Long-Term Perspectives on Central Banking

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1. Introduction

The recent global financial crisis and Great Recession has led to calls by some for a remaking of the model of central banking (Goodhart 2010). Instead of focusing primarily on maintaining price stability (anchored by credible rules), providing stability to the real economy and serving as a lender of last resort and protector of the payments system, central banks should now give greater importance to overall financial stability and to preventing asset bubbles. Others argue that central banks should stick to the successful model developed in the 1980s that led to the Great Moderation, and should attach ultimate importance to maintaining credibility for low inflation. Such a policy would also foster both real economic stability and financial stability. Financial stability concerns should be treated separately by a Financial Stability authority or, if based within the central bank by statute, should be managed by tools other than the policy interest rate (Svensson 2010, Taylor 2010).

This essay, taking a long-term historical perspective considers whether we need to rewrite the central banking rule book in the aftermath of the recent crisis. I argue that central banking evolved in the eighteenth and nineteenth centuries into a golden age of following credible rules to maintain price stability and serving as an effective lender of last resort to the money market. This occurred during the classical gold standard regime from 1870-1914. With the Great Depression, central banks then went into the dark ages, a fate which was created largely by their adherence to bad doctrine and to the flawed interwar gold exchange standard. The Depression was followed by several decades in which central banks in most countries became virtual adjuncts of the fiscal authorities. Central banks in many countries gradually recovered their independence in the 1950s to 1970s, but faced with new mandates and new doctrine generated the Great Inflation from 1965- 1980. The renaissance of central banking
followed the Volcker/Thatcher disinflation shocks of 1979-1981 led to a new regime of a credible nominal anchor in a fiat money regime based on rules similar to the gold standard’s convertibility rule. The following two and a half decades were characterized by low inflation and stable real growth (The Great Moderation).

The recent financial crisis which began in the United States and spread to the rest of the world can be related to failures of monetary policy in the U.S. by keeping policy rates too low in the early 2000s and stimulating a housing boom which burst with devastating consequences in 2006, but more likely to serious failures in U.S. government housing policies and failures of regulators to keep track of financial innovation.

Debate swirls over whether the new golden age rule based paradigm of the Great Moderation should be restored with some adjustments for financial stability or whether we need a new model. I conclude with the case for sticking to the tried and true rules for central banking that have evolved through history.

2. The Origins of Central Banking

The story of central banking goes back at least to the seventeenth century, to the founding of the first institution recognized as a central bank, the Swedish Riksbank. Established in 1668 as a joint stock, it was chartered to lend the government funds and to act as a clearing house for commerce.

A few decades later (1694), the most famous central bank of the era, the Bank of England, was founded also as a private institution with a government charter. Its original mandate was to purchase and help market government debt. Other central banks were set up later in Europe for similar purposes. Early
central banks issued private notes which served as currency, and they often had a monopoly over such note issue.

While these early central banks helped fund the government’s debt, they were also private entities that engaged in banking activities. Because they held the deposits of other banks they came to serve as banks for bankers, facilitating transactions between banks or providing other banking services. They became the repository for most banks in the banking system because of their large reserves and extensive networks of correspondent banks. These factors eventually allowed them to become a lender of last resort in the face of a banking panic. In other words the central bank became willing to provide emergency cash to its correspondents in times of financial distress.

Monetary policy as we know it today began by central banks discounting the paper of other financial institutions, both government debt and commercial paper. The interest rate at which the bank would lend, based on this collateral was the discount rate. By altering this rate the central bank could influence credit conditions in the economy.

Central banking achieved its maturity in the period 1870-1914, the era of the classical gold standard. The gold standard evolved from the earlier bimetallic regime. Under the gold standard all countries would define their currencies in terms of a fixed weight of gold. The key rule for a central bank under the gold standard was to adhere to gold convertibility, i.e. to maintain convertibility of its notes into gold at the official fixed parity (except in wartime emergencies) or serious financial crises] when gold convertibility could be suspended and fiat money issued on the assumption that once the hostilities (crisis) ended, that deflationary policies needed to restore convertibility would be followed.) The classical gold standard had two automatic mechanisms to maintain long-run price stability; the operation of the
commodity theory of money and the price specie flow mechanism (Bordo 1992). Hence adhering to gold convertibility also meant adhering to a rule that produced price stability.

