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Chris Dialynas Discusses the Causes and Implications of Low Interest Rates and the Yield Curve Conundrum



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Mr. Dialynas joined PIMCO in 1980. He has written extensively and lectured on the topic of fixed income investing. He served on the Editorial Board of The Journal of Portfolio Management and was a member of Fixed Income Curriculum Committee of the Association for Investment Management and Research. He has twenty-five years of investment experience and holds a bachelor's degree in economics from Pomona College, and holds an MBA in finance from The University of Chicago Graduate School of Business.

Despite tighter monetary policy, longer-term interest rates have remained relatively low in the U.S. and globally, producing a flat yield curve and a situation outgoing U.S. Fed Chairman Alan Greenspan has called a "conundrum". In the interview below, PIMCO Managing Director Chris Dialynas discusses the causes and potential implications of today's low rates, and offers a different take on incoming Fed Chairman Ben Bernanke's theory that a glut of global savings has lowered interest rates and risk premiums around the world. Mr. Dialynas is the author of numerous papers on geopolitics, economics and financial markets, including "Trouble Ahead-Trouble Behind: Restructuring the Global Economy – A New Marshall Plan".

Q: Incoming U.S. Fed Chairman Ben Bernanke has suggested that today's relatively low interest rates are the result of a global savings glut that is flowing into U.S. and global bonds. What are your thoughts on the "savings glut" theory?

Dialynas: The idea of the savings glut is that there is an abundance of savings in the world and that this abundance of savings has caused interest rates to drop to low levels globally and for risk premiums on financial assets to dissipate, leaving us in a financial environment where risk premiums are quite low and real interest rates are quite low. The basic tenet underlying the savings glut hypothesis is that there is more saving than investment and that savings is maldistributed. We know that saving equals investment, so today's situation is characterized as actual investment falling short of "intended investment". The savings glut is essentially Professor Bernanke's, and others', answer to Chairman Greenspan's yield curve conundrum.

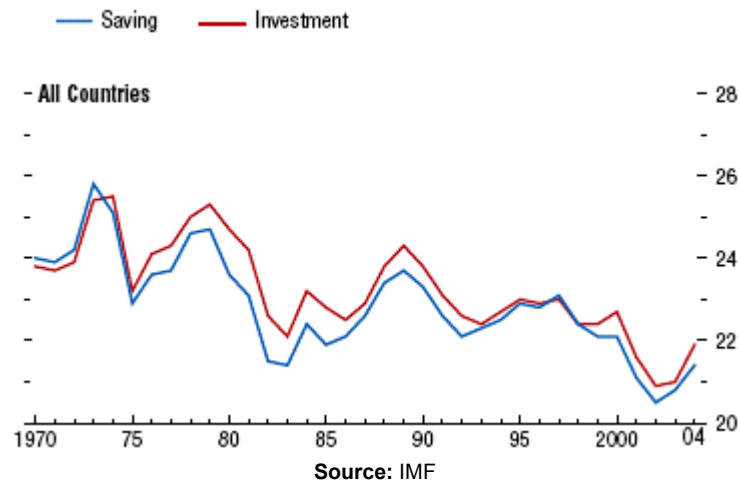
But to me, the notion that there is a savings glut is an incomplete and inadequate theory. The International Monetary Fund recently published data on world savings, and what we observe is that world savings rates have actually declined from the 1970's to the present time (see **Chart 1**). So the crude notion of a savings glut doesn't seem to reconcile the data with the theory because if there is a savings glut now then there would have been a much higher savings glut in the 1970's, and yet real and nominal rates were high in the late 1970's and extremely high in the early 1980's. Ironically, the savings glut concept, global aggregate demand shortfall, insufficient consumption

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discussions dominated the economic discussions of the 1930's. The 1930's were dominated by global recession, accentuated by extreme stress in the U.K. and the emergence of the U.S. economy on a relative scale, in sharp contrast to today's global prosperity but similar in that the emergence of China is similar to the emergence of the U.S. at the beginning of the 20th century.

Chart 1:
Global Saving and Investment
(Percent of world GDP, 1970-2004)



Q: If the savings glut theory doesn't fit the data, what might explain today's interest rate structure?

