean that consumption will continue to grow at rates that prevailed during 2002-2007, or that Joe Sixpack won't save more in the months and years ahead.

On that note, keep in mind that our friends in Washington have been moving heaven and earth to promote consumption in the cause of mending the economy. Of course, it was spending in excess that got us into this problem and so it's not clear that more of the same is the salvation we're looking for.

That concern leads some policymakers to advance the idea that foreign governments need to take a more active role in spurring their constituents to spend. This is an especially popular stand in the West as it relates to consumers in emerging markets, starting with China. But here too the future is cloudy. The penchant for saving won't be quickly displaced in Asia. For cultural and economic reasons, saving in that region of the world is a habit with deep roots.

The recovery, then, remains a precarious creature, at least on paper. But the trend so far is encouraging, employment being the primary exception. Deciding if the green shoots will remain so, and spill over into the labor, is a debate still in progress. In that sense, the biggest challenge for the economy lies ahead. Whatever happens, rest assured that the ebb and flow of the labor market will cast a long shadow on results, for good or ill.

By that benchmark, there's still reason for concern. The economy lost more than a quarter-of-a-million jobs last month, and more losses may be coming. There are many reasons for optimism, but all of them carry caveats until the labor market stops contracting. B

ETF, ETN & INDEX FUND NEWS

More Treasury ETFs from PIMCO and the first exchange-listed security targeting residential real estate. Plus, an intriguing redesign of short ETFs and a broad commodity ETF gets a face lift in response to new rules on futures.

Last month in this column we briefly noted that the bond shop PIMCO (Pacific Investment Management Co.) launched its first band of ETFs, which focus (surprise, surprise) on the Treasury market. PIMCO has further enhanced its lineup with

three more funds, once again targeting U.S. government bonds:

- PIMCO Broad U.S. TIPS (TIPZ)
Benchmark: ML U.S. Inflation-Linked Treasury
- PIMCO 15+ Year U.S. TIPS (LTPZ)
Benchmark: ML 15+ Yr U.S. Inflation-Linked Treasury
- PIMCO 7-15 Year U.S. Treasury (TENZ)
Benchmark: ML 7-15 Year U.S. Treasury

We'll be reviewing TIPS as an asset class, along with the various fund choices, in an upcoming issue of BIR. Meantime, you can find more information about the new PIMCO funds at PimcoETFs.com.

* * *

On a slightly higher plane of innovation comes news of a freshly minted pair of exchange-listed residential housing products from MacroMarkets, a firm co-founded by Professor Robert Shiller of Yale. The two securities are the first to directly target the beta of the broad U.S. housing market. The products come in long and short versions:

- MacroShares Major Metro Housing Up (UMM)
Benchmark: S&P/Case-Shiller Composite-10 Home Price Index
- MacroShares Major Metro Housing Down (DMM)
Benchmark: S&P/Case-Shiller Composite-10 Home Price Index (inverse)

The duo is intriguing because they effectively securitize the U.S. residential housing market, a first for the capital markets. The underlying index is a weighted measure of home prices of 10 major metropolitan areas in the U.S., including New York, Los Angeles, Chicago and Las Vegas. As such, the MacroShares products introduce a critical and otherwise absent beta to the investment menu.

That said, we're inclined to watch and wait at this point. Our caution is driven by several concerns. First, these are new exchange-listed products and as a general rule we're always wary with new-fangled securities. There is any number of caveats that may harass the latest financial novelty, ranging from low

liquidity to falling short of delivering as promised via a synthetic wrapper.

A more fundamental concern is whether there's an asset allocation case for owning residential real estate in a traditional investment portfolio. Most investors probably already own a house, and since this tends to be the single-largest asset on the household balance sheet there's some question as to whether more of the same is necessary or even prudent.

By contrast, the average investor has little if any exposure to commercial real estate, which is one reason why the case for holding REITs is persuasive (see our analysis on page 9).

Meanwhile, the new MacroShares products are levered, representing an interest in the underlying index at three times the change in the benchmark price (or the inverse equivalent for the short product). There's nothing inherently evil about leverage and, in the right hands, it can be quite productive. Deciding if that's the case here isn't immediately obvious.

