

Why The Monetary Policy Framework in Advanced Countries Needs Fundamental Reform*

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Working Paper No. 210

August 3rd, 2023

ABSTRACT

The objective pursued by most central banks in recent decades has been a low level of inflation. Since inflation was believed to respond to changes in unemployment, this implied a primary focus on labor markets and output gaps in the “real” economy when setting monetary policy. In contrast, “financial” sector developments were thought to be of no great importance.

It is argued in this paper that monetary policy should be guided much more by financial sector developments (credit and debt) and much less by near term targets for inflation. This argument is first supported by an empirical review of the negative outcomes produced by the current policy framework; in particular, financial bubbles have created ever larger bubbles which threaten future growth prospects. A second level of support is provided through questioning the need for and the effectiveness of easy money, and through pointing out its many unintended and dangerous consequences.

An alternative monetary policy framework would begin with the observation that an economy is a complex, adaptive system like many others in nature and society. From this perspective, arguments for introducing a “narrow money” regime need more attention.

<https://doi.org/10.36687/inetwp210>

JEL codes: N10, E31, E42, E52, E58.

Key words: inflation, monetary policy, financial system, complexity, bubbles

* A revised version of this Working Paper will appear as a chapter in “The age of debt bubbles” to be published by Springer.

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Introduction

I have been working in or around central banks for over fifty years¹. To my regret, as I look back on my career, I can now see that I was often guided by an evolving set of false beliefs about how an advanced economy works and how monetary policy might contribute to its better functioning. I was at various times an advocate of targeting the exchange rate, of targeting the natural rate of unemployment, of targeting monetary aggregates and, more recently, of pursuing the near-term stability of some index of consumer prices. Indeed, a summing up of my career, prior to joining the Bank for International Settlements (BIS) in 1994, might well have been “I’m sorry, it seemed like a good idea at the time”.²

The fundamental objective underlying the more recent of these policy prescriptions was strongly suggested by the inflationary crises of the 1970’s and early 1980’s; monetary policy should seek to maintain projected inflation at some low level.³ Since inflation was believed to respond to unemployment, this implied a primary focus on labor market and output “gaps” in the real economy.⁴ Financial sector developments, including the evolution of credit and debt, were thought to be of no great importance in the setting of monetary policy.⁵

This focus on the “real” economy desperately needs rethinking as the Bank for International Settlements (BIS) has been suggesting for many years.⁶ Monetary policy should be guided much more by financial sector developments (credit and debt) and much less by near term targets for inflation. The pursuit of stable prices remains important, but policy should focus on success over a much longer time period than the two year horizon that has become fashionable in recent decades.⁷

Perhaps the most effective way of showing the need for fundamental monetary reform is to point out the negative implications of the monetary policies followed by the major central banks in the advanced economies over the last few decades.

First, the general adoption of a positive (+2%) inflation target has prevented the downward adjustment of prices that would be the natural product of increases in productivity and positive supply shocks. As a result, prices have been drifting upwards (and significantly) for decades. Second, the recurrent use of monetary easing to spur demand and raise inflation has become increasingly ineffective. Current monetary policy faces a fundamental problem of temporal inconsistency: solving today’s problems also makes tomorrow’s problems worse. Third, stimulative monetary policy has had a variety of unintended and unwelcome

¹ My PhD thesis (1969) at the University of Manchester focused on UK monetary policy in the post-war period. After beginning my working life at the Bank of England, I spent 22 years at the Bank of Canada, ending as Deputy Governor (International). From 1995 I had the post of Economic Adviser at the Bank for International Settlements in Basel, the meeting place for central banks globally. After retirement from the BIS in 2008, I served until 2018 as the Chair of the Economic Development and Review Committee at the OECD in Paris. This committee conducts country surveys and provides policy advice on both macroeconomic and structural issues.

² For an overview of my evolving beliefs, and indeed much of conventional macroeconomics, see White (2013).

³ Broadly speaking, the projection horizon was around two years and the inflation target was some measure of consumer prices.

⁴ This is a basic implication of the Phillip’s curve relationship. Absent supply side shocks, this relationship also implies there is no conflict between pursuing an unemployment target and an inflation target.

⁵ To the degree central bankers were concerned with such issues, it was felt that regulatory agencies were primarily responsible for resolving problems.