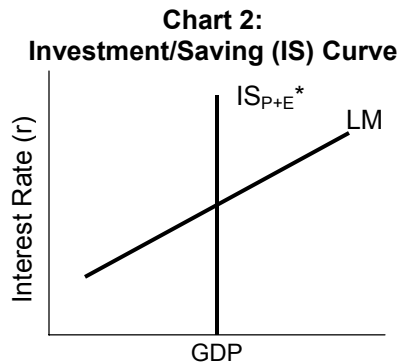
Dialynas: In thinking about the causes for low rates and low risk premiums in bond markets globally, it seems to me that there is something else going on that relates to global trade and to global capital flows that is somewhat independent of global savings rates and more dependent upon the risk of investment in plant and equipment relative to financial assets. Certainly savings rates in individual countries are important but the quantity of global capital flows and abundant access to credit enables global arbitrage of investment opportunities.

My basic premise is that investment projects, as we all know, need to be evaluated on a risk-adjusted basis and that the risk of investment in plant and equipment and capacity has increased for a few reasons. One reason is that war and terrorism increase the risk of investment. The second reason is the fact that capital cannot freely flow into and out of China and even if it could, property laws don't seem to be well developed in China and the risk of expropriation by the government would appear to be quite high. Additionally, China's government does not permit the free flow of investment into the country. Finally, the twin deficits and the pension industry problems pose future policy risk uncertainty.

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In an ideal world, investment capital would flow into China because of their vast amount of people and extraordinarily low labour compensation rates, and unconstrained global investment would be re-established, out of financial assets into plant and equipment in China. Hard investment elsewhere would immediately become obsolete if China opened fully, including freely floating its currency. So there is, in essence, a barrier to optimal investment and investment returns need to be calibrated for the higher risk. The failure of the S&P 500 price-to-earnings multiple expansion at present is indicative of a higher risk premium. In Keynesian/Hicks parlance, the investment/saving curve in the U.S. is almost vertical and will remain that way until changes in China occur. High risk causes the investment/saving curve in the U.S. to go to a vertical slope, causing investment in plant and equipment to be insensitive to interest rates, as you can see in **Chart 2**, where the “LM” curve indicates equilibrium between money demand and money supply.



* IS_{P+E} = IS plant and equipment

Source: PIMCO

If China opens, floats its currency, insures property rights, etcetera, the investment/saving curve will become horizontal in China and remain vertical in the U.S.

Viewed alternatively, and an obvious hypothetical, if U.S. companies were able to freely import labour, for as long as they desired, from China at Chinese wage rates (including benefits), then the U.S. investment/saving curve would flatten and the slope of the investment/saving curve in China would steepen. Investment into the U.S. would increase substantially and subside in China.

The barrier to investment in China could evaporate tomorrow or that barrier may become infinite tomorrow. So the uncertainty associated with the war in Iraq, the war on terror and the political/economic future of China causes a lack of hard investment by savers and the money flows into more liquid assets, such as bonds in industrialized countries. As the money flows into bonds, it gets recycled through trade and interest rates decline. Moreover, it instils a sense of tranquillity in the receiver nations such as the U.S. Tranquillity relieves any impetus for policy action.

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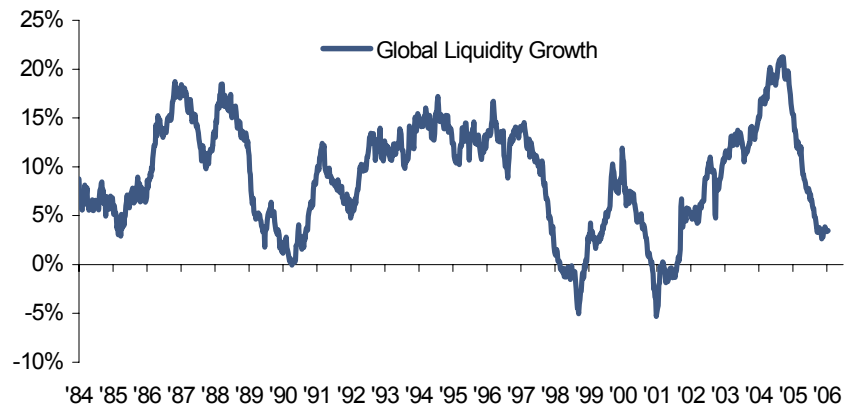
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This process has continued, unabated, because of the fixed exchange rate in China and some quasi-fixing of other exchange rates in the Asian region to the Chinese currency, which in essence means other Asian exchange rates are fixed to the dollar. This situation has obviously led to greater and greater trade imbalances, greater debt in the U.S. and a tremendous amount of reserve accumulation for Asian countries and oil-producing countries and commodity-rich countries as well. The Asian fixed exchange rate is a critical element to the imbalances, to the dynamics, and creates the analogy of the U.S.-China peg today to the U.K. adherence to the Gold Standard in the 1920's.