Gold convertibility embodied a monetary rule or commitment mechanism to prevent monetary authorities from either pursuing otherwise time-inconsistent policies of creating surprise fiduciary money issues in order to capture seigniorage revenue or defaulting on outstanding government debt (Bordo and Kydland 1996). On this basis adherence to the gold standard rule before 1914 enabled many countries to avoid the problems of high inflation and stagflation that marked much of the late twentieth century.

Under the gold standard, central banks were also supposed to use their discount rates to speed up the adjustment to external shocks to the balance of payments, i.e. they were supposed to follow the “rules of the game” (Keynes 1930). In the case of a balance of payments deficit, gold would tend to flow abroad and reduce a central bank’s gold reserves. According to the rule, the central bank would raise its discount rate. This would serve to depress aggregate demand and offset the deficit. At the same time the rise in rates would stimulate a capital inflow. The opposite set of policies were to be followed in the case of a surplus.

During this period the Bank of England and other European central banks learned to serve as lenders of last resort. Although the early central banks had public charters they were privately owned and they had policy independence. A problem that plagued the Bank of England in its early years was that it placed primary weight on its commercial activities and on several occasions of financial distress was criticized for neglecting the public good. Walter Bagehot formulated the responsibility doctrine in 1873 according to which the Bank was to place primary importance on its role as lender of last resort. The Bank began to follow Bagehot’s rule—in the face of an internal drain (banking panic) to lend freely on the basis of
any sound collateral offered, in the face of an external drain (speculative attack) raise Bank rate, and in
the face of both to lend freely at a high rate.

The Bank of England took many years to learn to become a successful LLR. In the middle of the
nineteenth century, in an increasingly sophisticated financial system (Bignon, Flandreau and Ugolini
2009), the Bank dealt primarily with discount houses which acted as intermediaries between
commercial banks and the Bank of England. When in need of liquid funds, commercial banks would turn
to the discount houses to rediscount their paper, and the discount houses in turn would go to the Bank
of England for accommodation. According to Capie (2002) the Bank lent anonymously to the money
market. No banking panics occurred in England after 1866. Other European central banks followed suit
in developing effective LLRs.

Successful lender of last resort policy and credible adherence to the gold standard were intertwined. In
the absence of credibility, expansionary liquidity actions to stem a banking panic would lead to capital
flight. With credibility, in the face of a crisis, capital would flow on the belief that the expansionary
policy was temporary (Eichengreen 1985).

In the classical gold standard era, while central banks adhered to gold convertibility and hence ensured
long-run price stability and also served as lenders of last resort, they did not attach much importance to
real economic stability and unemployment. This was because wages and prices were relatively flexible,
labor was internationally mobile and labor unions and Labor parties were not yet important. However
because major European central banks were credibly committed to maintaining gold convertibility they
had some policy independence within the gold points to pursue domestic stabilization objectives (Bordo
and MacDonald 2005).
3. In the Dark Ages

World War I ended the gold standard as the belligerents scrambled to convert their foreign investments into gold. Central banks were quickly converted into engines of inflation. After the war Great Britain and other countries alarmed by the postwar experience of inflation and exchange rate instability, were eager to return to the halcyon days of gold convertibility before the war. The system reestablished in 1925 was an attempt to restore the old regime but to economize on gold in the face of a perceived gold shortage. Based on principles developed at the Genoa conference in 1922, members were encouraged to adopt central bank statutes that substituted foreign exchange for gold reserves and discouraged gold holding by the private sector. The central banks of Britain, France and Germany joined with the recently created Federal Reserve System (1914) to coordinate their monetary policies to restore the gold standard (Ahamed 2009).

The new system lasted only six years, crumbling after Britain’s departure from gold in 1931. The system failed because of several fatal flaws in its structure and because it did not embody a credible commitment mechanism.

The fatal flaws included the adjustment problem (asymmetric adjustment between deficit countries such as Britain and surplus countries such as France and the United States); the failure of countries to follow the rules of the game, e.g. the United States and France sterilized gold inflows; the liquidity problem (inadequate gold supplies, the wholesale substitution of key currencies for gold as international reserves, leading to a convertibility crisis; and the confidence problem leading to sudden shifts among key currencies and between key currencies and gold (Bordo 1993).)