⁶ See BIS Annual Reports from the mid 1990’s onwards. Also, for early papers see Borio et al (2001), Borio and Lowe (2002) and White (2003).

⁷ As always, there are exceptions to the rule. The Swiss National Bank has always preferred to pursue price stability over a medium-term horizon.

consequences that can only worsen; credit “booms and busts”, potential financial instability, fiscal unsustainability, a progressive loss of central bank “independence”, growing inequality of wealth and opportunity and a slower growth rate of potential output. Fourth, as the threat posed by these unintended problems have cumulated over time, “exit” and the “renormalization” of policy has become ever harder to achieve.

To sum up, the current monetary system has trapped us on a path we do not wish to follow because it leads inevitably to ever bigger problems. This is why fundamental reform is needed.

Some facts: How “bubbles” have created “bigger bubbles”.

Since roughly the latter part of the 1980’s, the economies of the major countries have been characterized by three major trends. First, there was persistent downward pressure on wages and prices exerted by a growing labor force and the rising participation rate of women. Even more important, workers from China and Eastern Europe re entered the global trading systems, putting downward pressure on wages globally. Second, there was widespread deregulation of financial systems facilitating faster credit growth from ever more diverse sources. Third, central banks became ever more committed to the pursuit of a low, positive inflation objective, an objective generally (and wrongly) referred to as “price stability”.

In pursuing this last objective, central banks ignored the broader implications of the other two major trends. In effect, by adopting an over simplified model of the world, one that abstracted from both supply side and financial shocks, central bank policies have created the instability they were seeking to avoid.⁸ Moreover, as the underlying problems have become worse, the capacity of monetary policy to respond has also become increasingly attenuated.

A particular shortcoming was ignoring the likelihood that an increasingly deregulated financial system might prove capable of creating destabilizing levels of credit and associated debt. Indeed, the first three of the four interest cycles we have seen since the late 1980’s - ending in 1990, 2001, 2008 and 2020 – ended with a financial crisis, while the fourth upturn was cut short by the covid pandemic. Each crisis had its origins in monetary stimulus intended to foster recovery from the previous recession, but each ended in financial “bust” and recession. Moreover, although the pace and magnitude of the monetary easing increased over successive cycles, the magnitude of the following recessions still became increasingly severe. This could indicate that the monetary cure for the downturn was aggravating underlying problems the more that it was used. If so, the implication would be that successive “bubbles” might eventually culminate in still more intractable problems.

Because monetary easing after the bust was always more aggressive than the subsequent tightening, peaks and troughs in policy rates also ratcheted down over time, eventually reaching zero or even slightly below zero. When rates hit the “effective lower bound”, yet central banks thought even lower rates were required, the monetary authorities responded with such unconventional measures as forward guidance, quantitative easing and, in the case of the Bank of Japan, yield curve control. This progression leads to the conclusion that, should the next bubble burst and cause a deep recession, monetary easing might not provide even the temporary support it was able to provide in the past. This could imply a deflationary outcome, or even a highly inflationary one if monetary expansion were to be pursued regardless.

⁸ In his recent autobiography, Paul Volcker (2018, p227) makes a similar point. Also see Hannoun et al (2019).

Arguably, the first of these expansionary interventions was the global easing required to support the US dollar after the Louvre agreement of 1987.⁹ Further easing came in response to the global stock market crash that came in the fall of that year, a policy increasingly referred to as the “Greenspan put” limiting asset price declines. These actions might well have contributed to the Savings and Loan crisis in the United States in 1989, and also the deep financial crises that affected Japan, all the Scandinavian countries, and many other countries at around the same time.

The global reduction in interest rates that followed the 1990 contraction was promptly reversed as the economy recovered, but that reversal was then attenuated by another set of financial crises. As rates rose and the US dollar strengthened, many highly indebted countries in Latin America were hit by capital outflows during the “peso crisis” of 1994. In 1997, similar problems hit many Asian countries that had also enjoyed massive capital inflows. Then in 1998, the prospective failure of LTCM, a large US hedge fund, actually led to reductions in US policy rates which further fueled an ongoing equity boom focused on the technology, media and telecommunications sectors. When policy rates did tighten again, this boom collapsed, and a recession then followed.

