Evaluating and misevaluating market risks

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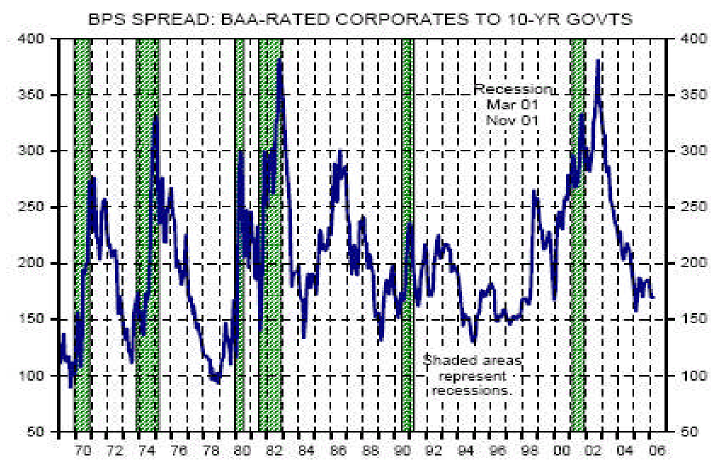
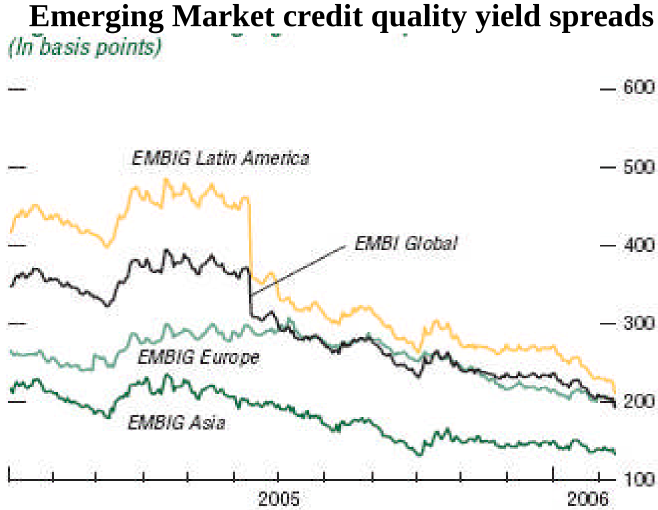
Credit risks seem dormant these days. The average credit in the US bond market is rated BBB. The credit quality yield spread between BBB bonds and US Treasuries has been unusually narrow this year, though not the narrowest in memory. Is this evaluation correct or will it turn out to be too complacent?



Source: Bank of Tokyo Mitsubishi

Even more striking is the pronounced narrowing of emerging market securities and US Treasury obligations.

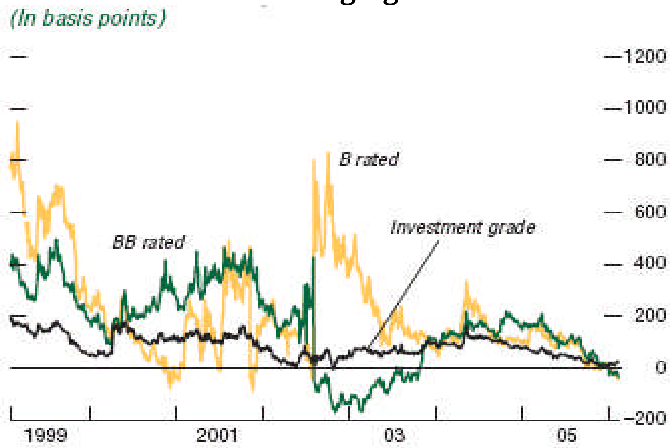
Emerging Market credit quality yield spreads



Sources: JPMorgan Chase & Co.; and Merrill Lynch.

This has led to the virtual elimination of any yield differences between similarly rated emerging market bonds and corporate bonds, not entirely unprecedented but highly unusual. This goes beyond complacency, veering toward wishful thinking.

