

MANAGER INSIGHTS

M-∞: How to Measure Strains Created by the New Financial Architecture

By: Eric Fine



The analysis below examines how one would look at reserve-currency balance sheets in a “scorched earth” scenario in which confidence in the reserve-currency country becomes questionable. Because it is the reserve currencies themselves being examined as “at-risk”, we use gold prices. None of the prices mentioned herein are actual target prices for gold. The numbers generated are measure of the strains on central bank balance sheets, and of strains that could potentially be put on central bank balance sheets based on future policymaker decisions.

Overview

- An unsustainable new global financial architecture that arose in response to the US and European financial crises has replaced an older, more sustainable, architecture.
- Most importantly, the previous architecture recognized limits on fiscal and central bank balance sheets. The new architecture attempts to “back”, perhaps unconsciously, the entire liability side of the global financial system.
- Under the old architecture, in which only money and deposits (M1¹) are “backed”, the strain on the central bank balance sheet was much lower than it is under the new architecture.
- The old architecture, in which only money and demand deposits (M1) are “backed” (and for our exercise, by gold), the gold price which equates this US central bank liability to gold reserves is roughly \$9,000 (\$8,612); in Europe, it is roughly \$18,000 (\$17,608).
- If M2¹ is the monetary aggregate/liability which is ‘backed’ in the US, the dollar price of gold that equalizes this backing is \$37,000, and for the EU, \$32,000. This is a big increase in the strain on the US central bank’s balance sheet resulting from just one element of the unrecognized new architecture (remembering that parts of M2 were “temporarily” guaranteed by US policy in our recent crisis).
- The real problem with the untested and unacknowledged new architecture is that it has created a new Federal Reserve liability, that I will call M-∞. At the time, secret lending to global banks was “flash money”, designed to prevent a run on debt and derivative liabilities at US and other banks.
- If the new architecture in which guarantees of off-balance sheet derivative liabilities are backed (our M-∞), in addition to portions of M2, though, the gold price that equates this backing is multiples of the \$37,000 price—a dangerous harbinger for inflation and/or systemic collapse.
- It should be noted that, so far, Europe is avoiding guaranteeing the entire left side of its financial system, so if their conservative policy choice resists international pressures for US-style expansion (the “new architecture”), the strain as measured by this framework will be much less dramatic.
- The potential result of all of this is if you think it is politically and practically sustainable for the Fed to back-stop a \$700+ trillion derivatives market, everything is fine; if you think it is not sustainable, everything is not fine.
- If this new architecture holds, capital controls would be an almost irresistible response on the part of status quo policymakers, undermining the reserve-currency status of many currencies, and boosting gold as a reserve asset and money.
- There is some hope from our framing of this new architecture. Namely, it points to how easily confidence could be restored if M-∞ is not allowed to become a formal liability of the central bank (or the fiscal authority).
- It is important to emphasize that no one chooses hard-currency regimes such as gold standards – they are forced on non-credible policymakers. Put more positively, if politicians want the power of fiat money, let alone the global reserve currency, they need to behave differently than they have.

¹M1 is the monetary aggregate that includes the total amount of M0 (cash/coin) outside of the private banking system plus the amount of demand deposits, travelers checks and other checkable deposits; M2 includes M1 plus most savings accounts, money market accounts, retail money market mutual funds, and small denomination time deposits (certificates of deposit of under \$100,000).

I believe an unsustainable new global financial architecture that arose in response to the US and European financial crises has replaced an older, more sustainable, architecture. The old architecture was crystallized in Washington- and International Monetary Fund-inspired policy responses to the numerous sovereign defaults, banking system failures, and currency collapses that characterized Northern Europe and Latin America in the '80s, Eastern Europe in the '90s, and Asia in the late '90s, among others. The Chinese-menu of policy responses insisted upon by the IMF (or, in some rare cases, by responsible national-level policymakers themselves) included the items outlined in the subsequent paragraphs.