The analogy to the huge exports of gold from the U.K. in the 1920's and early 1930's is the \$2 trillion reserve accumulation by other countries during the past few years. In the past few years, there has been in excess of a couple trillion dollars of dollar reserve accumulation by other countries. As a result, the global economy is, and has been, awash with liquidity because of the increased risk of investment and fixed exchange rate in China (see **Chart 3**).

Finally, the increased uncertainty of future U.S. policy associated with large fiscal and current account deficits as well as under-funded private pension systems also substantially increases investor risk. While it may be difficult to conceive of a solution to the deficits, a very large number of policy combinations are imaginable, each with a very different implication for capital returns.

Chart 3:
Global Liquidity Growth*
(Jan. 1984-Jan. 2006)



*Global Liquidity = US Monetary Base plus Foreign USD Reserves

Source: Federal Reserve

Q: Let's talk about some of the implications of this excess global liquidity. What happens if the barrier to investment in China is removed?

Dialynas: A tremendous inflow of capital into China would occur if investment barriers were removed. The inflow of capital would bid up the value of the economy, the

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exchange rate and the price of labour. The inflow of capital into this utopian investment regime would result in an outflow of capital from industrialized countries and a reduction in wages in those countries. The “exploitation” of low-cost Chinese labour would enrich western capitalists to the detriment of the Chinese holders of production facilities. This process is in progress today—in slow motion. The present process, while politically comfortable, is an economic disaster. The U.S. will cross over from a “control” economy and world leader to a “controlled” economy and world follower. An outflow from the U.S. of high quality human capital will occur as this process progresses.

Q: If the global economy is awash in liquidity, wouldn't that normally lead to inflation?

Dialynas: The inflation has occurred. The inflation is in the housing market. The inverse of the current account deficit has been debt creation, and debt has accumulated in the consumer side and federal component of the economy. So the inflation that we have realized in the U.S., the U.K., Australia and other current-account deficit countries, but also in some surplus countries like China with low-priced labour and undervalued exchange rates, has been huge price inflation in the real estate markets. Housing price inflation is, in essence, the externality of this global liquidity and fixed exchange rate regimes.

Housing price inflation has some very important longer-term implications. A housing bubble leads to more investment in housing, which contributes to current GDP growth. However, if that investment were in plant and equipment of equal magnitude then we would have a productive resource with which production could be utilized to repay the current account deficit. In the case of a housing bubble and construction boom, no such product is available. The economic prospects for the national economy will rise and fall with the housing market. A pop in the housing bubble may invoke a ruinous downward multiplier reduction in the U.S. economy while the debts remain. Ultimately, the houses themselves may need to be liquidated to settle debts with foreigners.

Q: There has also been inflation in commodity prices, and oil in particular. What is the relationship between global liquidity and commodity prices? And how do you think about the implications of this relationship when trying to forecast global economic growth and other factors?

Dialynas: The boom in industrial commodities is another result of the abundant global liquidity and that has important implications as well. Some of the stock markets in countries that export these commodities have had their prices inflate upward quite a bit, especially in the Middle East, where the geo-political risk actually fell as a result of the U.S. invasion of Iraq. Given the dramatic increase in oil prices, there has been a fair amount of wealth transferred from the U.S. (and all net consumers of oil, but the U.S. is the largest consumer of oil by a large amount) to these oil-producing and many industrial-commodity-rich countries, including Russia, Middle East countries and South American countries.

For some of these Asian countries, reserve accumulation is a new process but reserve accumulation for oil-producing nations is something that Middle Eastern countries in

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particular have been accustomed to for decades. The explosion in energy prices is a big windfall to oil-rich countries. So, in trying to forecast future risk premiums and relative asset valuation, yield curves and inflation rates it is important to understand how the future consumption and investment behaviour of some of these oil-producing countries will differ from future consumption and investment by countries in the Asian bloc.

It seems to me the Middle Eastern countries will be much more likely to consume, and the consumption will probably be tilted toward technology—aircraft and military equipment—as well as consumer goods, than might be the case if we contrast them with some of the Asian countries, where they are more concerned with actually producing goods and selling goods, but also desirous of advanced technologies—military and otherwise. And if you consider these natural resources, such as oil, for example, as inventory that the commodity-producing countries are simply drawing down, there is very little risk capital investment associated with that process as contrasted with traditional spending and investment that is tilted more toward building new factories or producing goods.

