

Sovereign Credit Risk And Currencies

One witticism circulating about the Internet endlessly – and by fax previously, for those of you old enough to remember when the fax machine was *très chic* – is the six phases of a project. These are, in chronological order: Enthusiasm, disillusionment, panic, search for the guilty, punishment of the innocent and praise and honors for non-participants.

This process must be scale-independent, for it applies to global central banks and finance ministries, operating both as separate entities and in coordination with each other, as well as to small groups within companies. How else can we explain a phenomenon increasingly observable in 2008 that once a country's sovereign credit rating deteriorates its borrowing costs fall and its currency, at least temporarily, rises? If this is not a perverse rewarding of the guilty, then what is?

Sovereign Credit Risk

Credit default swaps (CDS) are insurance contracts wherein the writer agrees to pay the investor the full, or “par” value of the bond in the event of a default. Think of them as put options on bonds. They are quoted in basis points, or 0.01% units of the dollar amount being insured, usually a minimum of \$10 million. The combination of a risky bond plus a CDS, therefore, is a synthetic call option on the bond. The arbitrage is conceptually simple: A holder of a risky bond should be willing to pay as much as the spread over Treasury or other sovereign yields in CDS protection.

What happens when the underlying bond itself is a sovereign credit risk such as a U.S. Treasury, a German bund or a Japanese government bond (JGB)? The default risk of any of these instruments involves something pretty apocalyptic, on the order of the issuing government ceasing to exist and honor its obligations. That happens, as anyone who dabbles in Tsarist or Confederate bonds in anything other than the scripphilly market can attest. And if that event comes about, it would be pretty pointless to receive payment for a defaulted U.S. Treasury bond in U.S. dollars. Therefore, the CDS quotes below always are in units of another currency; euros for U.S. bonds and dollars for German and Japanese bonds.

Rising CDS costs on various sovereign credit risks became an increasing fact of life after the onset of the credit crunch in 2007. Governments everywhere, but in the U.S. and U.K. in particular, felt the appropriate response to banks reaping the consequences of their own bad bets and risk management was to bail them out by a combination of negative real short-term interest rates, acceptance of all manner of hard-to-value securities as collateral, implicit backstops of rescue plans for entities such as Bear Stearns, the de facto nationalization of Fannie Mae and Freddie Mac and the creation of a bewildering array of lending facilities managed by some combination of the Treasury and the Federal Reserve.

Each one of these steps reduced, in the case of the Federal Reserve, the quantity of Treasury securities on its balance sheet. Central banks' portfolios held securities of increasingly dubious quality, so much so the Federal Reserve has refused to disclose the garbage it has accepted as collateral despite of Freedom of Information Act inquiry pursued by *Bloomberg*. All of this chicanery produced higher inflation and, ironically, higher credit costs for both corporate borrowers and for residential mortgages without the offsetting benefit of rising asset prices. As far as complete failures with catastrophic long-term consequences go, you would be hard-pressed to beat this.

Praise and honors for the non-participants might be a Pyrrhic victory given the damage produced by the participants. Did we mention Timothy Geithner, present as the president of the New York Federal Reserve at the destruction of Lehman Brothers and the draconian “rescue” of AIG, inter alia, was rewarded with the Secretariat of the Treasury?

It is important to remember the government's AAA credit rating derives from 1) its taxation authority and 2) its printing presses, not necessarily in that order. While the federal government can tax 100% of your money, (true statement; under the due process clauses of the 5th and 14th Amendments, all that is required is for Congress to pass a law) it is unlikely to do so, and we saw by the dollar's collapse early in 2008 that international creditors might issue a collective cease-and-desist order on the printing presses. If the markets sense the government's balance sheet consists of defunct mortgage securities, a deterioration of credit will occur.