The commitment mechanism of the gold exchange standard was much weaker than that of the classical gold standard. Pre-1914 the commitment to gold parity was believed to be paramount. In the face of a
recession and a balance of payments deficit, central banks would tighten to protect their gold reserves and pay less attention to rising unemployment. After World War I with the rise of organized labor and Labor parties, preserving jobs became more important. The markets began to understand the slippage in credibility (Eichengreen 1992). Because monetary policy became politicized in many countries, the commitment to convertibility was not believed and hence invoking the contingency clause of the gold standard rule and altering parity in the face of a crisis would have led to destabilizing capital flows. Moreover central bank cooperation was ineffective. The system collapsed in the face of the shocks of the Great Depression.

The Great Depression was triggered by the failure of the Federal Reserve to follow its mandate and serve as lender of last resort in the face of a series of banking panics from 1930-33. The downturn of August 1929 was soon followed by the Wall Street Crash in late October. The background to the beginning of the downturn and the Crash was based on Fed tightening beginning in early 1928 to stem the stock market boom which had been underway for two years. The Fed followed the real bills doctrine which condemned bank lending to finance stock market speculation. The monetary tightening led to the start of the recession in August. The evidence is mixed on whether the Fed directly triggered the crash but, these experiences as well as the bursting of Japan’s real estate and stock bubble in 1990, have made central banks reluctant to use monetary policy to deflate asset bubbles.

The Fed’s failure in 1930-33 reflected its adherence to the real bills doctrine (Meltzer 2003), flaws in the structure of the Federal Reserve system (Friedman and Schwartz 1963), the inability of the framers of the Federal Reserve Act to adapt the successful European LLR model to the U.S. institutional environment (Bordo and Wheelock 2010). The Great Depression spread across the world via the fixed exchange rate gold standard. Moreover the central banks of many countries were prevented from attenuating banking panics and following expansionary monetary policy because of “golden fetters”—
the fear that expansionary policy would force them to leave the gold standard. Beginning with Britain in September 1931, countries were able to reflate their economies once they abandoned gold convertibility and adopted fiat money regimes.

The Great Depression was blamed on commercial banks for taking undue risks and central banks for restoring and maintaining a flawed gold standard. This led in every country to massive regulation of the financial system (inter alia interest rate ceilings and firewalls between commercial and Investment banking) and the subservience of the central banks to the Treasury. In the U.S. the Federal Reserve lost its independence and for almost two decades used its monetary policy tools passively to maintain a low interest rate peg set by the Treasury to both stimulate the economy and aid the Treasury in marketing its debt. This policy fueled inflation during and after World War II. Other countries had similar experiences.

Monetary policy was restored to the central banks beginning in the 1950s. In the U.S., the Federal Reserve Treasury Accord of 1951 again allowed the Fed to use its policy tools to stem inflation. In the 1950s and up to the mid 1960s, the Fed and other central banks successfully followed countercyclical monetary policy and maintained generally low inflation. This in part reflected their adherence to the Bretton Woods system which like the gold standard provided a modicum of price stability.

Under the Bretton Woods system established in 1944, which involved members pegging their exchange rates to the dollar, the dollar pegged to gold, monetary policy autonomy to maintain real economic stability, capital controls and the freedom of members to adjust their pegs in the face of major shocks, there followed a brief period of price stability and stable and rapid economic growth until the mid 1960s. The Bretton Woods system suffered from the same fatal flaws as the Gold Exchange Standard and it broke down beginning in the 1960s when the U.S. the key provider of international reserves,
broke the rules of the gold dollar standard and began following, under the Chairmanship of William McChesney Martin, expansionary monetary policy to finance the Vietnam war and President Johnson’s Great Society. The rest of the world did not want to absorb additional dollars that would lead to inflation. Another important source of strain in the system was the unworkability of the adjustable peg under increasing capital mobility. Speculation against a fixed parity could not be stopped either by traditional policies or international rescue packages. The Americans’ hands were forced by British and French decisions in the summer of 1971 to convert dollars into gold. The impasse was ended when President Nixon closed the gold window on August 15 1971 (Bordo 1993).