To be fair, the leverage in the MacroShares isn't the traditional financial leverage that dominates elsewhere. Yale Professor Robert Shiller, chief economist and co-founder of MacroMarkets, said in an August press that the two funds

...offer both leveraged and inverse performance designed for longer-term investors. MacroShares magnify returns by applying an index leverage factor to the cumulative percentage change in the index over time from a fixed, starting level, which is different than the leverage structure of ETFs. Delivering amplified returns is consistent with the needs of buy and hold investors, and also ensures that the underlying value of the security will always move in the direction one would expect, regardless of holding period or degree of market volatility.

Another issue to consider is that MacroShares' design promotes market prices that deviate from the underlying index by more than trivial amounts. Why? Because investors' expectations about the housing market seem to dominate pricing. That's in contrast with most other index funds, whose prices

are often linked tightly with the value of the index. But it's not quite so seamless with MacroShares, which track indices that are updated monthly, with a roughly 60-day lag. The July index update, for instance, was released on September 29. The securities, of course, trade in real time.

Meantime, MacroShares are designed with five-year terms and so the shares will be liquidated in 2014. Given our medium-to-long term focus on these pages, that may be cutting time horizon a bit close.

As for the price of entry, the MacroShares carry a 125-basis-point expense ratio. That may be reasonable compared with holding a portfolio of houses directly, but it's not clear that the expected return on a broad portfolio of residential real estate is worth the high expense ratio within the confines of a multi-asset class portfolio.

Overall, we're intrigued by the new MacroShares securities, but we're still studying them. Stay tuned.

* * *

We're not a fan of short and levered index funds, primarily because of the short-term design focus. The preference for targeting the inverse or levered version of a given index on a *daily* basis makes these funds incompatible with the strategic-minded philosophy espoused on these pages. That's unfortunate because a longer-term perspective with short and levered funds would make these products useful in a strategic context.

Enter Direxion, a leading provider of short and levered index funds. The firm announced last month that it lengthened the target horizon for its products to one month from one day. As a result, the funds are now rebalanced monthly rather than daily. The practical implication: Investors who hold these securities for a given month will receive the inverse or levered return for that period. That's in contrast to the old methodology, which dispensed the accumulated result of a daily rebalancing.

That's a step in the right direction although it's still too short for our purposes. But now that the genie is out of the bottle, might even longer-term targets for short and levered index funds be

coming? Ideally, we'd like to see multi-year time horizons for these products.

Imagine, for instance, that you can buy the inverse or levered beta for, say, the U.S. stock market measured by the change in the market over the next three years. In that case, you'd have a broader palette for managing and re-engineering risk on a strategic level. That's probably more than most investors want (or need) in managing asset allocation. But for those with a deft hand in juggling a wider menu of risk factors, the extra choices could be productive.

Alas, a sufficiently lengthy time horizon still doesn't exist in short and levered funds. But as the shift in Direxion's funds show, these products are capable of evolution.

* * *


The government's efforts at restricting speculation in the futures market continues to force adjustments among commodity ETFs and ETNs. The latest blowback includes a broadening of the targeted commodities owned by PowerShares DB Commodity Index Tracking Fund (DBC), an ETF that trades on the NYSE. As unintended consequences go in this matter for this fund, however, the changes look productive. DBC, in short, is planning on owning a wider mix of commodity futures. We're still a fan of the DJ-UBS index as a general rule for owning commodities, but the coming adjustments at DBC make the product worthy of a fresh look.¹⁹

At issue are the widely reported plans of the Commodity Futures Trading Commission (CFTC) to introduce position limits on various commodity futures. If enacted, the limits would create new challenges for some commodity funds in terms of reducing the available supply of futures contracts.

Anticipating the restrictions, Deutsche Bank announced on September 30 that PowerShares DB Commodity would soon begin holding a wider range of commodity futures. By diversifying over a broader mix of contracts, the fund will reduce its dependence on any one. Currently, the ETF holds

¹⁹ For a detailed look at commodity funds, see "Commodity Funds" in the August 2009 issue of BIR.

six contracts: crude oil, heating oil, gold, aluminum, corn and wheat. The new indexing rules call for expanding the portfolio to 14 contracts, including natural gas, soybeans, and sugar. As such, the weights of individual commodities in the fund will go down.