Yield spread differences between Emerging Market and US Corporate bonds



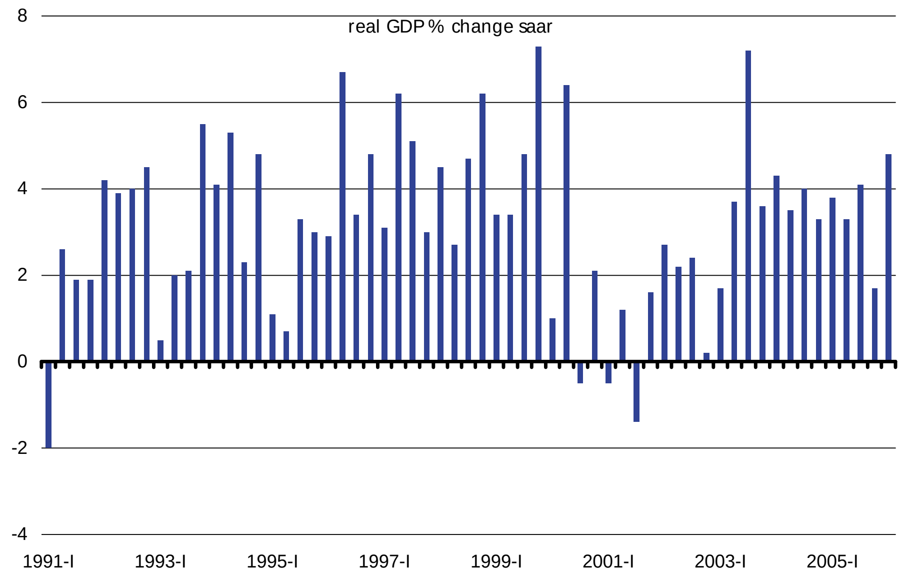
Sources: JPMorgan Chase & Co.; and Merrill Lynch.

And the recent behavior of many commodity prices—especially gold, other precious metals, and even standard industrial materials—suggested that risk aversion had almost lapsed. What used to be considered highly speculative positions had become ordinary. Alongside that price surge, the stock markets of many commodity producers and emerging market countries enjoyed thrilling 2-year long rallies, e.g., Brazil.

In justifying their investment decisions, those piling into risky assets have argued "this time is different." Maybe so. But the sudden turnarounds that took place in mid-May inject more than a note of caution. Instead, they are fair warning that the lessons of history have not been overturned, at least not yet.

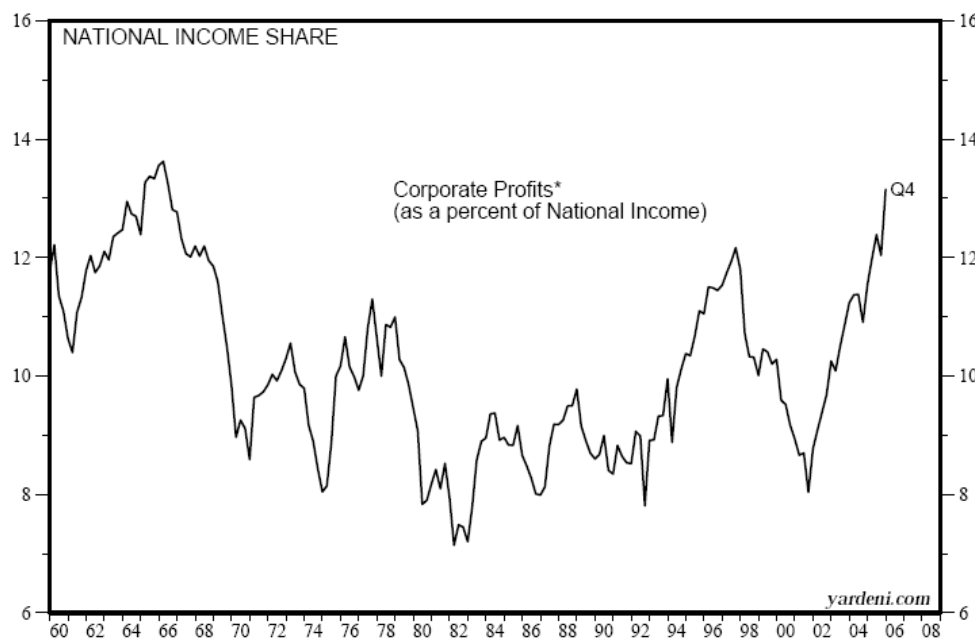
In trying to shed some light on how markets evaluate risk – or as is rather often the case over the past decades—misevaluate risk, I want to start by laying out some of the similarities and differences between today's market conditions and those that prevailed the last time risk aversion seemed to be slumbering. Using credit quality yields for the average US corporate borrower as the metric, the last time yield spreads—and the risk perceptions that they encapsulate—were around current levels was in the mid-1990s, from about 1994 to 1997, up until the time of the Asian debt crisis. Let's run through some of the similarities and differences in the economy and financial markets that might be thought to influence credit quality and risk perceptions. Here are four similarities:

