Credit Innovation and Opportunities

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Mark Kiesel

We live in a fascinating time. Faster than ever before, innovation opens up unimaginable possibilities and transforms potential into reality. New technology and products allow us to explore previously untapped opportunities and leverage our resources. As a society, we have embraced these changes, creating new products that span a breadth and depth never before experienced.

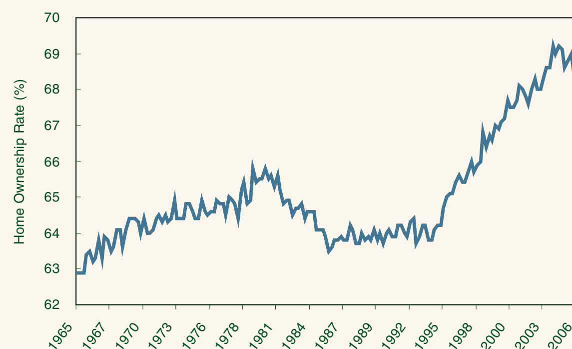
In particular, financial market innovation has shifted the status quo for individuals and corporations. Thanks to new products in the mortgage and credit markets, homebuyers and corporations can access capital like never before. And with the global economy growing and default rates at historically low levels, investors have been ready and willing to provide that capital.

However, with innovation comes risk. Uncharted waters have not yet been tested during turbulent times. If the U.S. economy slows sharply, today's healthy risk appetites could quickly wither. Most likely, a deceleration in the economy will diminish the availability of capital, increase volatility, and apply downward pressure on asset prices by raising risk premiums in credit markets from today's historically low levels. In this environment, a successful asset manager must proactively seek new ways to add value while guarding against the risks in today's credit markets. That is exactly what we attempt to do here at PIMCO. I'll explain how, but first let's take a look at the innovations in the mortgage and credit markets.

Innovations in the Mortgage Market

Innovations in the mortgage industry have made it easier than ever for homebuyers to acquire real estate. The home ownership rate in the United States today is at 69%, up 5% in the last 10 years (Chart 1). Changing demographics, growing wealth, and rising immigration explain part of this increase. But the mortgage industry's ability to develop new products that keep initial monthly payments low, enabling consumers to buy homes they could not otherwise afford, is a major factor in rising home ownership. For example, over the past several years, homebuyers have increasingly used adjustable-rate mortgages (ARMs) to purchase homes in an appreciating market. Last year, ARMs represented 31.4% of total mortgage originations whereas in 2001 ARMs contributed only 10.2%[1]. Other examples of new mortgage products include mortgages with maturities up to 40 years, low or no down payments, reverse mortgages, and introductory teaser-rates. Creative financing kept housing accessible despite rising short-term interest rates.

U.S. Home Ownership Rate



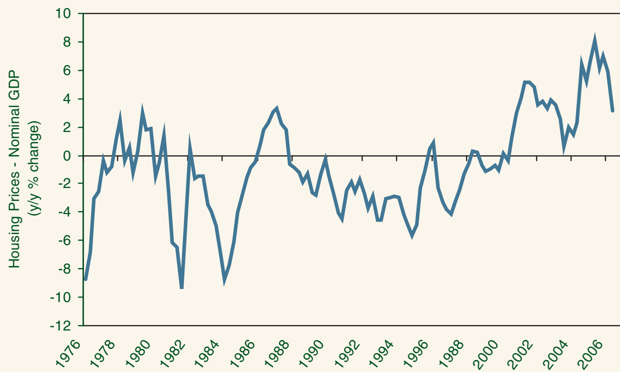
Source: U.S. Census

Chart 1

Novel techniques employed on Wall Street also make it easier for home buyers to access capital. New investment products allow mortgage cash flows to be separated and sold off in various tranches of risk to investors. Collateralized mortgage obligations (CMOs), interest-only mortgages (IOs), and principal-only mortgages (POs) are decades old, but the growth in collateralized debt obligations (CDOs) over the past several years has expanded capabilities. More recently, sub-prime mortgage loan growth exploded, creating a new means for lower-quality borrowers to buy homes. Coupled

with growing demand, these new investment products fueled an unprecedented period of liquidity for potential homebuyers. The result: lower costs of capital and initial monthly mortgage payments for the average homeowner. Consequently, due to innovation, disintermediation and leverage, housing prices have appreciated significantly faster than nominal GDP growth over the past several years (Chart 2).