The portfolio changes are scheduled for October 19-31. 

All funds are ETFs, except as follows:
 * actively managed
Bold indicates mutual fund
 † indicates ETN

Green bars show funds that correspond to BIR's model portfolios. All other bar colors indicate asset class subcategories.

Global Equities (including U.S.)	Ticker
Vanguard Total World Stock	VT
iShares MSCI ACWI	ACWI
Vanguard Total World Stock	VTWSX

Foreign Equities (broad)	Ticker
Vanguard All World ex-US	VEU
SPDR MSCI ACWI ex-US	CWI
iShares MSCI ACWI ex-US	ACWX
Vanguard Total Int'l Stock	VGTSX
Vanguard FTSE All-World ex-US	VFWIX

Foreign Equities (developed markets)	Ticker
iShares MSCI EAFE	EFA
SPDR S&P World ex-US	GWL
Vanguard Developed Markets Index Fund	VDMIX

U.S. Equities (broad)	Ticker
iShares Russell 3000 Index	IWV
Vanguard Total Stock Market	VTI
iShares S&P 1500	ISI
SPDR DJ Wilshire Total Market	TMW
Vanguard Total Stock Market	VTSMX

Emerging Market Equities (broad)	Ticker
Vanguard Emerging Markets	VWO
iShares MSCI Emerging Markets	EEM
SPDR S&P Emerging Markets	GMM
Vanguard Emerging Markets	VEIEX

Foreign Gov't Bonds (developed markets)	Ticker
SPDR Barclays Capital Int'l Treasury Bond	BWX
SPDR Barclays Capital Short Term Int'l Treasury	BWZ
iShares S&P/Citigroup Int'l Treasury Bond	IGOV
iShares S&P/Citigroup 1-3 yr Int'l Treasury	ISHG

U.S. Bonds (broad investment grade)	Ticker
Vanguard Total Bond Market	BND
iShares Barclays Aggregate Bond	AGG
SPDR Lehman Aggregate Bond	LAG
Vanguard Total Bond Market	VBMFX

Emerging Market Bonds	Ticker
iShares JPMorgan \$ Emerging Markets Bond	EMB
PowerShares Emg Mkts Sovereign Debt	PCY
Payden Emerging Market Bond*	PYEMX
Fidelity New Markets Income*	FNMIK
T. Rowe Price Emerging Market Bond*	PREMX

Foreign Inflation Indexed Gov't Bonds	Ticker
DB Int'l Gov't Inflation-Protected Bond	WIP

U.S. Inflation Indexed Gov't Bonds	Ticker
iShares Barclays TIPS	TIP
SPDR Barclays TIPS	IPE
PIMCO 1-5 Year TIPS	STPZ
PIMCO 15+ Year U.S. TIPS	LTPZ
PIMCO Broad U.S. TIPS	TIPZ
Vanguard Inflation-Protected Securities*	VIPSX

High Yield Bonds	Ticker
iShares iBoxx \$ High Yield Corporate Bond	HYG
SPDR Lehman High Yield Bond	JNK
Vanguard High Yield Corporate*	VWEHX
PowerShares High Yield Corporate Bond	PHB

Global Real Estate/REITs	Ticker
SPDR Dow Jones Global Real Estate	RWO
First Trust FTSE EPRA/NAREIT Global RE	FFR
Northern Trust Global Real Estate	NGREX

Foreign Real Estate/REITs (ex-US)	Ticker
SPDR Dow Jones International Real Estate	RWX
iShares FTSE EPRA/NAREIT Global RE ex-US	IFGL

U.S. REITs	Ticker
Vanguard REIT	VNQ
SPDR DJ Wilshire REIT	RWR
First Trust S&P REIT	FRI
Vanguard REIT	VGSIX