First, **good economic growth**. Growth rates were generally improving during the 1994-7 period. Lately they have been strong and even more stable, although emerging signs that the US housing boom is tapering off suggests GDP growth will recede over the next year or so.



Source: Bureau of Economic Analysis

Second, **excellent corporate profits**. The share of profits in US national income started to climb in 1994 and rose until corporate bond spreads widened in 1998. The increase in profitability has been even more dramatic in the past few years. In both time periods, strong profits have been a source of comfort to bond investors and an indicator of improved credit quality. Obviously, the predictive content was weak back in the late 1990s, and we don't know now how long the recent stretch of sharply higher profits will last.

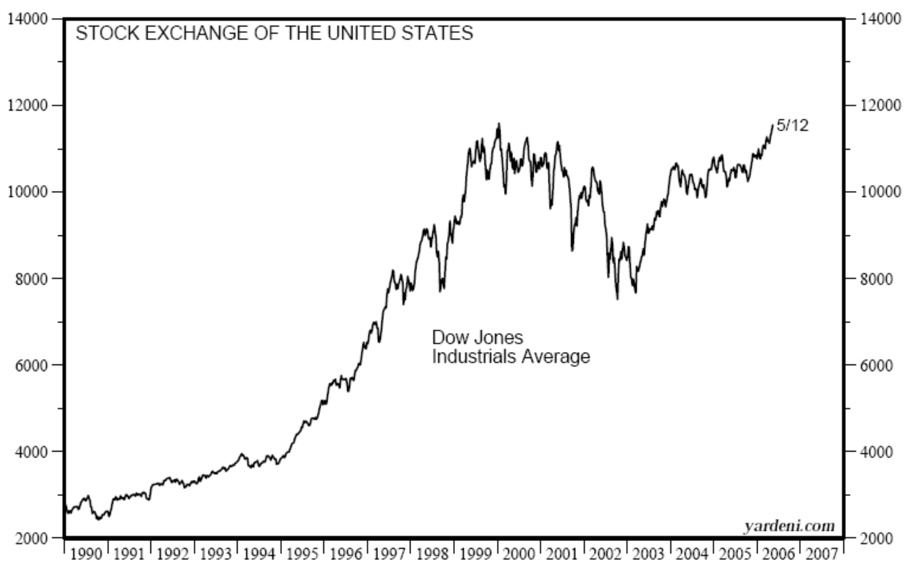


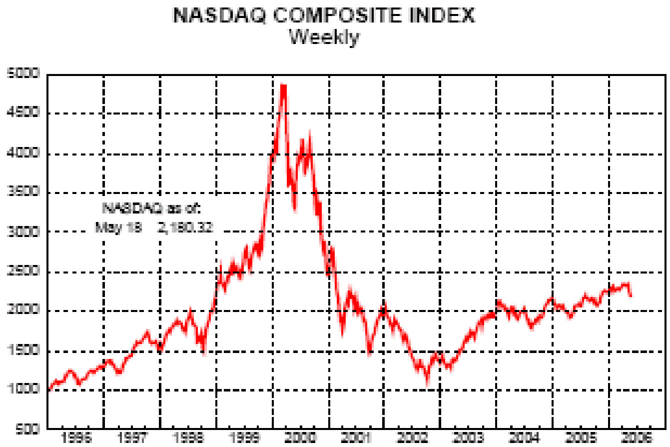
Source: Bureau of Economic Analysis

Third, **weak commercial real estate development**. One of the lesser known similarities between the two periods is that both followed stretch of prolonged problems in commercial real estate. In the early 1990s the problems reflected a banking crisis which was partly caused by excessive speculative building. In the present decade, several commercial real estate markets were badly injured by the collapse of the high-tech bubble and the associated failure of many firms in high-tech centers like San Jose, Austin, Dallas, and Salt Lake City. In both periods, commercial real estate developers scaled back their ambitions, and their bankers encouraged that shift to more prudence by refusing to lend against buildings that were not fully rented in advance. Less commercial real estate financing had the effect of redirecting money toward corporate bonds, thus helping to narrow spreads. As the sector recovers, as it has started to do lately, this factor will diminish in importance, again mirroring what happened after about 1996.