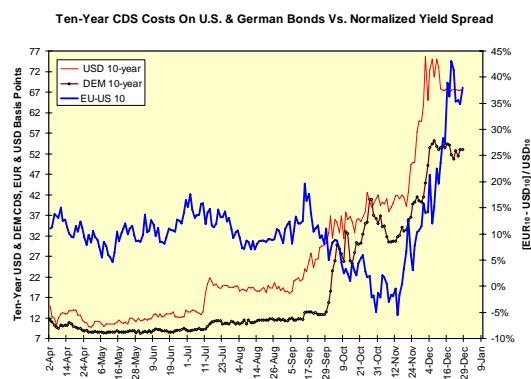
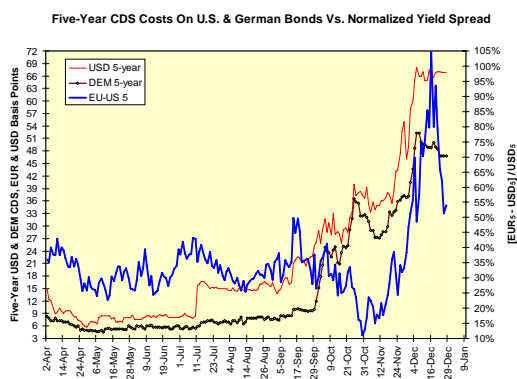
Trans-Atlantic Trade

Let's map two different CDS costs, those for German bunds priced in dollars and those for American bonds priced in euros, at two different maturities, five and ten years. The jump in CDS costs for the U.S. during various phases of

the 2008 credit crisis and the government's response thereto is quite apparent, as is the ratchet nature of their climb: Once the market priced in a lower credit rating for the U.S., it remained elevated until the next jump.

What about the CDS costs for the German bunds priced in dollars? While are at lower basis point levels than their American counterparts, their path has paralleled U.S. CDS costs. The credit crisis was as a global affair and clearly affected the German bunds as much if not more than it did the American bonds.

Now let's overlay the normalized yield spreads between the German and American bonds; this is the yield differential between the German and American bonds, divided by the American yield itself. This normalized yield spread began to move strongly lower in mid-July 2008, but then shot higher into December 2008, especially at the five-year horizon, as investors fled into U.S. Treasuries. This was a rather bizarre phenomenon; as the U.S. abandoned all pretense of fiscal and monetary sobriety and began to borrow \$100 billion chunks as if they were \$5 bills, U.S. Treasury yields collapsed. By December 2008, four-week Treasury bills were yielding 0.0000% at auction and three-month bills were actually being sold at a premium to par for a negative yield to maturity.



Restated, as credit risks in general increased, investors chose to flee riskier assets for the perceived safety of sovereign debt. It is a flight-to-quality only if you choose to use “quality” and “printing press” interchangeably.

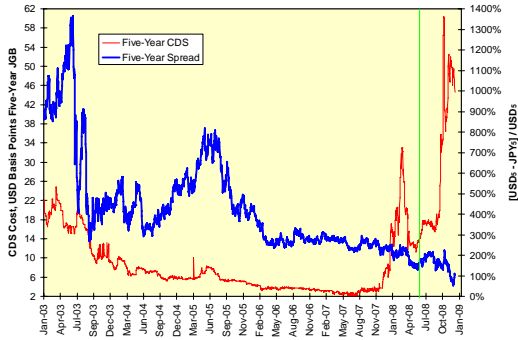
Yes, it was time to punish the innocent with rising costs for mortgages and corporate debt and reward the guilty with declining funding costs for sovereign debt even as the sovereign was trying desperately to inflate its way out of every problem, real and imagined. The expansion of moral hazard was complete; banks learned they can force the governments' hands by failing on a grand scale, and governments learned their power rises and their funding costs fell when they extended the full faith and credit of their national treasuries to wayward financiers.