U.S. Residential Real Estate	Ticker
MacroShares Major Metro Housing Up	UMM

Commodities (Broad)	Ticker
iShares S&P GSCI Commodity	GSG
iPath Dow Jones-AIG Commodity †	DJP
PoweShares DB Commodity	DBC
AB Svensk Elements Rogers Int'l Comm †	RJI
iPath GSCI †	GSP
GreenHaven Continuous Commodity	GCC
Credit Suisse Commodity Return Strategy A	CRSOX

U.S. Short Term Treasury Funds	Ticker
iShares Barclays 1-3 Year Treasury	SHY
iShares Barclays Short Treasury	SHV
SPDR Barclays Capital 1-3 Month T-Bill	BIL
PIMCO 1-3 Year U.S. Treasury Fund	TUZ
Fidelity Spartan Short-Term Treasury Bond	FSBIX

U.S. Medium Term Treasury Funds	Ticker
SPDR Barclays Capital Intermediate Treasury	ITE
iShares Barclays 3-7 Year Treasury	IEI
Fidelity Spartan Intermediate Treasury	FIBIX

U.S. Long Term Treasury Funds	Ticker
SPDR Barclays Long Term Treasury	TLO
Vanguard Extended Duration Treasury	EDV
iShares Barclays 7-10 Year Treasury	IEF
iShares Barclays 20+ Year Treasury	TLT
iShares Barclays 10-20 Year Treasury	TLH
PowerShares 1-30 Laddered Treasury	PLW
PIMCO 7-15 Year Treasury	TENZ
Fidelity Spartan Long Term Treasury	FLBIX

U.S. Short-Term Corporate Bonds	Ticker
iShares Barclay 1-3 Year Credit Bond	CSJ

U.S. Intermediate-Term Corporate Bonds	Ticker
iShares Barclay Intermediate Credit Bond	CIU
iShares Barclay Credit Bond	CFT
SPDR BarCap Intermediate Credit	ITR

U.S. Long-Term Corporate Bonds	Ticker
iBoxx \$ Investment Grade Corporate Bond	LQD
SPDR Barclays Capital Long-Term Credit Bond	LWC

U.S. Small Cap Value Equities	Ticker
Vanguard Small Cap Value	VBR
iShares S&P 600 Value	IJS
SPDR DJ Wilshire Small Value	DSV
iShares Morningstar Small Value	JKL
iShares Russell 2000 Value	IWN
Rydex S&P Smallcap 600	RZV
Vanguard Small Cap Value	VISVX
DFA US Targeted Value I	DFFVX
DFA Tax-Managed US Target Value	DTMVX