Most importantly, the old architecture put a sovereign default explicitly on the table if there was a “debt overhang” – it was considered senseless to provide liquidity if solvency could never reasonably be achieved. Second, deep structural reforms were required to ensure that growth would eventually arrive to maintain solvency and sustainability. Third, a plan for fiscal balance was required, for self-evident reasons (and by self-evident, I suppose I must exclude US-style Keynesians, for whom fiscal sustainability is not a self-evident requirement). Fourth, independent central banks that would never (and usually it was never again) become the endless lender to the fiscal authority were required, and they would often have to maintain high interest rates to prove their independence and firmly anchor inflation expectations. A final element was open capital markets to lubricate trade and growth and encourage a competitive banking and commercial system. This sounds fairly reasonable, especially since the countries that took advantage of this policy menu are now our creditors, have safer banking systems and more sustainable fiscal positions, and prevented or overcame social meltdown (generally speaking). They also outperformed us during the latest crises and some are experiencing inflows of flight capital and human capital.

To the extent that there were deviations from a totally free-market-determined architecture in which bad decisions were punished by markets and the new last resort liquidity providers, it involved guaranteeing bank deposits to prevent society-wide panic. This was a widely accepted (and perhaps subsequently over-extended) conclusion from Milton Friedman's study of the US Depression. If a bank had too many non-deposit liabilities to make a deposit guarantee credible, those liabilities would take a hit and equity could go to zero, and senior unsecured debt could take hits (in exchange for equity). After all, if there were no pain to reckless lenders, the reckless lending would return. Off-balance sheet liabilities?...don't even consider putting them in the way of depositor confidence. It helped that in many of these crisis-toughened countries, the respect for societal equity was such that protecting those wealthy enough to own bank equity or debt, and not a simple depositor, was a non-starter. In any case, all of these hits to bank capital structure were designed to strengthen deposit guarantees—depositors knew there were multiple financing sources available well before we got to the level of deposits.

Before describing the biggest departure from this more sustainable orthodoxy, let us first acknowledge that when the US experienced its crisis in 2008, not only did the US not avail itself of a single item from the policy menu I just described, but we created a new entitlement program that was not financed (my point is not

about the merits of healthcare, only on its lack of financing). We did nothing on structural reform, and neither party has a long-term fiscal plan comparable to those we insisted on in crisis-stricken countries that came to “us” (a definition in which I incorporate the IMF) for liquidity. Let us similarly acknowledge the fact that Fannie Mae and Freddie Mae's gross (granted, not net) liabilities are roughly equal to our entire national debt. This is noteworthy, as such off-balance sheet fiscal liabilities were common to crisis-torn countries, and we normally insisted that they be recognized as formal liabilities (and then often defaulted on), which we have not done in our crisis. But, my point is not about these more traditional fiscal issues, as they are ultimately not as big as the US central bank's potential liabilities, and in any case the superficial fiscal issues at least get discussed even by status-quo economists.

The real problem with the untested and unacknowledged new architecture is that it has created a new Federal Reserve liability, that I will call $M-\infty$. In the US phase of the crisis, not only were deposit guarantees greatly expanded (by 2.5x), but bank debt was guaranteed by the fiscal authority (in theory, only temporarily). The idea, of course, was that new banking system rules and good fiscal policy would be implemented during the bought time, which has clearly not happened given the greater concentration of too-big-to-fail (TBTF) banks and lack of a fiscal plan. The US banking system (which, post-crisis, generously included speculative entities such as investment banks) has about \$15 trillion in liabilities, the largest elements of which are deposits, and their entirety appears to be guaranteed. But wait, there's more...Bloomberg sued the Fed to clarify the precise amount of theretofore secret loans. Teams of economists are still deciphering the Fed's dump of thousands of pages (to comply with a Federal judge's order, after long resistance), and are arriving at numbers up to \$16 trillion (roughly equal to US GDP). Huh, that's strange, secret Fed lending during the crisis might have exceeded the total on-balance sheet liabilities of the US financial system!

These additional guarantees from the monetary authority were “flash money” designed to prevent a run on derivative exposures at US and other banks. Perhaps as a result of “over-learning” from the fallout from Lehman's collapse—that a default on bank debt and off-balance-sheet derivative liabilities means systemic collapse—the monetary and fiscal authorities ensured that any claim on a bank was met. The loans of up to \$16 trillion, plus Fed purchases of risk assets such as mortgage-backed securities, and all the other “stuff” we have read about by now, were enough to prevent the run. I should emphasize that this might have been the right decision, if it were conditioned on the isolation of the speculative activities of a bank from these guarantees in the future, the establishment of moral hazard (at least via firing bank boards and managements, given that bond defaults were deemed unacceptable), a long-term fiscal plan, etc. This was not the case.