Trans-Pacific Trade

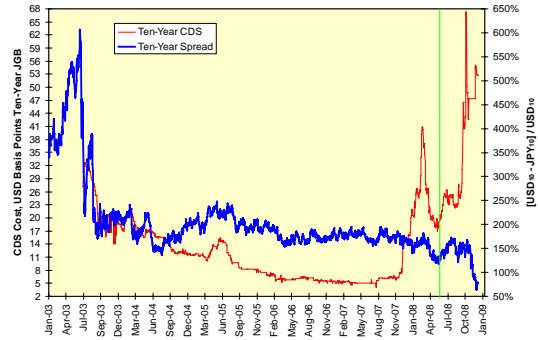
One of the downsides of the U.S.-German example is its short life; the CDS series for the Treasuries begins in April 2008, and that simply is too small of a data sample to draw any meaningful conclusions between credit risk and currencies. If, however, we look across the Pacific to Japan, we can find CDS on JGBs trading back to 2003. Let's see whether these instruments confirm the principle suggested above, that money flows into mismanaged government coffers.

Five- and ten-year CDS costs on JGBs priced in USD exploded higher between November 2007 and the March 2008 Bear Stearns panic low. They retreated between March and June 2008 and hit a reaction low in early June, marked on both charts with a green vertical line, and then rose sharply during the September-October crisis.

Credit Risk Of Japanese Five-Year Bonds Remains Elevated



Credit Risk Of Japanese Ten-Year Bonds Remains Elevated



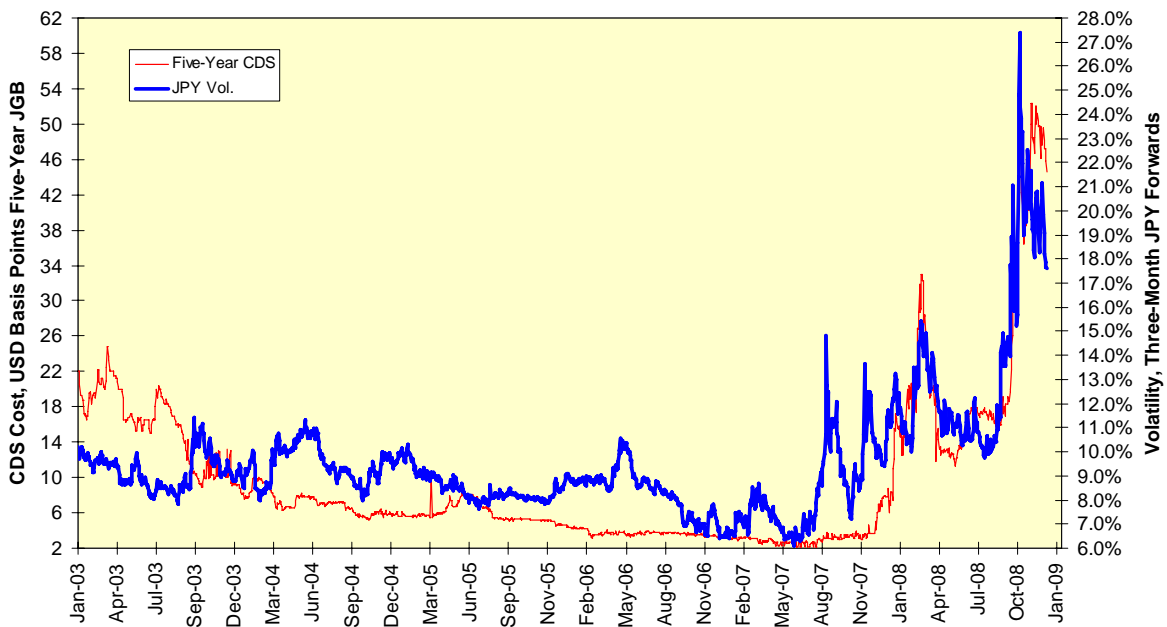
The normalized yield spread between Japanese and American five- and ten-year bonds started to rise after June 2008. Japanese yields fell faster than American yields even though the credit risk for Japanese bonds rose at a faster rate and the yen weakened against the dollar. This was a temporary phenomenon, however. By the time the FOMC announced its “anything goes” monetary policy on December 16, 2008, the yen was at a thirteen-year high, and short-term American rates were below their Japanese counterparts in what some may regard as a violation of the laws of financial gravity.