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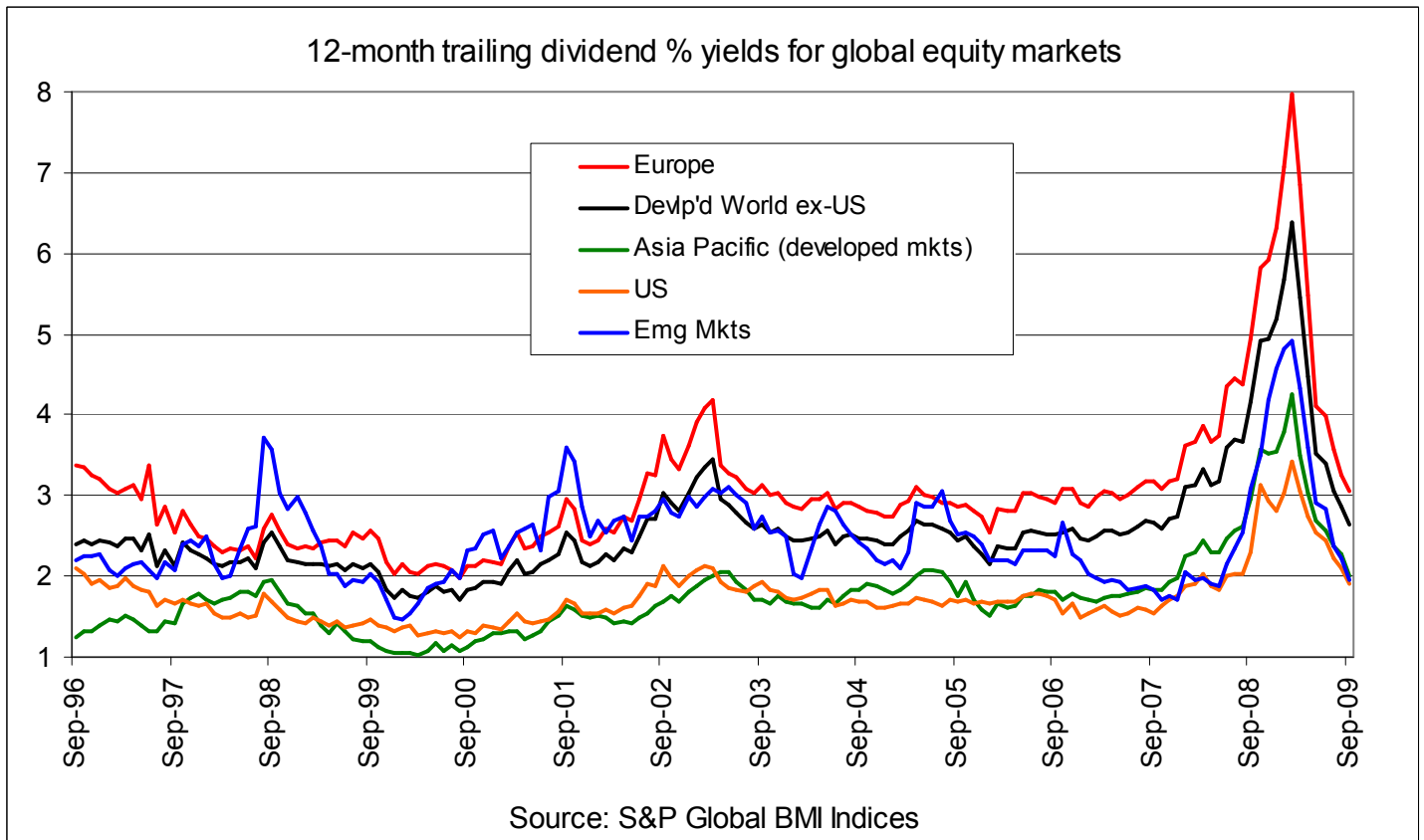
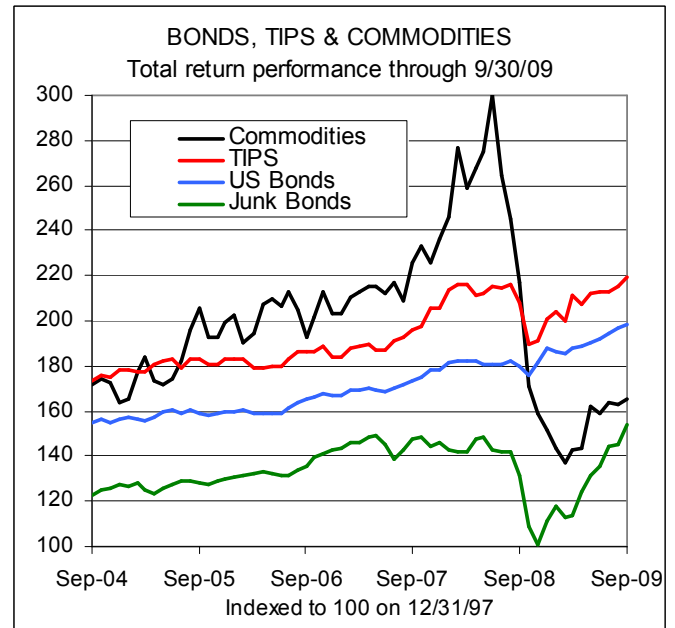