Another important implication of this idea that commodity-producing countries are merely drawing down inventory relates to the fact that one of the common prescriptions for curing global imbalances is for emerging market residents to become consumers. If we believe the inventory-draw-down hypothesis, then this transformation is very difficult because the hypothesis implies the emerging market countries are the beneficiaries of an economic and financial windfall that could end tomorrow.

In fact, those countries are also suffering a hollowing out of their production by China and are becoming economically obsolete, which should retard consumption rather than encourage it. If they are able to liquidate their resource inventories for a very long time, such that they become extremely wealthy, and figure out a way to hold the wealth in a secured way (if such a notion exists), then this hollowing out becomes irrelevant and their consumption can increase. That prospect is very distant in my view. They will continue to feed the Chinese production machine the best they can, for as long as they can. The stronger they become, the greater they can charge for marginal commodity production.

Q: What role are the financial markets playing in the global liquidity glut?

Dialynas: We know the primary source of the global liquidity glut is the extremely stimulative fiscal and monetary policies in the U.S., post-2000, and the transmission of U.S. monetary policy to China, Japan and other “fixed exchange rate” regimes via the currency peg.

It may also be the case that some of this excess global liquidity is the result of leverage. With the proliferation of derivative instruments, and unregulated swap markets in particular, in conjunction with low risk premiums and investors’ ingenuity in trying to engineer higher absolute rates of return, financial leverage has been one of

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the presumed solutions to low returns. And we see this with the proliferation of the hedge fund industry.

The proliferation of derivative instruments and products may be offering a very cheap and abundant, but potentially transitory, source of funding to the demanders of capital through the leveraging of investment risk in conjunction with derivative vehicles. And the flip side of this cheap capital is that the suppliers of capital may be, and probably are, taking inordinate market risk.

If the market should be confronted with an external shock, we might in fact find that capital can be destroyed rather rapidly because of the past complacency of the market and the inherent capacity for virtually anybody to employ leverage via the derivatives market. In former times, the qualifications for leverage were much more onerous and not as readily available or custom-made as they are today.

One of the secular risks facing the global economy is the potential for an exogenous shock that hits at our tremendously levered capital structure, in the U.S. in particular. With leverage at unprecedented levels, such a shock would hit both the borrower's ability to service the debt and hit the investor's wealth simultaneously as negative investment returns prevail.

Q: How would you characterize today's global economy? Is it a so-called "Goldilocks" economy, with good growth, low inflation and low risk premiums, or is it a situation fraught with risk?

Dialynas: It's both, depending on your time horizon and who you're talking to. If growth with low conventional "core" inflation is your metric, then it's a Goldilocks world. The question is how long can it persist? The Goldilocks people will tell you it can persist for a very, very long time. But the problem that I explained earlier, which is the problem of a lack of investment because of the very high geopolitical risk associated with investment, implies that capital is depleted with time. So the potential to repay the debt dissipates with time and finally, although we don't know when, Goldilocks runs into the Big Bad Wolf and the wolf eats Goldilocks.

Q: We've talked about a lot of variables, but what is the bottom line in terms of the outlook for bonds and the shape of the yield curve?

Dialynas: The outlook is very path-dependent. There is this notion that the U.S. in particular, but other industrialized countries as well, has received a subsidy from the global savers in the form of lower rates. The estimates are that rates are 50-100 basis points lower than they would otherwise be as a result of this symbiotic trading and financing relationship between surplus countries and deficit countries and that if something should disrupt this process, then rates would go up substantially. On the surface, this seems pretty logical, and certainly if things unwound slowly, that would probably be the path. As the subsidy dissipated, assuming the capital needs were consistent, you would need higher interest rates or a lower currency to continue to attract capital, particularly because, as we've discussed, the successful transformation of China would result in massive outflows of U.S. capital to China.

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But if things were disrupted by some sudden surprise event, then it seems to me rates would probably decline across the curve, and probably more so for short rates than long rates. Economic growth would most likely slow substantially and you'd probably go into recessionary conditions. It could go either way and that's why trying to forecast the investment behaviour of those who hold the dollar reserves and those who continue to have huge trade surpluses is really a very, very important call for us to make.

If you look at the volatility of the market and the price of options on currencies, interest rates and stocks, volatility premiums are quite low. And a flat yield curve would be indicative of, at least for a while, lower volatility premiums.