As before, central banks began to lower policy rates in 2001, but did so even more aggressively than in the early 1990’s and to a lower trough. Again, the global economy recovered while inflation stayed quiescent. Indeed, the post 2002 recovery was so strong, and inflation was so low and stable, that a new phrase was created to describe the economy’s performance – the Great Moderation. While policy rates were raised from 2005 onwards, generally in “measured” steps, evidence once again began to accumulate of developing imbalances. In the English-speaking countries, household saving rates fell to record lows. This was accompanied by sharp increases in credit, private debt, leverage and asset prices in many large countries, as well as a number of emerging markets and important countries on the periphery of Europe.

House price increases and mortgage lending had been particularly strong in the United States with loans to “subprime” borrowers especially noticeable.¹⁰ Moreover, in a new financial innovation, these loans had been securitized and then distributed widely to lenders in the broader economy. While US house prices first began to fall early in 2007, there was no generalized economic moderation until 2008 after the failure of a number of important American financial institutions. A financial crisis was then triggered in the United States, and the turmoil subsequently spread to Europe as many European financial institutions struggled to find short term dollar financing for longer-term dollar assets.¹¹ In 2010 Europe was plunged into outright crisis as previous capital inflows into Italy, Spain, Ireland and Greece were reversed and the bond rates in those countries rose sharply against Bunds.

As in earlier cycles, policy rates were quickly lowered,¹² and still more aggressively than ever before. Indeed, a number of countries imposed negative rates on reserves held with them by commercial banks. In Europe, the President of the ECB vowed to do “whatever it takes” to stabilize financial developments in the Euro zone. Moreover, central banks brought into

⁹ The rest of this section on “Some Facts” is based on a rereading of successive Annual Reports of the Bank for International Settlements. I wrote the Introduction and Conclusions of that Report from June 1995 to June 2008, covering the largest part of the period under review.

¹⁰ In part this was due to government support and mortgage guarantees.

¹¹ The crisis became known popularly as the Great Financial Crisis. However, some thoughtful commentators suggest it should rather be known as the North-Atlantic Financial crisis. See Fender and McGuire (2010) and Tooze (2019).

¹² An important if temporary exception was the ECB which, for a time, continued to raise rates in response to continuing inflationary pressures.

widespread use a number of instruments of monetary expansion that had only been used rarely before. Forward guidance about future policy rate moves was used to influence medium term rates while Quantitative Easing helped push down longer-term rates. Fiscal expansion was also used to soften the downturn, but this was quickly reversed. In the Euro zone, the countries most affected by the crisis were eventually forced into outright fiscal austerity.¹³

Perhaps most important, policy rates were kept close to zero and unconventional monetary measures were maintained in use throughout the subsequent, long expansion extending to early 2020.¹⁴ Nevertheless, in most advanced countries, the recovery was unusually slow and inflation targets were generally undershot, which provided the principal rationale for the decision not to tighten policy. Yet, at the same time, there were many indicators of the further growth of financial imbalances. Debt ratios and asset prices rose, almost continuously and almost everywhere, while credit quality continued to deteriorate. There was also a significant shift in the source of credit. As banking regulation tightened, post-crisis, less well-regulated financial markets and non-bank financial institutions increasingly provided substitute sources of credit. Unfortunately, from a financial stability perspective, this also implied a growing lack of transparency about credit and other exposures within the financial system. The growing use of derivative products to hedge portfolio exposures, often by opaque counterparties, was a particular source of uncertainty about the systemic implications of economic and financial shocks.¹⁵

These were the prevailing circumstances when the covid pandemic hit the advanced countries in March of 2020. “Lockdowns”, waves of infections and fears of infection then interacted to cause both aggregate demand and economic supply to fall massively. The former led to a steep recession while the latter contributed to a marked increase in inflation, particularly for goods.¹⁶ Monetary policy responded with still lower policy rates, where possible, and an unprecedented increase in Quantitative Easing. Fiscal easing was also used much more aggressively than previously, with a much greater reliance on direct payments to households and companies. In combination, these policy measures constrained the contraction and contributed to a very sharp economic recovery. However, they also contributed to further, marked increases in both private debt and public debt.

The pandemic induced increase in inflation was initially ignored as a “transitional” phenomenon and monetary policy remained highly expansionary until near the end of 2021. However, as inflation accelerated even as supply blockages eased, central bankers finally concluded they had to respond to constrain a possible wage-price spiral. Policy rates were then raised at an unprecedented pace, and with unprecedented correlation across major

¹³ This policy subsequently attracted criticism. See White (2015).