Credit Innovation at Work: Housing Prices - Nominal GDP



Source: OFHEO and BEA

Chart 2

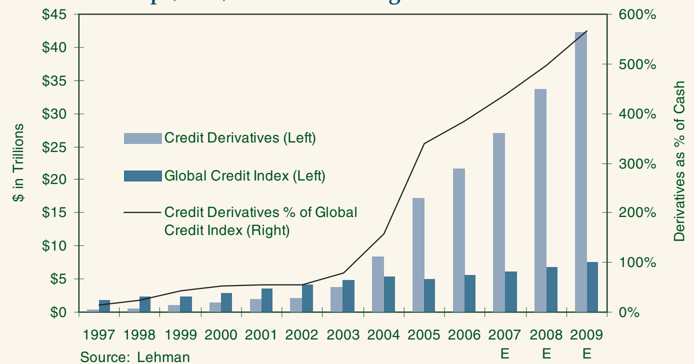
Ironically, despite a significant slowdown in housing price appreciation and soaring inventories[2], credit availability for home buyers is only just beginning to tighten. Why? Investors remain focused on low default rates. In addition, abundant global liquidity continues to flow into the credit markets, providing a buffer against short-term interest rate hikes by the Federal Reserve. As long as the U.S. labor market remains healthy, it seems investors will continue to lend. Nevertheless, innovations in the mortgage market have brought a new and growing class of buyers, including sub-prime, adjustable-rate, and speculative borrowers, into the housing market. In all likelihood, these new players contributed to the rapid appreciation in the housing market over the past several years. However, if delinquencies and foreclosures rise, the prevalence of these marginal players will probably reduce risk tolerances. How the cooling housing market will impact the overall economy is still unclear. What does seem clear to us is that the tightening of credit for homebuyers we are beginning to see is just that: the beginning. If we are correct, it follows that the influence of leverage and innovation on the housing market will turn and asset prices will be challenged.

Innovations in the Credit Market

As new mortgage products transformed credit availability for homebuyers, credit market innovations have also influenced corporate bond spreads. Credit default swaps (CDS) have grown such that the notional value of all outstanding CDS is now three times larger than the cash corporate bond market (Chart 3). As a result of growing liquidity in the CDS market, corporate bond collateralized debt obligations (CDOs) are increasingly replaced by synthetic CDOs, which are funded with CDS contracts as opposed to cash bonds. The growth in the synthetic CDO market (Chart 4) has been explosive as new investors, rating agencies and investment banks have all embraced this new asset class. In fact, structured credit demand increasingly acts as the marginal price determinant of credit risk today. Placated by historically low default rates, investors are now comfortable taking on more structured credit risk. The various tranches of CDOs disperse risk to investors according to their return objectives and risk tolerances. The secular trend of disintermediation has created tighter credit spreads and lowered the costs of capital for companies in the corporate bond market in the same way it has lowered the cost of mortgages for homebuyers.

Does credit innovation carry risks? Yes. As we have seen with housing, new home buyers can be lured into buying homes they cannot afford. Ultimately, rising defaults and restricted credit availability will negatively affect the housing market, foreshadowing what is also in store for the credit

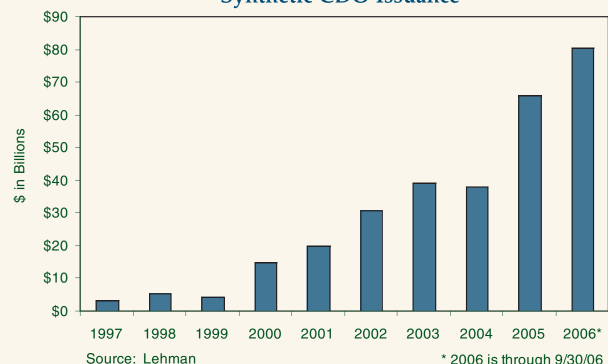
Credit Derivatives Market Growth: Credit Default Swap (CDS) Market Growing Faster Than Cash



Source: Lehman

Chart 3

Explosive Growth in Structured Credit: Synthetic CDO Issuance



Source: Lehman

* 2006 is through 9/30/06

Chart 4

market. An economic downturn will test the new synthetic players and products in the corporate bond market. The growth of CDS, synthetic CDOs, and leveraged structured credit products, such as the recent constant proportion debt obligations (CPDO) vehicles, has been swift. These products and markets are relatively new and, more importantly, have yet to be tested in a bear market. Leverage has been pushed to the point that corporate bonds, and particularly CDS securities, may have limited upside potential going forward. In fact, the explosive growth in leveraged structured credit products globally is likely a main catalyst behind the dramatic tightening in the major U.S. and European credit default indices (CDX and iTraxx) where credit spreads have now reached new tights (Chart 5). We are clearly in uncharted waters.

Structured Credit Demand has led to Tightening in CDS Index Products

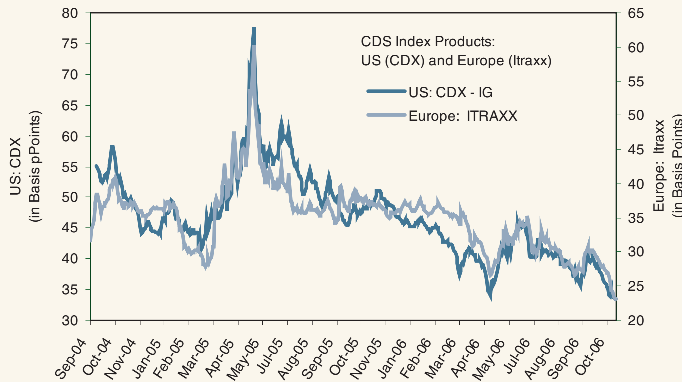


Chart5

Negative Basis Opportunities

How do the trends we've discussed so far create opportunities for PIMCO to potentially add value while guarding against the risks facing today's credit markets? Strong demand for structured credit products, such as synthetic CDOs, has created an interesting dynamic between CDS and corporate cash bond spreads. Since investors have increasingly used CDS securities to fund synthetic CDOs, CDS issues have outperformed corporate bonds. As a result, CDS are now trading "rich" versus corporate bonds. This trend has resulted in "negative basis trades," which occur when CDS securities yield less than the underlying cash bonds.