Source: Bureau of Economic Analysis

Fourth, **favorable stock markets**. The beginning of the rally of the 1990s coincided with the election of a Republican Congress in November 1994. The first leg of the equity boom was generalized, in contrast to what would come later when mainly high-tech stocks drove up the NASDAQ. The narrowing in credit quality yield spreads in the past couple years coincides with the irregular progress of the familiar stock indexes toward their pre-bubble highs.



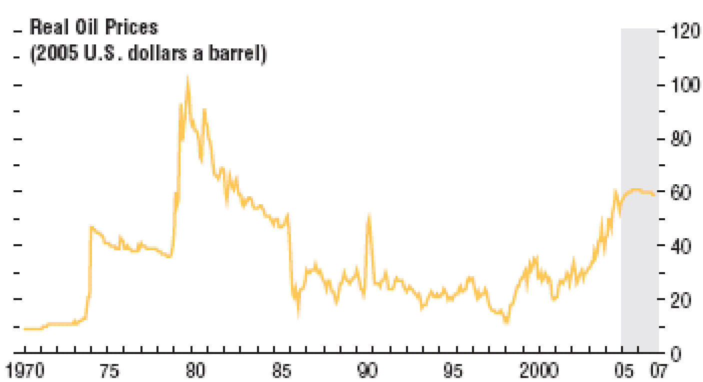


Source: Federal Reserve Board

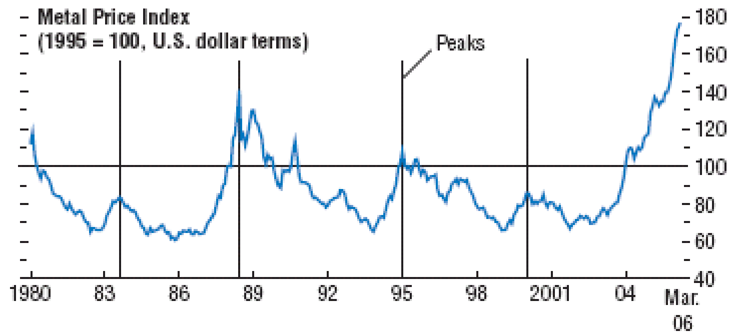
Those who have been amassing large positions in risk assets are not unaware of these similarities. But they don't believe those parallels will eventually provoke a market setback – or at least they feel they will get out in time before that happens. And it is true that there are some considerable differences between today's conditions and the mid-1990s when risk aversion was diminishing and yield spreads were narrowing. Here are three factors that may tend to inoculate an abrupt adverse market break for risky assets.

First, **more differentiated corporate bond market**. In the 1994-97 period, the narrowing in credit quality yield spreads was a generalized phenomenon. Risk perceptions declined almost across the board, encompassing corporations from a wide variety of industries and countries. By contrast, the recent narrowing of credit quality yield spreads has definitely not been across-the-board. Significant shocks in the airlines and motor vehicles industries, with numerous bankruptcies such as United Airlines, Tower Automotive and Delphi, and steep downgrades of icons such as GM and Ford, have been a continuing reminder to investors of the risks to companies and whole industries.