¹⁴ The initial expansion of central bank balance sheets (QE) was an entirely justified response to market disorder and fears of financial instability. Subsequently, however, central bank purchases of longer-term securities had a quite different objective; namely, to lower longer term interest rates to stimulate aggregate demand. Forward guidance was intended to lower medium term interest rates with the same objective in mind.

¹⁵ That there was valid reason for concern became evident in a bout of disorder and sharply higher rates in the UK gilt-edged market late in 2021. UK pension funds had followed portfolio strategies using derivatives which resulted in their facing large margin call as gilt rates rose. They were then forced to sell gilts to raise cash which exacerbated the original problem and forced the Bank of England to step in. Some commentators, reflecting on the unexpected and destabilizing interactions between different financial markets in the UK, expressed concern that the UK experience might prove to be a “canary in the coal mine” for other countries.

¹⁶ The demand for services, which generally involves human contact, fell particularly sharply. In contrast, the demand for goods rose sharply as orders could be placed over the internet and fiscal easing increased household disposable income.

countries. Inflation then fell sharply as the negative supply shocks dissipated, but core inflation generally remained well above target levels through to the spring of 2023.

From the spring of 2023 onwards, some central bankers argued that enough had been done to reduce inflation back to the two percent target. They generally suggested that monetary restraint had mostly to do with the **change** in stimulus, which had been massive, and the full effects of tightening to date remained to be seen. However, others who shared that disinflationary objective felt that still higher rates might be required since the **level** of real rates generally remained negative. In this eventuality, some in the latter group also worried that still higher rates might trigger another private sector financial crisis. Moreover, given that repeated use of monetary stimulus after previous financial crises seemed to have made the next crisis worse, they worried that the next financial crisis might be worse still.

Moreover, and for the first time, worries began to surface about the effects of higher rates on the debt service capacities of major governments. Not only had higher deficits during the pandemic raised the stock of debt, but central bank policies had raised the sensitivity of debt service to higher rates. Quantitative Easing, which replaced long term government debt with overnight financing (reserves at the central bank), effectively shortened the duration of that debt. Moreover, the losses from higher rates were first recorded on the balance sheet of the central banks, raising fears of reputational implications.¹⁷ Finally, the magnitude of the expansion of central bank balance sheets during the pandemic almost exactly matched the increased size of the government debt. For some, this coincidence raised fears of “fiscal dominance” and possibly much higher inflation in the future.

Some theory: How “false beliefs” contributed to “bad policy”.

The Introduction to this paper listed a number of negative implications associated with the conduct of monetary policy over the last few decades. These developments occurred because central bankers in the advanced economies generally shared a set of “false beliefs”. They overestimated the **need** for easy money. They overestimated its **effectiveness** in stimulating aggregate demand. They underestimated the **unintended consequences**. And, finally, they underestimated how difficult it would be to **exit** from such policies.

The need for easy money

As noted above, the last few decades have been characterized by large, positive supply shocks in the global economy that led to persistent downward pressure on prices. There is a large, now largely forgotten literature, that suggests these initial price declines should have been allowed to happen.¹⁸ For example, lower prices arising from positive productivity trends initially spread the benefits to consumers and workers. This would have helped avoid the worsening income inequality that has become so pervasive in many countries. Further, periods of falling prices to offset rising prices at other times would have helped avoid the sharp upward trend in prices we have seen since the end of the Bretton Woods system in the early 1970’s.

These arguments for allowing deflation were subordinated to the argument that deflation would lead to prices cascading downward and would culminate in depression. These arguments were largely based on the experience of Western countries in the 1930’s.

¹⁷ The recorded losses of the Federal Reserve were almost \$1 trillion by the end of 2023Q2. The Swiss National Bank recorded losses equal to 18 per cent of Swiss GDP in 2022.

¹⁸ See Selgin (2018).

However, numerous historical studies indicate this experience was essentially unique.¹⁹ Most periods when prices were falling were characterized by rising productivity and rising real GDP. As for cascading price declines, the experience of Japan is instructive. They have had gentle deflation since the early 1990's without any evidence of this phenomenon.