Today, the negative basis, or the difference between CDS and cash bonds is near all-time wides (Chart 6). PIMCO seeks to capitalize on this development by buying the relatively "cheap" cash, or corporate bonds, and selling the relatively "expensive" CDS. Buying corporate bonds (going long) and buying protection via CDS securities (going short via the CDS market) with similar maturity

Negative Basis Trade Opportunity as CDS Outperforms Cash

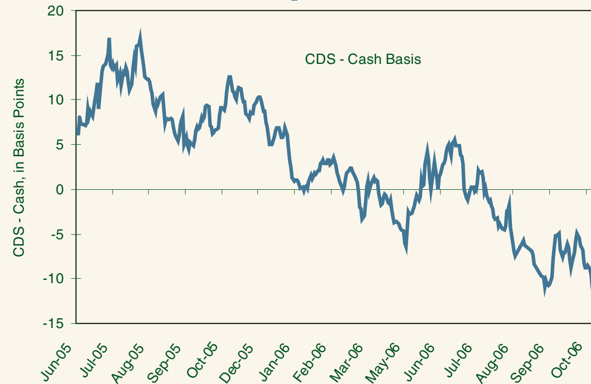


Chart 6

dates allows us to earn positive spreads for our clients. Given our expectation that the basis will converge towards zero, investors could potentially earn a positive carry equal to the current basis.

In fact, investing in negative basis trades may offer two additional advantages. First, credit spreads are now led by the CDS market. As a result, CDS should underperform cash bonds if credit spreads widen. This is because fast money tends to move initially into CDS given its high liquidity and tight bid/offer spreads. Therefore, we favor buying protection, or going short credit risk, in single name CDS due to current "rich" valuations and our belief that credit spreads will widen over time. Second, investors have become more aggressive and, thus, helped re-leverage corporate balance sheets[3]. For example, LBOs are on the rise (Chart 7). In this environment, our strategy is to own short-maturity cash bonds, preferably with covenants, that we hedge by buying protection through CDS securities with similar maturity dates. This approach makes sense because banks, which have helped fund the

Rising Event Risk

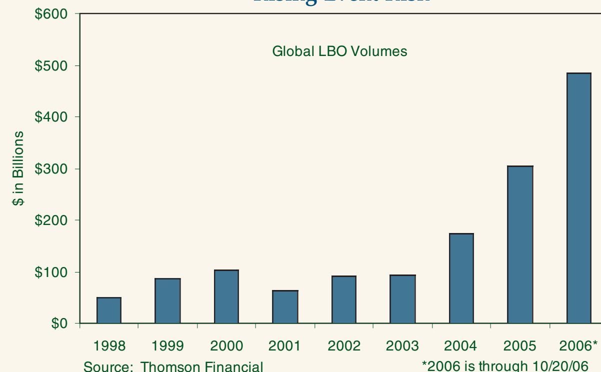


Chart 7

recent LBO wave, dislike capital structures where existing bonds mature prior to new bank debt maturities. As a result, a fair amount of shorter-maturity debt may be tendered. If this trend continues, cash bonds should strongly outperform CDS and bonds may tighten even further whereas CDS should widen as corporate leverage and risk rise. For these reasons, as well as attractive valuations, we believe negative basis trades are an effective way for PIMCO to actively manage credit risk with a short, or negative credit bias, while potentially earning a positive carry for our clients.

Focus on Value

Innovation is playing a huge role in both the mortgage industry and the corporate bond market, bringing lenders and borrowers together and providing easier access to credit than ever before. As the housing market slows, mortgage lenders are beginning to tighten credit in recognition that innovative loans are fine in a bull market but perhaps less so in an increasingly bearish market. We suspect the corporate bond market will eventually follow a similar path toward tighter credit, particularly as the slowdown in housing leads to slower economic growth.

Innovation is a wonderful thing, but it can also lead to excesses that separate asset prices from their underlying value, whether we are talking about houses, corporate bonds, credit default swaps or pets.com. That's why PIMCO continues to focus on value in corporate bonds, researching our credit investments from the bottom up and taking advantage of value opportunities like negative basis trades when they present themselves. In today's corporate bond market, our focus on value, while not innovative, may be the most sensible approach of all.

Mark Kiesel
November 9, 2006

[1] Mortgage Bankers Association

[2] For a more detailed analysis of the housing market, please see our U.S. Credit Perspectives, June 2006, *For Sale*.

[3] For a more detailed analysis of the re-leveraging of corporate balance sheets, please see our U.S. Credit Perspectives, September 2006, *Going for the Long Ball*.

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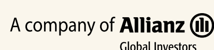
P I M C O

840 Newport Center Drive

Newport Beach, CA 92660

949.720.6000



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