The advent of generalized floating in 1973 allowed each country more flexibility to conduct independent monetary policies. In the 1970s inflation accelerated as advanced countries attempted to use monetary policy to maintain full employment. However monetary policy could be used to target the level of unemployment only at the expense of accelerating inflation (Friedman 1968). In addition the U.S. and other countries also used monetary policy to accommodate oil price shocks in 1973 and 1979.

Finally between the 1940s and the 1970s, in the face of heavy regulation of the financial sector, the institution of deposit insurance and a financial safety in most countries, there were few bank failures and no banking crises. The lender of last resort function of central banks was in abeyance.

4. A Renewed Golden Age

The high inflation rates of the 1970s (the Great Inflation) led to a determined effort by monetary authorities in the U.S. and U.K. and other countries at the end of the decade to disinflate. Thus in the U.S. the Volcker shock of 1979-81 in which tight monetary policy led to double digit short-term interest rates which broke the back of inflation and inflationary expectations at the expense of a severe
recession. By the mid 1980s inflation returned to levels not seen since before the Great Inflation began in 1965.

The 1980s witnessed renewed emphasis by central banks on low inflation as their primary (if not sole) objective. Although no formal monetary rule was established, a number of countries granted their central banks independence from the fiscal authority and also instituted mandates for low inflation or price stability. Formal inflation targeting was first instituted in New Zealand followed by Canada and the UK. The subsequent two decades came to be known as the Great Moderation with low inflation and a stable and growing real economy. In many respects the era reflected a return to a rule like the gold standard’s convertibility principle and a fixed nominal anchor.

During this period financial stability once more became a problem for central banks as in the interwar period. In the face of inflation which made interest ceilings on deposits untenable, leading to disintermediation and financial innovation, and the subsequent deregulation of the financial system and the removal of capital controls, banking crises erupted in advanced countries. But unlike in the pre 1914 golden age, instead of following Bagehot’s rules, the Federal Reserve and other authorities adopted the “Too Big to Fail” doctrine in the mid 1970s. This led to the growing problem of moral hazard.

Also during this period asset booms and busts reappeared as they had during the 1920s. Because of a fear of the 1929 stock market crash and its association with the Great Depression which many observers attributed to Fed tightening in 1928, and the bursting of the Japanese bubble in 1990, the Fed (and other central banks) expressed an unwillingness to use monetary policy to deflate bubbles.
5. The Crisis of 2007-2008: A Game Changer?

The subprime mortgage crisis of 2007-2008 originated in the U.S. and spread to the rest of the world. The key event leading to the crisis was the collapse of a major housing boom in 2006 which severely impacted the financial system.

Its causes include: U.S. government policies since the 1930s to extend homeownership, major changes in regulation, lax regulatory oversight, a relaxation of normal standards of prudent lending, and a period of abnormally low interest rates. The default on a significant fraction of subprime mortgages produced spillover effects around the world via the securitized mortgage derivatives into which these mortgages were bundled, to the balance sheet of investment banks, hedge funds, and conduits (which are bank owned but off their balance sheets) which intermediate between mortgage and other asset-backed commercial paper and long-term securities. The uncertainty about the value of the securities collateralized by these mortgages had the effect of spreading uncertainty about the soundness of loans for leveraged buy-outs through the financial system. All of this led to the freezing of the interbank lending market in August 2007 and substantial liquidity injections by the Fed and other central banks.

The Fed then both extended and expanded its discount-window facilities and cut the federal funds rate by 300 basis points. The crisis worsened in March 2008 with the rescue of Bear Stearns, an investment bank, by J.P. Morgan, backstopped by funds from the Federal Reserve. The rescue was justified on the grounds that the exposure of Bear Stearns to counterparties was so extensive that a worse crisis would follow if it were not bailed out. The March crisis also led to the creation of a number of new discount-window facilities (credit policy) whereby investment banks could access the window and which broadened the collateral acceptable for discounting. The next major event was a Federal Reserve-Treasury bail-out and partial nationalization of the insolvent government-sponsored enterprises (GSEs),
Fannie Mae and Freddie Mac, in July 2008, on the grounds that they were crucial to the functioning of the mortgage market.