Unfortunately, once easy money has led to a significant rise in debt, the argument for not worrying about deflation loses a great deal of its force. These arguments were put forward by Irving Fisher²⁰ in the 1930's and should concern us today. However, Paul Volcker recently put the ultimate blame for such problems on central bankers when he said²¹ "Ironically, the 'easy money' striving for a 'little' inflation as a means of forestalling deflation, could, in the end, be what brings it about." In effect, central bankers now find themselves caught in a "debt trap". Failing to tighten policy encourages still more debt accumulation, but tightening could trigger unexpected consequences.

The effectiveness of easy money

Coming out of the 2009 recession, central banks (and the IMF and the OECD) for ten years in a row overestimated the growth rate of real GDP in the following year. Similarly, inflation was consistently forecast to rise faster than it actually did. An underlying problem was that the stimulus expected to arise from easy monetary policies failed to materialize. As discussed below, this problem might have been anticipated. At the least, it should have led to a fundamental reconsideration of the analytical (forecasting) framework that was producing such errors. Sadly, this has not happened.

John Maynard Keynes, in the *General Theory* (1936) warned against the efficacy of the expansionary monetary policies that he himself had recommended in the *Treatise On Money* (1930). "If we are tempted to assert that money is the drink that stimulates the system to activity, we must remind ourselves that there may be several slips between the cup and the lip".²² Plausible arguments support the view that low interest rates might not stimulate either consumption²³ or investment²⁴. Indeed, these arguments imply low rates might even lead to less consumption and investment. The idea that lower rates increase wealth and therefore spur consumption also suffers from a fundamental analytical flaw.²⁵ Finally, experimental monetary policies could raise private unease, constraining Keynes' "animal spirits", and this could also lead to less spending rather than more.

Perhaps even more important, the effectiveness of monetary stimulus declines with repeated use. That is, there is a fundamental intertemporal inconsistency. To the extent lower rates do encourage spending, it is by bringing intended spending forward in time often through the vehicle of increased debt. If that spending does not generate the returns required to service the debt, then over time the debt becomes a burden reducing future spending. This is the feedback effect once referred to by Alan Greenspan as "headwinds". In fact, global debt ratios (to sectoral revenues or GDP) have been rising steadily since the 1980's, and this

¹⁹ See Atkeson and Kehoe (2004) and Borio and Filardo (2004).

²⁰ Fisher (1933).

²¹ Volcker (2018).

²² Keynes (1936), p. 151; the quotation follows the pagination of the Palgrave Macmillan edition of 2018.

²³ See White (2016). For example, suppose people have a savings target which will allow them to buy an annuity of a certain size when they retire. If the rate at which their savings accumulate falls, as interest rates decline, then people must save more not less.

²⁴ See White (2016). For example, if future consumption is expected to be constrained, because current consumption has been financed with debt, why invest more today to meet future demand that will not materialize? As well, defined benefit pensions are a liability of the corporations that offer them. Lower returns on pension fund investments require a corporate top-up which reduces the cash flow available for investment.

²⁵ White (2006).

continued even after the onset of the recession of 2009. According to the Institute of International Finance, the global ratio of debt was 280% in 2008, 321% at the beginning of the pandemic in 2020 and then rose to a peak of 360% subsequently. Given that investment spending has declined in recent years, the presumption that a heavier debt load will eventually constrain spending seems increasingly plausible.²⁶

The unintended consequences of easy money

The **unintended accumulation of debt** is perhaps the most important of the unintended consequences, but by no means the only one.

Inequality of income, wealth and opportunity has been rising in many countries for a variety of reasons including technological change and globalization. However, easy monetary policies have worsened these trends to a significant degree. Richer people own most of the riskiest assets whose prices have been supported by low interest rates. While those who have benefitted the most have responded by increasing consumption,²⁷ higher income deciles still have higher saving rates than lower income deciles. Thus, redistribution effects lower aggregate consumption and support arguments for continued easy money.

Financial instability has also been encouraged in a variety of ways. Many financial institutions have seen their lending margins squeezed by lower rates. Given the various competitive challenges already threatening banks (Fintech), insurance companies and pension funds (climate related claims and longer living pensioners) some institutions even came to feel that their business model was under threat.²⁸ Not surprisingly, many financial institutions have reached for yield, and in consequence have taken on both more credit risk and more liquidity risk. The relative expansion of less traditional financial vehicles (like private equity and asset management firms) has led to the Financial Stability Board to raise still other concerns about potential financial instability²⁹.