Second, **bubbling commodity prices**. The global commodities markets have been on a roll during much of the recent period of narrowing credit quality yield spreads. That differs sharply from the 1994-1997 period. Back then, oil prices were fluctuating in a narrow range, in comparison to the recent surge in energy costs. Also in 1994-7, average prices of metals essentially peaked and drifted lower. In the past few years, by contrast, they have risen spectacularly. This has been particularly important for commodity producers in emerging markets. As a result, their perceived credit risk diminished.



Source: IMF

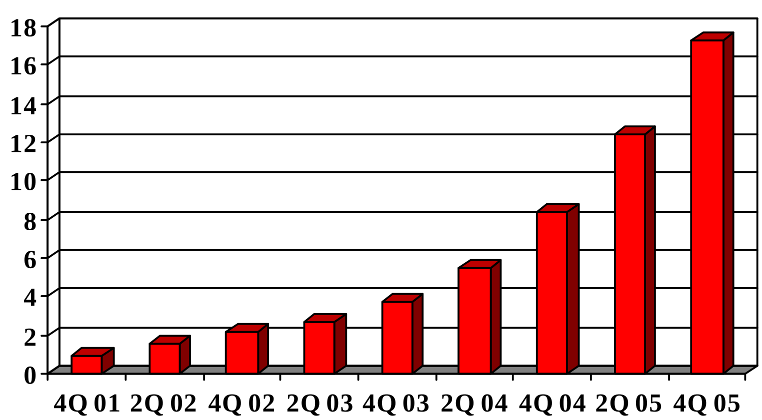


Source: IMF

Third, **explosive growth of credit derivatives**. Traditional buying and selling of corporate bonds has been overshadowed by a new, and possibly superior, trading vehicle: credit derivatives. Credit default swaps and other forms of credit derivatives barely existed ten years ago. They have only become a major risk management and trading alternative in the past three years. Corporate bond trading has always come with relatively high transactions costs – far more expensive than similar sized transactions in the stock market. That discouraged many investors from reallocating their bond portfolios on a continuing basis. That left them with exposures that were hard to adjust when credit perceptions changed in the market. When everybody tried to get out of exposures at the same time, yield spreads widened, often abruptly and sometimes sensationally. Credit derivatives may provide some meaningful benefits in making the corporate debt markets more resilient to shocks. Of course, there are no guarantees that the existence of a large market in credit default swaps will be enough to cure the problem of being stuck with embarrassing exposures when the credit quality of a company, industry or sector suddenly deteriorates. The so-called "re-pricing of risk" may be no different in today's trading environment. And some market professionals are not encouraged by the leverage that can be built up in the market on short notice: for example, the value of credit swaps on Delphi bonds reached 8 to 10 times the total value of the underlying bonds. Obviously settlement of such exposures cannot rely on physical settlement, so alternative mechanisms have to be agreed in advance.

Growth in Credit Derivatives Market

(Notional Value Outstanding)



Source: International Swaps Dealers Association

However, there are some structural changes that may not act as buffers should market sentiment turn.

First, **pension system in flux**. Since the mid-19990s, there have been some pronounced structural changes in US and global financial markets that will have lasting effects on who buys, holds, and trades corporate bonds. One is the shift in the pension system away from defined benefit pension programs to defined contribution plans, the most familiar of which are 401k plans. Private defined benefit pension plans are shrinking, as corporations with such plans go into bankruptcy or are able to convert these plans into defined contribution plans. The total size of defined benefit plans peaked at $2.1 trillion in 1999, and the amount contracted by about 15% since then. Meanwhile, defined contribution plans continue to grow rapidly, both in number and size. The shift is likely to have permanent effects on the bond market. Simply put, defined benefit plans invest a moderate amount of their total footings in corporate bonds, but individuals don't. When individuals invest their own money, they tend to buy equities more than bonds, and when they do invest in the fixed-interest sector, they buy mostly governments, government agencies, or mutual funds that invest in governments and agencies.