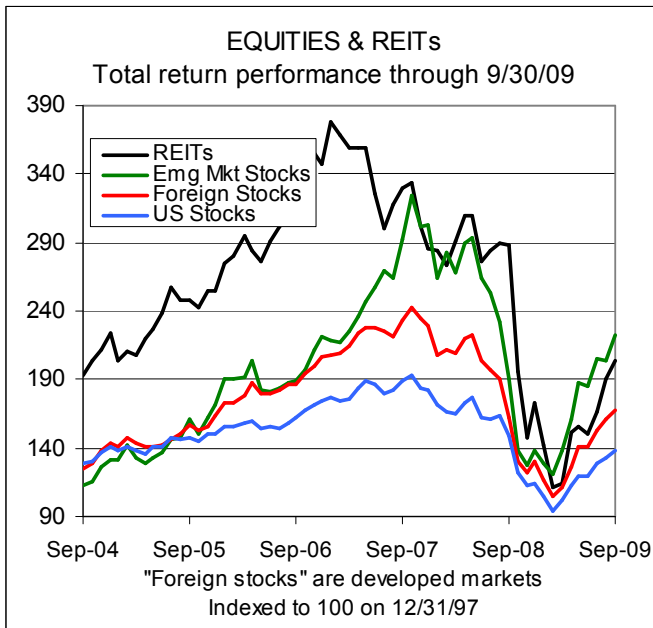
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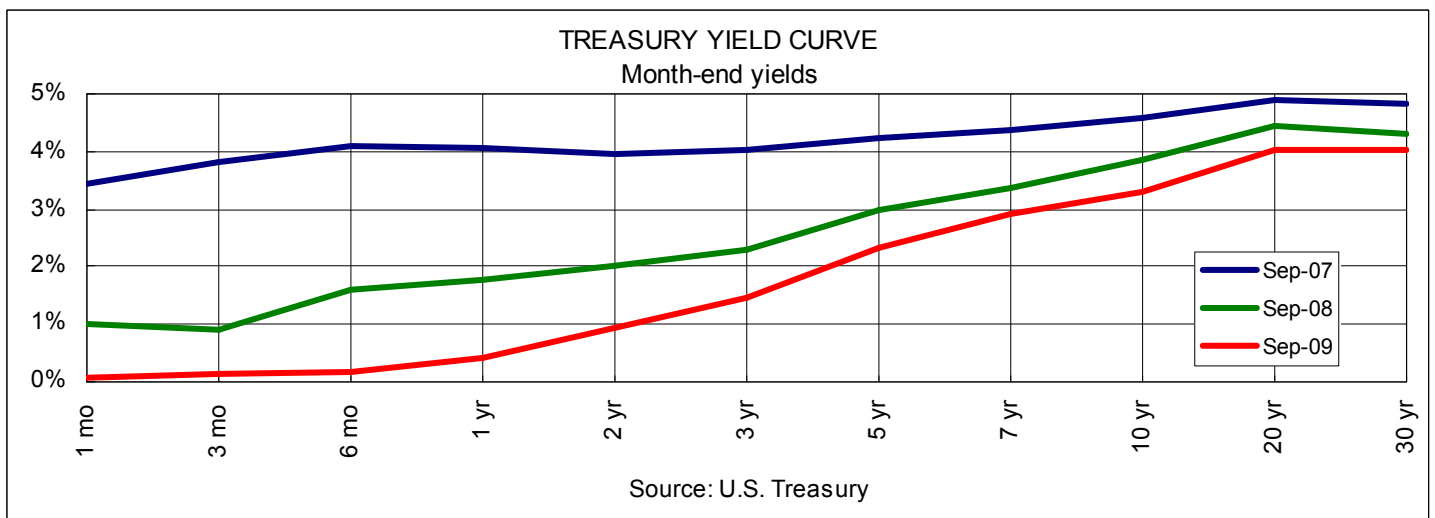
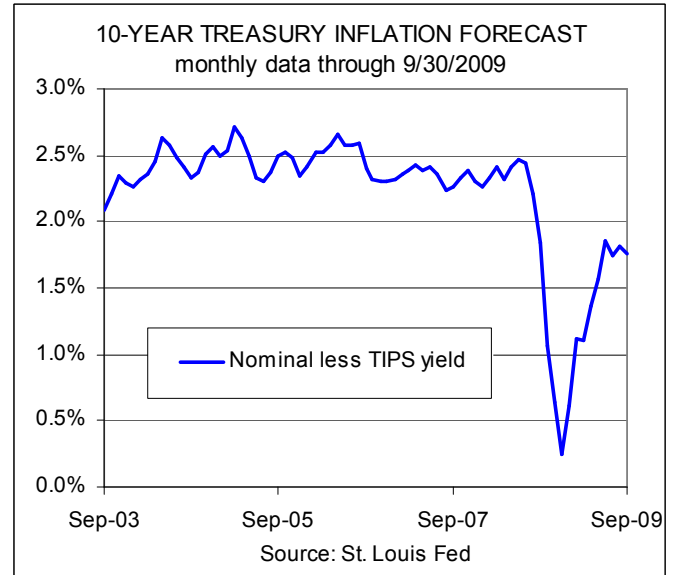