While an upward movement in asset prices was actually desired as part of the transmission process of monetary easing, it is hard to believe that an “everything bubble” was fully intended. Prior to some reversals in 2022, there was a relentless upward movement in the prices of almost all financial assets including commercial property and houses. The McKinsey Global Institute notes that these price increases were largely responsible for a new phenomenon. Since 2000, the rate of growth of “measured wealth” has for the first time ever greatly exceed the growth of nominal GDP.³⁰ At the same time, credit spreads, duration spreads and measures of volatility all sank. While these developments set the stage for recent reversals, there remain considerable doubts as to whether the new downward phase in asset prices is over. What the implications of still larger losses might be for corporate insolvencies and economic stability more generally remains to be seen.

Finally, the absorption of bonds by central bank purchases (Quantitative Easing) might have contributed to the significant deterioration of market functioning seen over the last decade or

²⁶ This is the basic logic of a “Balance Sheet Recession”. See Koo (2009) who analyzes the causes and consequences of Japan’s post 1990 economic performance.

²⁷ See Ferguson and Storm (2023).

²⁸ This too has further repercussions. For example, some companies are no longer willing to provide insurance coverage for houses in California and Florida.

²⁹ Financial Stability Board (2019).

³⁰ McKinsey Global Institute (2021). They also point out that only seven percent of these “measured assets” are actually productive real assets like infrastructure, machinery and equipment and intangibles like software. The picture they paint is one of a huge inverted financial pyramid resting on a tiny productive base. Also see White (2006) who had earlier raised similar concerns about the growing gap between “real wealth” and “measured wealth”.

so.³¹ Continuing market “anomalies”³² have been complemented by recurring “flash crashes” in various markets. Most important, there was a bout of massive disorder in the market for US Treasuries in September of 2019 which then recurred in March of 2020. In late 2021 a similar bout of disorder was observed in the market for UK gilt edged securities, with long rates rising suddenly at an unprecedented rate.

While the Federal Reserve and the Bank of England stepped in to restore order, their interventions had at least two downsides.³³ First, they marked a transition from central banks being a “lender of last resort” to a “buyer of last resort”, thus effecting a major extension of the financial safety net with an associated increase of moral hazard. Second, they demanded an increase in the size of central bank balance sheets when the central banks were already committed to reducing them. This issue of “exit” is returned to below.

It might seem counterintuitive to suggest that easy money, and lower interest rates, promoted **fiscal unsustainability**. However, persistently low borrowing rates led governments, as well as other borrowers, to believe that their debts were sustainable and to put off needed measures of fiscal restraint. In association with the debt duration issues noted above,³⁴ many governments found themselves looking at a very challenging profile of future debt service requirements when interest rates did begin to rise in late 2021.

The way monetary policy has been conducted has also had implications for the **“independence” of central banks**. Many of their actions have had distributional implications and distributional issues that are fundamentally political. Easy money and the associated increase in the price of assets overwhelmingly favor those who held the assets in the first place. Thus, wealth inequality has been added to longstanding concerns about inequality of both income and opportunity. As well, quantitative easing and the effects on government debt service raises questions about central banks usurping fiscal policy,³⁵ while purchases of privately issued liabilities raise the issue of who has been favored and why. All of the above considerations could imply the need for closer political oversight of central banks than has been the case in recent years.³⁶ This comes on top of the need for ongoing cooperation between central banks and other government agencies in the pursuit of systemic financial stability.³⁷

The **potential growth rate** of the advanced economies might also have been reduced by past monetary policy. While neoclassical models say demand fluctuations and monetary policy have no lasting real effects on the economy, the facts seem to say otherwise.³⁸ A low interest rate environment has supported the survival of “zombie” companies” whose loans have been evergreened by poorly capitalized banks in particular.³⁹ These “zombies” absorbed resources

³¹Both tighter regulatory requirements and Quantitative Easing reduced the availability of collateral for market trading. This occurred at the same time that increased repo trading was demanding the use of more collateral and the size of the underlying markets was also growing rapidly.

³² Borio et al (2016).

³³ The UK incident had a further complication. See footnote 14 above.

³⁴ What is also surprising is that more governments did not make a more determined attempt to increase the duration of their debt when long-term interest rates were low. Perhaps it is because short term rates were lower still, and this situation was expected to continue for the foreseeable future. In this regard, central bank “forward guidance” was distinctly unhelpful.

³⁵ Allen W (2021).