Structural Changes in the US Private Pension Fund System

Share of equities and corporate bonds in total assets

	End 1997	End-2005
Defined benefit pension plans: total assets	$1,747 billion	$1,769 billion
Of which, percentage share		
Equities + mutual funds	54.8%	49.7%
Corporate bonds	11.9%	14.5%
Defined contribution plans: total assets	$1,942 billion	$2,844 billion
Of which, percentage share		
Equities + mutual funds	65.9%	73.8%
Corporate bonds	3.5%	1.0

Source: Federal Reserve System *Flow of Funds*

Second, **globalization of portfolios**. Another structural change is the greater participation of foreign investors in the US bond market. The Fed's *Flow of Funds* statistics amalgamate corporate bonds with asset-backed securities, so it isn't possible to give precise figures on what proportion of outstanding corporate bonds is held by foreign investors. But a broad trend toward greater foreign participation is evident from the data. In the 1994-97 period, foreign investors accounted for about 14% of the US corporate bond market, including asset-backed securities. By the end of last year, that proportion had climbed to 25%. But it is an open question whether foreign investors will remain wedded to these assets, let alone accumulate additional US dollar-denominated securities, in the face of a possible further decline the value of the US dollar in the foreign currency markets.

Third, **expanding hedge funds role**. Finally, the role of hedge funds in the global financial system has mushroomed in the past ten years or so. What they own, how they trade, and whether they actually "hedge" or just take speculative positions are all unknowns. Reliable data are sparse. What is clear is that hedge funds have become an especially important factor in the markets for risk assets. They are heavily involved in commodities trading. They have become the crucial swing factor in the emerging markets fixed-income sector, especially during the recent period of narrowing credit quality yield spreads on many emerging market securities. Hedge funds buy bonds issued by emerging market governments in dollars and other major currencies. They are also active in domestic currency issues in the emerging markets, both governments and corporates. Since hedge funds employ significant leverage in their investment activities, they normally do not follow a buy-and-hold strategy. Even a mild increase in overall risk aversion could easily precipitate a significant sell-off of these holdings.

Conclusions:

In the mid 1990s, many investors convinced themselves that the risk of lending to domestic corporations was low, and would remain low. This complacency extended into the realm of emerging market fixed-income securities, as well. It took unforeseen shocks – the Asian financial crisis, the Russian debt problems of 1998, the Long Term Capital Management debacle, and finally the collapse of the high-tech bubble and associated failures of giant proportions such as Enron and Worldcom – to puncture the complacency and compel a far-reaching reevaluation – and re-pricing – of risks.

The current environment of low risk aversion is grounded on a number of assumptions that may or may not be valid. What are they?

- That a sturdy economic expansion will continue in the United States, in China, and elsewhere in Asia, and will broaden to include Europe, Latin America, and other emerging markets,

- That economic growth will be steady, without volatile ups and downs that often presage an eventual cyclical downdraft,

- That corporate profits will, accordingly, continue to move ahead,.

- That labor markets will stay roughly in balance, strong enough to keep unemployment low and job growth moderate, but not so strong as to touch off an escalation of labor costs that would threaten a wage-price spiral,

- That monetary policy will therefore be able to be kept benign, so interest rates will remain stable,

- That participants in the financial system will be successful in managing risk through the mathematical modeling techniques that have been developed, without being caught off guard by developments that might undermine the reliability of past statistical relationships,

- That the use of financial and credit derivatives to control risk will be effective,

- That any risks which might surface at the company or industry level will be isolated and not contaminate any major financial institution,

- That if some sudden shock should cause greater risks to the system, the Fed and the other major central banks will respond quickly and forcefully to contain the damage.

It is certainly possible that all of these assumptions will come to pass. But the list amounts to a formidable hurdle. Perhaps the best that can be hoped for is that the markets get some reminders about how unlikely it is that such a favorable set of circumstances can prevail. In May, we got a glimpse of the kind of speed bump that can suddenly catch markets by surprise and provoke a nasty spike in volatility. It is highly likely that more incidents will arise in the near future to test the convictions of those who are comfortable with the relatively low pricing of risk that has become fashionable in the past couple of years.