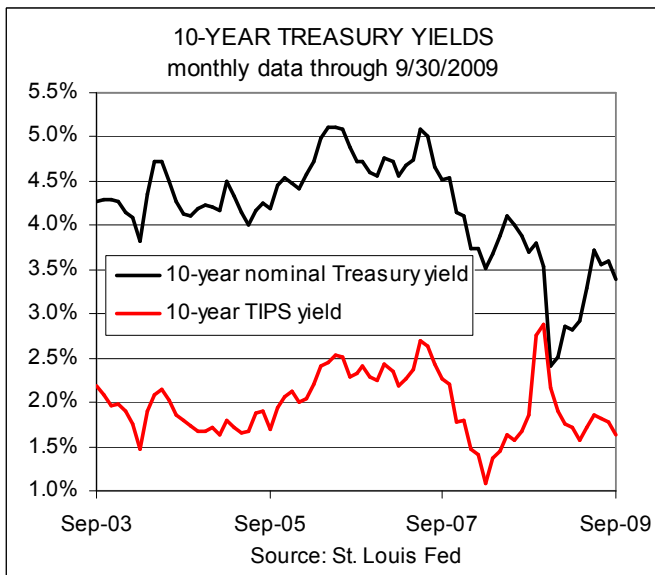
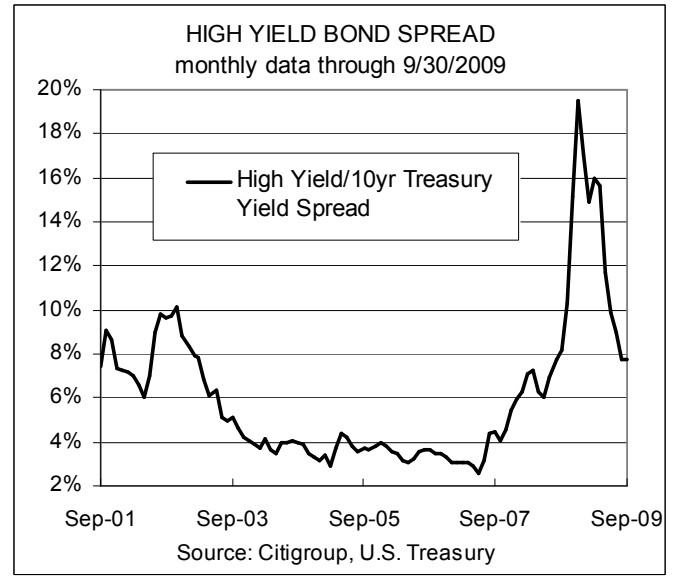
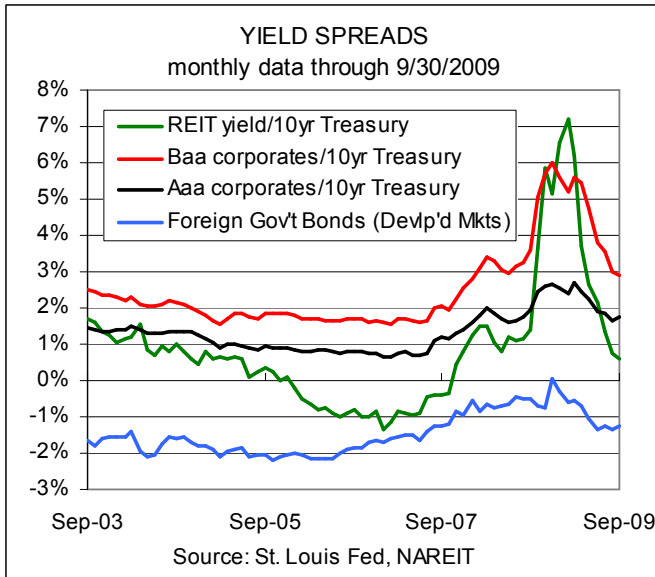
Dynamic Asset Allocation