³⁶ Sedgewick P (2023).

³⁷ Central banks have generally been charged with responsibility for changing macroprudential policies so as to preserve the systemic stability of the financial system. However, many of the policy instruments used to do this are under the direct control of other government agencies like financial regulators.

³⁸ Cerra et al (2023).

³⁹ See Acharya et al (2010), Andrews et al (2017) and Banerjee and Hoffman (2018).

that might have supported other more productive companies, but their continuing competition also helped keep down prices.

In addition, low borrowing costs contributed to a massive increase in the availability of financing for “high risk” but potentially “very high return” projects. Many well-established firms (especially in high tech industries) spent heavily on such “malinvestments”, while the increased availability of venture capital led to the emergence of many companies that remained profitless for an abnormal number of years.⁴⁰ Finally, a low interest environment supported mergers and acquisitions and encouraged a degree of consolidation that many now find a cause for concern.⁴¹ Should worsening market conditions force a shakeout of unviable companies, prices (or inflation) might fall less than might normally be expected. Indeed, there is some evidence for this in the recent rise of corporate profit margins in a number of countries.

Finally, some consideration needs to be given to the unintended implications for **emerging market countries**. As policy has ebbed and flowed in the advanced countries, short term capital flows have created problems for emerging markets, both when capital has flown in and when it has flowed out. Albeit due in part to a “fear of floating”, the emerging markets now suffer from many of the same unintended consequences as the advanced countries. The increase in debt ratios from 2008 to 2019 was described in a recent World Bank report⁴² as “the largest, fastest and most broad based increase of debt” in the last 50 years. As a consequence, the IMF estimated in 2022 that over 60 percent of Low Income Countries were either “in distress” or at “high risk” of distress”.

The difficulties of “exit” from easy money

There are many political economy arguments for thinking that central banks will generally tighten too late after a period of monetary expansion.⁴³ Indeed, the way in which the unintended consequences of easy money have built up over time shows that this is a chronic tendency. Post pandemic, the delayed response of central banks to rising inflation provide further evidence of this tendency.⁴⁴ Looking forward, further monetary tightening will be (and perhaps should be) impeded by a number of considerations.

Higher policy rates could trigger a crisis due to tensions generated by the unintended consequences of earlier policies. In this regard, fears of financial instability in the private sector should be a key consideration. So too should concerns about the implications for capital flows and emerging market economies.⁴⁵ Fears of fiscal unsustainability have also sharpened recently, which will surely raise further doubts about the “independence” of central banks.⁴⁶ Moreover, looking forward, the trade-off between allowing higher inflation,

⁴⁰ The business model was to subsidize prices to gain market share and eventual industry dominance. Evidently, if a number of firms in the same industry are behaving in this fashion, most of their hopes must be disappointed.

⁴¹ See for example Lynn (2009) and the research work of the Open Market Institute which he previously headed. More recently, the Biden administration and the European Commission have been rethinking the criteria previously used for accepting mergers and acquisitions.

⁴² See Koh and Yu (2020) as well.

⁴³ Group of Thirty (2015).

⁴⁴ Wheeler and Wilkinson (2022). An important consideration is that central banks gave “forward guidance” that rates would not be raised and therefore hesitated to negate their own advice. When rates did rise, borrowers who had acted in accordance with the “forward guidance” were understandably angry. The full implications for trust in government institutions remains to be seen.

⁴⁵ UNCTAD (2023) recently called for the Fed to eschew further tightening on the grounds that the EMEs would be disproportionately harmed by it.

⁴⁶ Sedgewick (2023).

and the dangers of resisting it, are likely to become much worse as negative supply shocks replace positive ones.⁴⁷ Should “financial repression” be the strategy chosen to improve this trade-off,⁴⁸ “exit” would be even further delayed.

“Exiting “from Quantitative Easing has its own difficulties. Against a backdrop of increasing market disorder, the withdrawal of excess bank reserves could have unintended consequences. Acharya et al (2023) argue that banks with excess bank reserves have made new commitments to clients to provide liquidity when needed. In effect excess reserves have been transformed into needed reserves. The implication is the Quantitative Tightening should likely be conducted even more prudently than raising policy rates.

Some observations: How to improve the monetary policy framework?