Events took a turn for the worse in September 2008 when the Treasury and Fed allowed the investment bank Lehman Brothers to fail, in order to discourage the belief that all insolvent institutions would be saved, in an attempt to prevent moral hazard. It was argued that Lehman was both in worse shape and less exposed to counterparty risk than Bear Stearns. The next day the authorities bailed out and nationalized the insurance giant AIG, fearing the systemic consequences for collateralized default swaps (insurance contracts on securities) if it were allowed to fail. The fall-out from the Lehman bankruptcy then turned the liquidity crisis into a fully fledged global credit crunch and stock-market crash, as interbank lending effectively seized up on the fear that no banks were safe.

In the ensuing atmosphere of panic, along with Fed liquidity assistance to the commercial paper market and the extension of the safety net to money market mutual funds, the US Treasury sponsored its Troubled Asset Relief Plan (TARP), whereby $700 billion could be devoted to the purchase of heavily discounted mortgage-backed and other securities to remove them from the banks’ balance sheets and restore bank lending. As it later turned out, most of the funds were used to recapitalize the banks.

In early October 2008 the crisis spread to Europe and to emerging-market countries as the global interbank market ceased functioning. The UK authorities responded by pumping equity into British banks, guaranteeing all interbank deposits and providing massive liquidity. The EU countries responded in kind. And on 13 October 2008 the US Treasury followed suit with a plan to inject $250 billion into the US banks, to provide insurance of senior interbank debt and unlimited deposit insurance for non-interest-bearing deposits. These actions ended the crisis. Expansionary Federal Reserve policy at the end of 2008, lowering the funds rate close to zero, followed by a policy of quantitative easing: the open-
market purchases of long-term Treasury bonds and mortgage-backed securities finally attenuated the recession by the summer of 2009.

Unlike the liquidity panics of the Great Contraction, the deepest problem facing the financial system was insolvency. This was only recognized by the Fed after the September 2008 crisis. The problem stemmed from the difficulty of pricing securities backed by a pool of assets, whether mortgage loans, student loans, commercial paper issues, or credit card receivables. Pricing securities based on a pool of assets is difficult because the quality of individual components of the pool varies and, unless each component is individually examined and evaluated, no accurate price of the security can be determined.

As a result, the credit market, confronted by financial firms whose portfolios were filled with securities of uncertain value, derivatives that were so complex the art of pricing them had not been mastered, was plagued by the inability to determine which firms were solvent and which were not. Lenders were unwilling to extend loans when they could not be sure that a borrower was creditworthy. This was a serious shortcoming of the securitization process that was responsible for the paralysis of the credit market (Schwartz 2008).

Finally, another hallmark of the recent crisis was that the Fed and other US monetary authorities engaged in a series of bail-outs of the incipient and actual insolvent firms deemed too systemically connected to fail. These included Bear Stearns in March 2008, the GSEs in July, and AIG in September. Lehman Brothers had been allowed to fail in September on the grounds that it was both insolvent and not as systemically important as the others and, as was stated well after the event, that the Fed did not have the legal authority to bail it out. The extension of the ‘too big to fail’ doctrine, which had begun in 1984 with the bail-out of Continental Illinois bank, may be the source of future crises.
The Fed and other central banks were severely criticized for not preventing the crisis. The indictment included the following: that had the Fed not followed too expansionary monetary policies in the years immediately preceding the crisis that the housing boom would have been less frothy and the bust leading to the crisis would have been avoided (Taylor 2007); the Fed failed to use its monetary policies to stem the housing boom; the Fed and other central banks followed credit policies which favored some institutions and markets instead of others (Schwartz 2009); the Fed and other central banks gave up their independence and combined monetary with fiscal policy (Bordo 2010); the Fed (and other central banks) halted their expansionary policies which began in September 2007 too early in the first half of 2008 and thereby guaranteed a recession would follow (Hetzel 2009); the Fed first rescued Bear Stearns in March 2008 and later let Lehman Brothers fail leading to great uncertainty and panic (Meltzer 2009); the Fed (and the Treasury) vacillated on the nature of the TARP program also leading to uncertainty and panic (Taylor 2010); the Fed and other monetary authorities bailed out Bear Stearns, Fannie and Freddie, AIG and later major universal banks on the grounds that they were too big and or too interconnected to fail. Finally the Fed did not follow Bagehot’s strictures to central banks to clearly state their lender of last resort policy in advance (Meltzer 2009).