This is completely parallel to the phenomenon observed for American and European bonds and thus confirms an emerging principle of sovereign credit risk: Governments are being rewarded with lower borrowing costs as investors flee risk.

Impact On The Yen

Now let’s turn this longer history toward the currency. If we map the implied volatility on three-month non-deliverable forwards on the yen against five-year CDS costs, we see how this volatility jumped during the August 2007 panic, well ahead of any increases in CDS costs. It peaked simultaneously with these costs in the January, March and September-October 2008 panics (Yes, there are a lot of panics to enumerate). Volatility on the yen remained elevated along with these CDS costs.

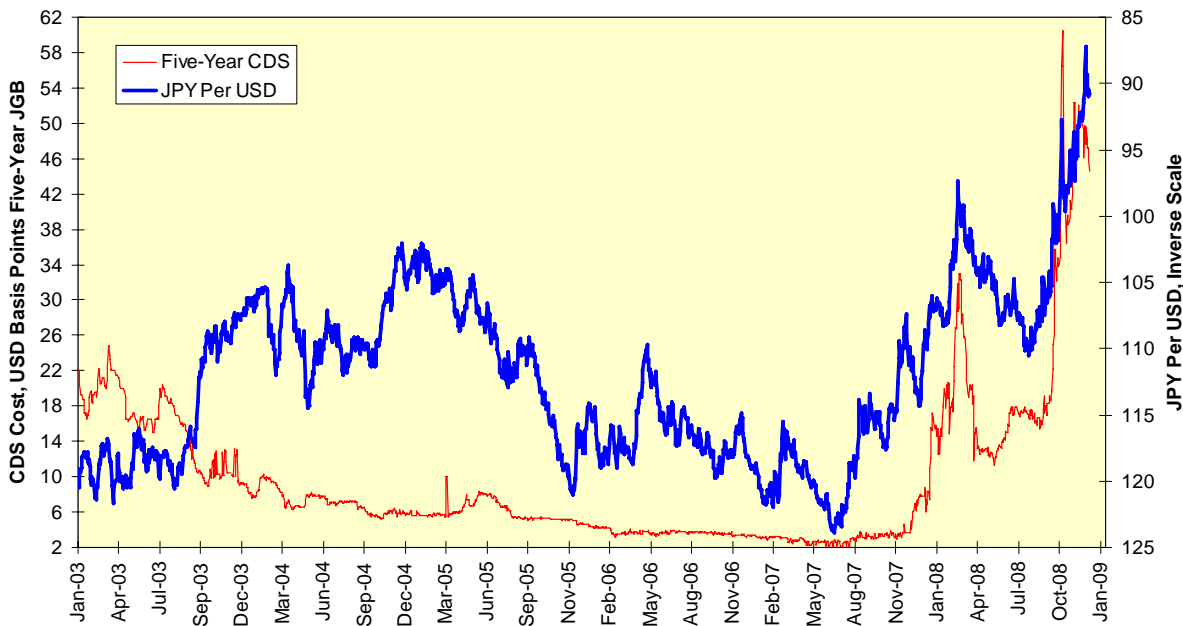
Yen Volatility Rose With Sovereign Credit Risk



If we strip out the intermediary of volatility and substitute the yen itself, we see this principle emerge quite clearly. Over the past year the yen and five-year CDS costs have moved in tandem. The circle has been closed: Higher

credit risk leads to both lower funding costs and a stronger currency for the government at the expense of higher funding costs for everyone else.

Yen Strengthened As Sovereign Credit Risk Rose



We have to consider another, grimmer scenario. If the Great Depression was prolonged and deepened by policy errors, did the world move away from greater centralized planning? No, the opposite occurred; the era initiated a half-century of ever-greater government interference in the economy. Past performance does not predict future results, but what else can we use? Expect the massive policy failures of 2007-2008 to lead to greater government intervention.