As a 14-year veteran of a TBTF investment bank, I distinctly recall the day the Fed's data dump indicated that my former employer received about \$2 trillion in loans (all of which occurred after I had left the firm). I, and many of my former colleagues, assumed that this was a typo. But no correction followed. Why, I asked, would the Fed lend my TBTF investment bank so much? At the firm, I ran emerging markets economics research and then the emerg-

ing markets proprietary trading desk. However much I respected my colleagues and our work (which is ‘a lot’), I do not think anyone would have made the case that we were doing anything especially socially useful. Nothing evil, of course, but nothing worthy of taxpayer guarantees, and I certainly expected that the firm would be allowed to fail if it merited failure. It was not, and there were no conditions for such a privileged status.

The result of all of this is if you think it is politically and practically sustainable for the Fed to back-stop a \$700+ trillion derivatives market, everything is fine; if you think it is not sustainable, everything is not fine. $M-\infty$ is that liability. What’s worse is that recent moves to have the derivative liabilities of TBTF banks placed on their deposit-taking subsidiaries brings this very close to the fiscal authority. Instead of the Fed being on the hook, the FDIC and US Treasury will be. It is no surprise that the Fed supports such moves – who would want to be around the next time investors worry about counterparty risk and more than the previous up-to-\$16 trillion in “flash money” required to prevent a run on liabilities? Who would want to explain to depositors that their guarantee is equal to a derivative counterparty’s? Who would want to explain that food stamps are being curtailed due to infusions from the fiscal authority into these bank liability guarantees? Who would want to explain that national defense spending is superseded by bank debt, and that the dollar might not remain the global reserve currency? I pity the academics, policymakers and politicians who will take responsibility for this scenario, though I suppose none will. The refrain will be that policy didn’t do enough borrowing and spending, and/or that the central bank didn’t expand its balance sheet enough.

As an aside, many will rightly argue that the net amount of these derivatives is by definition much lower. There is a counterparty on one side, and on the other, which can often be collapsed to zero, assuming the profit/loss is booked properly. The problem with this logic is that it assumes, in the daisy chain of counterparties, no counterparty will go down, and that the books are marked properly. We believe, and argue throughout this article, that the financial system is not sustainable. Even current market guides, as distorted as they are, show high credit spreads for TBTF financial institutions, and these discount rates are not(!) used to reduce the value of a derivative with that institution. As a result, we will have to discover the precise amount of the net liability via recognized insolvencies at financial institutions. By the way, this daisy chain crosses borders, and thus any one country’s financial authority. We argued above that the Fed has so far taken on the job of guaranteeing this daisy chain, which is why so many foreign banks received Fed support, and why the ECB gets swap lines from the Fed despite the Euro being, or pretending to be, a reserve currency in the “new architecture” mold of the US.

There is great hope from the preceding framework, namely, it points to how easily confidence could be restored if $M-\infty$ is not allowed to become a formal liability of the central bank, and gold becomes the reserve asset. We have been talking about unsustainable liabilities...how are we talking about gold as the reserve asset? Let me explain. Gold standards are the functional equivalent of currency boards. Currency boards/hard-money standards come about when trust in the fiscal and monetary authorities has eroded. The most typical cause for the many currency boards/hard-money

standards I have experienced is one of the following. Most commonly, a central bank becomes perceived as an endless lender to the fiscal authority. Given that the Fed has bought more than half of all US Treasuries issued in the past 12 months, I think it is safe to say that we can check that box. Another route to a hard-money standard is the discovery or creation of unsustainable guarantees for the financial system on the part of the fiscal and/or monetary authority. Check that box, too.

In these scenarios, the fiscal and monetary authorities are conflated. This can be put many ways. In one narrative, citizens lose trust when a central bank asset (Treasuries, for example) becomes viewed as supported/purchased only by a central bank liability (money, deposits...and hopefully nothing else) whose primary purpose is simply to buy that asset. This is one way of describing quantitative easing—printing money to buy Treasuries—and keep the Treasuries paying interest rates that are not market-determined. It could be put another way. Trust is lost when the fiscal authority’s liability (Treasuries) is viewed as unsustainable due to an excess of on- and off-balance sheet guarantees, and whose payment sustainability is only generated by suppressed interest rates on the part of a co-opted (*i.e.*, not independent) monetary authority. The point is whether the Fed has the $M-\infty$ liability or whether the Treasury eventually assumes it, it doesn’t really matter, as by that stage the fiscal and monetary are conflated and confidence is lost in both government debt (the central bank’s asset) and the country’s money (the central bank’s liability).