These criticisms and more have led for calls for changes to the basic central bank model which is based on rules prescribing credibility for low inflation (as evidenced in explicit or implicit flexible inflation targeting (Svensson 2010) and central bank independence. Reforms suggested include: greatly increasing the central banks role in financial stability including using some monetary policy tools to lean against the wind of asset booms (bubbles) (Borio and White 2003); develop and administer macro prudential rules for commercial and investment banks (i.a. countercyclical capital requirements, liquidity ratios, leverage ratios); working more closely with the fiscal authorities (Goodhart 2010); and sticking to announced more transparent rules (Meltzer 2009).
6. Sticking to the Rules

The history of central banking just surveyed teaches us that the first responsibility of a central bank is to maintain price stability. If the central bank is successful in maintaining a stable and credible nominal anchor then real economic stability should obtain although in the event of adverse shocks central banks should follow short-run stabilization policies consistent with their objective of price stability.

History also suggests that central banks should serve as lenders of last resort to the money market in the face of liquidity shocks. Lender of last resort policy involves temporarily expanding liquidity and then returning to the path consistent with price stability. The central bank should preferably do this by open market operations rather by discount window lending to individual banks, to let market forces chose the recipients of funds rather than relying on discretion (Goodfriend and King 1988). But if the discount window is to be used, loans should be made only to solvent institutions. Bailouts should be avoided.

The historical examples of 1929 and Japan suggests that the tools of monetary policy should not be used to head off asset price booms—following stable monetary policy should avoid bubbles. In the event of a bubble however, whose bursting would greatly impact the real economy, non monetary tools should be used to deflate it (Bordo and Jeanne 2002). The comparative advantage of the policy rate is to influence the money market and not asset prices (Bean et al 2010). Using the tools of monetary policy to achieve financial stability (other than LLR) would reduce the effectiveness of monetary policy for its primary role.

History also suggests that the central bank should protect the payments mechanism and be ready to provide liquidity assistance only to institutions which provide means of payment. The role of a central bank is not to protect non bank financial institutions which do not provide means of payment. The supervision and regulation of these institutions should be handled by other regulatory authorities.
Finally the history of inflations past and the recent financial crisis teaches us that central banks should be independent of the fiscal authorities.

In sum the events of the recent crisis leads to the conclusion that central banks should stick to following the rules to maintain price stability. Flexible inflation targeting as practiced by the Norges Bank and by the Riksbank seems to be a reasonable way to go forward and should be adopted by other central banks. Flexible inflation targeting aims at stabilizing both inflation around the inflation target and resource utilization around a normal level. The central bank should then choose the policy rate and policy –rate path so the forecast inflation and resource utilization best stabilizes inflation and resource utilization. The central bank can incorporate financial conditions and other shocks into its forecasts. (Svensson 2010) Finally, a lesson from the recent crisis is that financial regulation (by agencies other than the central bank) should be based on providing incentives for private financial agents to take prudent actions (“to have skin in the game”). Had this been the case the financial collapse would have been greatly attenuated.

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This chapter approaches bank risk management under the regulators’ perspective with an emphasis on the risk-based capital regulation. Specifically, how bank risk is regulated under the risk-based capital regulation and whether the regulation shapes bank risk are discussed in detail. Interest rate risk (in the banking book) is related to the adverse movements in interest rates of bank assets, liabilities, and/or off-balance sheet items. A change in the interest rate affects a bank’s expected interest incomes and expenses and thus affects its future marginal profits. These two standards are designed to promote both short-term and long-term resilience of a bank’s liquidity risk profile. The Fed and the European Central Bank (ECB) have already cut rates to zero; historically low rates limit the tool kit of other central banks, and several global regions are probably already in recession as many economists and the latest data from China suggests. Addressing the situation will require further global action and public–private coordination. At the same time, banks may begin to stress test their capabilities and financials, laying the groundwork for identifying long-term strategic implications and ensuring a smooth bridge between the present and future. Immediate response. Banks have already taken a series of actions in reaction to the spread of COVID-19.