Modern Portfolio Theory Updated For The Smart Investor

By James Picerno

Published by Bloomberg Press (February 2010)





TOTAL RETURNS (%) as of September 30, 2009

Major Asset Classes	1 mo	YTD	1 yr	3 yr*
U.S. Equities (Russell 3000)	4.2	21.2	-6.4	-5.1
Foreign Developed Market Equities (MSCI EAFE)	3.8	29.0	3.2	-3.6
Emerging Market Equities (MSCI EM)	8.9	61.5	16.4	5.6
U.S. Investment-Grade Bonds (Barclays. U.S. Aggregate Bond)	1.1	5.7	10.6	6.4
Inflation-Indexed Treasuries (Barclays TIPS)	2.1	9.5	5.7	5.6
High Yield Bonds (iBoxx High Yield)	6.0	38.6	16.9	4.3
Commodities (DJ-UBS Commodity)	1.6	9.0	-23.7	-4.9
Real Estate (Wilshire REITs)	7.1	17.8	-29.2	-13.7
Foreign Developed Market Gov't Bonds (Citigroup WGBI ex-US)	2.7	6.7	16.0	10.1
Emerging Market Gov't Bonds (Citigroup ESBI-Capped)	4.8	28.5	17.9	7.0
Foreign Gov't Inflation-linked bonds (DB Global ex-US Inflation-Linked Capped)	2.4	18.5	7.1	n/a
Cash (3-month Treasury Bill)	0.0	0.1	0.4	2.9

U.S. Equity Capitalization	1 mo	YTD	1 yr	3 yr*
Large Cap (Russell 1000)	4.1	21.1	-6.1	-5.1
Mid Cap (Russell Mid Cap)	5.7	32.6	-3.6	-4.1
Small Cap (Russell 2000)	5.8	22.4	-9.6	-4.6
Microcap (Russell Micro Cap)	6.3	28.1	-7.9	-7.9

U.S. Equity Style	1 mo	YTD	1 yr	3 yr*
Large Cap Growth (Russell 1000 LC Growth)	4.3	27.1	-1.9	-2.5
Large Cap Value (Russell 1000 LC Value)	3.9	14.9	-10.6	-7.9
Midcap Growth (Russell MC Growth)	5.8	37.1	-0.4	-3.1
Midcap Value (Russell MC Value)	5.6	27.6	-7.1	-5.7
Small cap Growth (Russell 2000 SC Growth)	6.6	29.1	-6.3	-2.6
Small cap Value (Russell 2000 SC Value)	5.0	16.4	-12.6	-6.7

Foreign Equity Region	1 mo	YTD	1 yr	3 yr*
Europe (S&P Europe)	5.0	34.7	3.3	-2.9
Asia/developed (S&P Asia Pacific)	3.3	29.6	9.6	-3.1
Emerging Asia (S&P Emerging Asia)	8.5	66.8	32.7	11.6
Latin America (S&P Latin America)	11.3	83.4	20.3	18.3
Emerging Europe (S&P Europe Emerging)	10.1	74.6	-6.0	-6.4
Middle East/Africa (S&P Middle East & Africa)	2.7	40.7	13.8	11.2

Key Commodities	1 mo	YTD	1 yr	3 yr*
Crude Oil	0.9	58.3	-29.8	3.9
Gold	6.0	14.3	15.7	18.9
US Dollar Index (postive returns equate with a stronger dollar in forex markets)	-1.9	-5.7	-3.5	-3.8

BIR's Global Market Index	3.5	18.6	5.1	1.1
S&P 500	3.7	19.2	-6.9	-5.4

* Returns for 3 year periods are annualized.

Sources: Frank Russell Co, MSCI Barra, Lehman Bros., iBoxx, Dow Jones, Wilshire Assoc., Citigroup, Standard and Poor's, Barchart.com, The Beta Investment Report