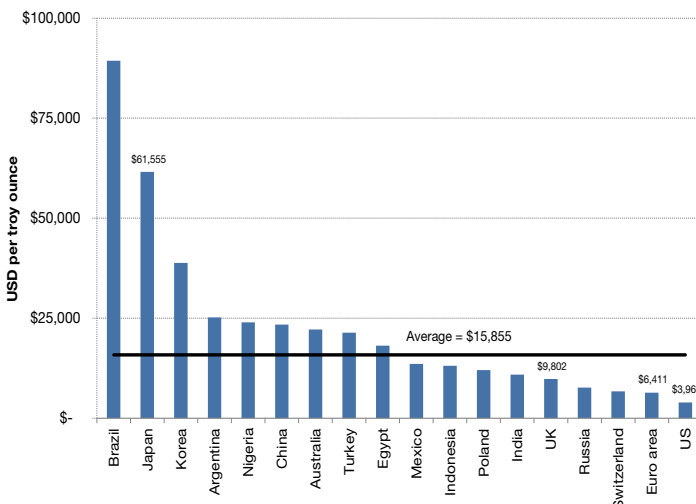
How can confidence be restored if confidence declines to “scorched earth” levels? Do not ‘back’ anything other than money and maybe deposits and use a reserve asset—for example, gold—that can not be created by a fiscal authority that has lost trust and credibility. Let us get one thing out of the way: the gold standard is very problematic and easy to attack, but proponents usually frame it as less bad than other regimes given the decisions made across the political spectrum in the US and much of Europe, as well as given the decisions made by policymakers throughout history. They also point out that it has a thousands of years old history as a store of value and, intermittently, as a unit of measure and means of exchange. This framing is consistent with a purely political—institutional stylized—fact that it is nearly impossible to penetrate the US political parties if the message is that there are limits to their power...or that their power requires great effort and sacrifice. This is why Keynesians (at least US ones) who argue there are no limits to a fiscal balance sheet are so popular with Democrats, and why monetarists (at least US ones) who argue there are no limits to a central bank balance sheet are popular with (a decreasing number of) Republicans. Party on! Again, nobody chooses hard-currency regimes – they are forced on non-credible policymakers. Let me put it more positively. If politicians want the power of fiat money, let alone the global reserve currency, they need to behave differently than they have.

I should emphasize that this is a “scorched earth” scenario in which confidence has been severely undermined. Policymakers in the US and Europe will presumably have many opportunities to respond and avoid such an outcome. Moreover, many reserve-currency status countries have achieved this with decades of credibility that has underlined the resultant confidence. As a result

of this confidence, the central bank has never really had to “back” anything, other than with confidence-building measures and a very limited number of formal guarantees (such as those given by the fiscal authority on deposits). But, those promises proliferated during our recent crisis, as confidence declined, so it is important to measure this change. Policymaker decisions, moreover, should be made with an appreciation of the degree to which our new architecture is straining the central bank’s and the sovereign’s balance sheets. So far, this is, in fact, happening more transparently and courageously in Europe where at least defaults on sovereign and bank debt are contemplated as alternative financing methodologies, rather than the monetization path of the US. Europe’s problems, we have argued, are more political and game-theoretic. In any case, these “scorched earth” scenarios in which we divide gold reserves by a monetary aggregate are only proxies to measure the stress created by the new architecture...these are not price targets.

Let us start quantifying. If the old architecture is maintained, in which only money and demand deposits (M1) are “backed” by gold, the gold price which equates this US central bank liability to gold reserves is roughly \$9,000 (\$8,612); in Europe, \$18,000 (\$17,608). The exhibit below reflects a simple calculation. It divides the central bank liability one chooses to back (here, we’re assuming only physical cash/coins and demand deposits, or M1), by the new “reserve asset” (ounces of gold), and arrives at a price per ounce of gold. The fact that this number is not being obtained in the market is either a sustainable reflection of great confidence in our monetary and fiscal authorities, or an unsustainable one. Also note the US’ strong position relative to other countries. I will not belabor this, as most countries hold dollar-denominated securities as their reserve asset. The calculation for other countries is more complicated than this graph implies. Nonetheless, it highlights the US’ strong position under the old architecture. It also gives policymakers a gauge for the strains on the central bank’s balance sheet under the old architecture.