In terms of the yield curve, part of what we are seeing with the flatter yield curve is lower term premiums but it is very hard to assign cause and effect because we have a re-regulation of the pension system that is resulting in better asset liability management on the part of defined benefit pension plans. So we have all of these factors with respect to trade flows. But then we have also got this huge stock of assets in the pension industry that are horribly mismanaged with respect to asset/liability management. Pensions are very short duration and regulations are being tightened to make it much more costly to be mismatched, and so one of the responses is to better match and that means buying more long bonds, resulting in lower rates and a flatter yield curve. So it is hard to dissect the inferences that one might normally make about the yield curve shape with respect to the economic cycle, with respect to trade flow influences and with respect to asset liability management.

And finally, in terms of risk premiums, I think it's interesting to note that from an economic point of view, other than the growth in debt, it seems to me we have been completely insulated from the economic hardship we might expect to be normally associated with fighting a war and financing a war. So there is a question as to whether some of the complacency in the financial markets is not only a function of capital flows but also a function of the fact that most Americans seem completely unaffected by the fact that we are engaged in a serious war.

And it's interesting to wonder whether it makes a difference in risk premiums and the financial markets in one regime versus the other, as to whether part of what we see with low risk premiums is the situation where we are engaged in a war but with good growth, low inflation, and low risk premiums even as we finance the war through the debt accumulation and the trade flows.

Q: Well Chris, now that Chairman Greenspan has passed the baton to Professor Bernanke – any comments?

Dialynas: As you can infer from my comments in this interview, from the [discussion of "Bretton Woods II"](#) last year and from my lengthy, detailed December 2004 paper "Trouble Ahead, Trouble Behind...", I am a pessimist who believes the imbalances in the world are grave and dangerous. I attribute part of the responsibility to the Federal Reserve as their "insurance company/bail-them-out" policy-making philosophy skewed

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incentives, which resulted in the mispricing of risk and the misallocation of global capital. The tremendous imbalances today are the result of this philosophical viewpoint.

This ad-hoc philosophical viewpoint, to the best of my knowledge, was conceived in the 1920's by Federal Reserve economist Charles D. Henry. There was much debate at the time about the role of the Fed and rules-based policies. The Fed proceeded with its mission using conventional methods, recognizing the effect low interest rates had on asset values, asset values on consumption and the destabilizing effect of asset bubbles.

The Greenspan Fed has rationalized its lenient, expansionary bail-out with the "productivity miracle" which, in my view, is mostly a result of the labour supply shock of China, India, Russia, Eastern Europe and extremely low interest rates.

Thus, there has never been a good rationale for sucking it up and absorbing the pain of rebalancing. Rather the policies of multiple bailouts were undertaken with a yet-to-be-known underwriter. Professor Bernanke of Princeton inherits a global political economy extremely unbalanced with no solutions in sight.

The Clinton and Bush administrations, as well as the Greenspan Fed, have relied upon many internal and external advisors. Without doubt, most of these advisors are of Ivy League vintage. It is particularly noteworthy to understand that the endowments of most of those universities—endowments that substantially accrue to the benefit of the respective professors—are primarily invested in very high-risk assets and high-risk strategies (as are numerous other investors in their quest for high returns in a low interest rate world). It is, consequently, of little surprise that policy advice has tended to aggressive stimulus. A disciplined, "take-your-medicine/rebalance-the-economy" set of policies would most likely be detrimental to the endowments of many of this country's leading educational institutions. As long as these institutions maintain high-risk portfolios, the policy advice from the ivory towers will be highly stimulative based upon new, bizarre economic ideas. The global imbalances will grow.

Professor Bernanke is a member of this fraternity. He is a very thoughtful economist who was an expert guest speaker at a PIMCO Secular Forum a few years ago. He was impressive then and impressive subsequently. There is an extraordinary challenge for a very high-quality person. My concern is his presumed pro-reflationary bias.

Q: If now-Chairman Bernanke were to ask you for advice, what would it be?

Dialynas: First, I do not know that I'm qualified to offer advice but I would be flattered and wouldn't hesitate. My advice would be simple.

Number one: beware of advice from advisors holding risky portfolios. Understand their biases. Who is paying their rent?

And number two: announce that all helicopters have been grounded and the pilots dismissed!

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I am honoured and emphasize these are my opinions and, while well-known to my PIMCO colleagues, are not regularly accepted but are well-debated to the benefit of our clients. Thank you for this forum.

Q: Thank you, Chris. We look forward to checking back with you in the future for updates on how these very important issues are progressing.

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