If “bad policy” outcomes are largely due to the “false beliefs” of central bankers, then it is tempting to say the solution is to replace those false beliefs with a more realistic set of assumptions; not least to adopt a longer horizon in the pursuit of price stability to take account of the unintended consequences.⁴⁹ However, there are two fundamental objections to this approach. First, it demands a paradigm shift in how central bankers think, and this seems unlikely to happen. Even the Great Financial Crisis, which extant models said could not happen, failed to stop central banks from applying “more of the same” policies that caused the crisis in the first place. The second objection is even more fundamental. The assumption made by central bankers is that they understand how the financial and economic system works and they can control it in consequence. There are very plausible reasons to believe this fundamental assumption is not true.

Rather than being deterministic and linear in its properties, economies are complex, adaptive systems having very different properties.⁵⁰ Such systems are ubiquitous in nature and society and have been well studied by other disciplines. This work can be interpreted to draw some quite simple lessons to guide the monetary authorities in their conduct of monetary policy.⁵¹ It has implications for the choice of objectives for monetary policy, for assessing and reacting to deviations from objectives, and for preventing and managing crises. Proceeding down this path would be a clear improvement on the current approach. Note, however, that it would still leave ample room for discretionary behavior on the part of the authorities.

One of the lessons to be drawn from the study of other complex, adaptive systems is that structure matters for systemic stability and that structure can be chosen to produce more stability. Building in modularity (to isolate shocks), redundancy (to improve resilience) and negative feedback mechanisms is standard in engineering systems. So too is the desire to remove unnecessary complexity. Against this backdrop, the suggestions made in the 1930’s

⁴⁷ White (2023).

⁴⁸ Reinhart and Sbrancia (2015). “Financial repression” was used after WWII to deal with the overhang of sovereign debt. It involved letting inflation rise moderately while using administrative means to keep interest rates down. Bond holders suffered negative, real rates of return for a number of years before the debt overhang problem was resolved at their cost.

⁴⁹ This suggestion was first made in BIS publications some decades ago. For a more recent discussion of how the existing monetary and regulatory framework might be altered to help minimize the costs of “boom-bust” cycles, see White (2020). These proposed improvements to current systems stand in contrast to more radical solutions like “free banking” or “narrow money”.

⁵⁰ For an introductory reference see Buchanan (2001). For a more direct application to economics see Arthur (2014). Also follow the research being carried out by INET (the Institute for New Economic Thinking) at the Oxford Martin School at the University of Oxford, as well as the work of the NAEC Group (New Approaches to Economic Challenges) at the OECD.

⁵¹ See White (2018) and White (2021).

by the “Chicago School” to introduce a “narrow money” regime should be carefully reassessed.⁵²

By eliminating the capacity of private agents to create assets that can substitute for money created by the public sector, there could be a greater potential for controlling the upward drift in prices and for reducing the harmful “boom -bust” cycles that have become increasingly common in recent years.⁵³ As well, much (perhaps all) of financial regulation and public safety nets might be made redundant within such a framework. Finally, by restricting the creation of money to public sector entities, the demand for that money would increase sharply. Commensurately, the cost of debt service for non-money public sector debt would be significantly reduced. All of these would be positive developments.

Evidently, a regime change of this magnitude would need careful assessment and even more careful implementation. However, the recent suggestion that central banks might introduce Central Bank Digital Currencies raises the possibility of extending that initiative to introduce a “narrow money” framework. That possibility should not be ruled out of hand, given the difficult circumstances bequeathed to us by the previous monetary regime.

⁵² See Benes and Kumhof (2012) and Macmillan (2015) for recent attempts to do so. Switzerland actually had a referendum in 2018 which proposed the introduction of a “narrow money” regime in Switzerland. The proposal was voted down, in part because of the fears of Swiss voters of “going it alone”. However, it did lead to a serious discussion of the fundamental problems with the current monetary system that a narrow money regime would address.

⁵³ Crypto currency is another form of privately created “money” that might substitute for money created by the public sector. Thus, expanded use of crypto would go in the opposite direction of introducing a “narrow money” regime. In fact, crypto currency has none of the characteristics normally attributed to money. It has not become a widely used medium of exchange, in part because of problems faced in scaling up to a large volume of transactions. Nor is it a reliable store of value, given large fluctuations in the value of many crypto currencies measured in more traditional currencies. The potential attractiveness of crypto currencies has also been diminished by operational irregularities as well as regulatory and legal challenges.

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