What if Confidence Declines and “Guarantees” Abound, Measured in Gold?



Above: Price of gold required to equate M1 to the value of gold reserves at current exchange rates by country. (Data from Van Eck, Bloomberg, IMF, BIS, National Central Banks).

If M2 is the monetary aggregate/liability which is ‘backed’ in the US, the dollar price of gold that equalizes this backing is \$37,000, and for the EU, \$32,000. This is a big increase in the strain on the US central bank’s balance sheet resulting from just one element of the unrecognized new architecture. This is an important increase. M2 includes savings and money market accounts; the latter was explicitly guaranteed by US policy during our recent crisis. It has been assumed that this was a temporary one-off guarantee, but that does not seem realistic. In any case, one can judge for oneself whether another bout of systemic crisis will be met with a repeat of such guarantees. If the answer is “yes”, then this new number shows a big increase in strain on the central bank’s balance sheet. I should note that Europe so far is avoiding guaranteeing the entire left side of its financial system, so if their conservative policy choice resists international pressures for US-style expansion (the “new architecture”), the upside to gold prices via their policies are less dramatic.

If the new architecture in which guarantees of off-balance sheet derivative liabilities are backed (our M_{∞}), in addition to portions of M2, the gold price that equates this backing is multiples of the \$37,000 price—a dangerous harbinger for inflation and/or systemic collapse. Remember that the up to \$16 trillion in Fed loans was “flash money” designed to prevent a run on off-balance sheet liabilities. It is very unlikely that any future run (and runs are a feature, not a defect, of the way fractional-reserve and leveraged banking systems are designed) will be satisfied with such a small amount of “money in the bank window”. As dollar holders (again, including cash in circulation, demand deposits, savings accounts, money market accounts, as well as derivative contract counterparties) start to doubt the currency’s store of value function, and the financial system’s sustainability, they will run on the central bank’s assets. First, perhaps, claiming Treasuries, but soon selling any dollar-denominated paper for real assets from equities (an ownership claim) to tractors, land and precious metals. In fact, we have long argued that policymakers will be increasingly tempted to use capital controls to prevent an unwind of their status quo, further undermining the reserve-currency status of the reserve currencies.

Accepting the framework described herein is very useful from a political-economy perspective, I believe, as it quantifies the so far unconscious choices of policymakers, quantifies potential damage done to savers, and takes partisanship out of a lot of economics. Let me conclude by listing the issues we will be able to transcend in our politics:

- Derivatives and banks would no longer be “evil”, only government guarantees of them will be.
- Depositors would have confidence that their guarantees are credible, and will not be diluted by massive, equal, competing claims.
- The “austerity” versus “stimulus” debate would resolve, reconciled by default becoming a potential financing tool. After all, if austerity is killing an economy, and stimulus is a non-starter due to debt constraints, you most likely have a debt overhang, so default (the earlier the better).
- The poor would be protected from inflation (and rising inflation expectations), business will be protected from uncertainty, and investors will no longer worry about the store of value of their wealth.

- Guns vs. butter discussions would be forced upon the fiscal authority, as the status quo's "yes to both" answer will be obviated by debt constraints; voters will have to make more mature trade-offs
- Societal equity would be strengthened by ending subsidies to wealthy lenders to, counterparties of, and employees of financial institutions whose social value (at least those that conduct purely speculative activities) is questionable.
- Capital controls and protectionism—which would be very tempting policies for defenders of the status quo—are harder to discuss when we have a price gauge via gold that values the preservation of freedom in trade and capital movement.

¹M1 is the monetary aggregate that includes the total amount of M0 (cash/coin) outside of the private banking system plus the amount of demand deposits, travelers checks and other checkable deposits; M2 includes M1 plus most savings accounts, money market accounts, retail money market mutual funds, and small denomination time deposits (certificates of deposit of under \$100,000).

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