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THE MONETARY MYSTERY OF THE LAST DECADE

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The Monetary Mystery of the last Decade

Mario Teijeiro, June 2020*

There is a feeling that the wisdom of monetarism has vanished during the last decade. Exceptional interventions of the Federal Reserve (FED) and the European Central Bank (ECB) have barely avoided deflation and have achieved delayed and modest growth. The absence of a solid monetarist explanation has been notorious. Moreover, after the formidable impact of lockdowns, many economists are now predicting a prolonged recession followed by a protracted deflation Japanese style, even when a much larger FED intervention is underway. Where is monetary policy headed to? What is ahead, inflation or deflation? Are we simply witnessing the final demise of monetarism? Or something else is at stake?

The basic facts

Let us deal first with the idea of disconnection between an (apparent) uncontrolled monetary growth and a meager increase in nominal GDP. The first thing to recognize is that the increase of monetary aggregates did not follow closely the increase in FED's assets. Indeed, the difference was huge. As an example, while total FED's assets between December 2007 and December 2014 increased the equivalent of \$ 3.6 trillion, currency in circulation increased only \$ 516 billion.

What is the explanation of such disconnection? A substantial share of the purchases of Treasuries and Mortgage-Backed Securities (MBS) (\$ 2.7 trillion out of the \$ 3.6 trillion) were sterilized in the form of (voluntary) deposits of commercial banks in the FED. With their action, banks impeded the potential expansionary effect of the money multiplier, which would have worked increasing bank credit and aggregate demand.¹

Imposing reserve requirements could have achieved the same sterilizing effect, but it was not necessary. The lack of capital impeded banks to expand loans with the increase in deposits (originated in the FED purchases of Treasuries and MBS's). The FED also started to remunerate those deposits, but it was not necessary to achieve sterilization. The banks had no alternative but to deposit their excess reserves at the FED. Remuneration of reserves was a way to capitalize commercial banks without going through a legislated budget appropriation.

What was then the purpose of an asset expansion that exceeded by far a normal growth of monetary aggregates? The purpose was to increase aggregate demand through reduction of the interest rates. The FED usually relied on fixing a basic overnight interest rate to influence the level of interest rates. However, the medium- and long-term interest rates were freely determined in the market of Treasuries and other private obligations. The central objective of monetary

* The author's points of view do not necessarily reflect the position of the Universidad del CEMA.

¹ The counterpart of buying Treasuries by the Fed is an increase in bank deposits of investors that sold the Treasuries to the FED. The increase in deposits may increase bank lending having an immediate impact on aggregate demand. However, if banks do not lend, and instead they deposit the excess reserves at the FED, the expansionary potential is aborted.

policy became to reduce previously free-market interest rates to encourage spending and accelerate the weak recovery from the 2008-09 crisis. Changing the structure of interest rates became a significant instrument to (hopefully) affect aggregate demand.

The underground belief of this policy was that in the presence of a very important financial intermediation, the level of the interest rate was a more efficient determinant of aggregate expenditure than the quantity of base money influencing expenditure through the lending of excess reserves. The existence of an undercapitalized banking system incapable of expanding credit was a circumstantial pragmatic support to this idea.

At the same time, the policy promised a desirable fiscal outcome. Buying high yielding medium- and long-term Treasuries financed by low costs deposits of commercial banks in the FED, generated substantial profits to the FED that reduced the fiscal deficits after transferring them to the Treasury. Moreover, the reduction of interests on new issues of Treasuries secured further reductions of the government's interest service and the fiscal deficit.

The last years of the decade

After finishing the second QE phase in 2014, FED's total assets remained at the same level - approximately \$ 4,5 trillion- until February 2018. Then the FED started a short period of "deleveraging" of its balance sheet that ended in September 2019 at a value of assets of \$3,76 trillion.² However, during this "contractionary" period, monetary aggregates continued increasing smoothly. Currency in circulation increased at an annual rate of 6.1% in 2018 and 5.2% in 2019. The disconnection between asset deleveraging and continued monetary growth was explained this time by the reduction of voluntary deposits held by commercial banks at the FED. The expansionary impact of the reduction of commercial bank deposits at the FED (around \$ 860 billion) compensated in excess the tightening impact of sales of Treasuries and MBSs (around \$ 670 billion).

Explaining the remaining disconnection

Even when we were not to judge monetary policy by the size of the FED's balance sheet; but by the behavior of monetary aggregates, some disconnection to be explained remains.

In the 12 years between December 2007 and December 2019, the (compounded) annual average rate of growth of currency in circulation was 6.8%. The average for M2, a broader definition of money, was 6.2%. However, the increase in nominal GDP during the same period was 3.3%. If the strict quantitative theory held, inflation or growth or both should have been significantly higher (around 3 points higher per year).

The explanation that could solve the remaining disconnection is an increase in the demand for money. Two credible explanations for the increase in demand for money are the following:

² During this "contractionary" period, the Fed funds rate was gradually increased to a level between 2,25/2,50%.

1. The opportunity cost of holding idle money has been coming down with the reduction of nominal interest rates. This reason is particularly strong for aggregates like currency in circulation and M1.
1. The behavior of nominal GDP is a good benchmark for evaluating the demand for dollar assets of US residents. However, being a world money center, the total demand for dollars includes the demand of nonresidents. As a reference, provisional estimates indicate that nonresidents were holding 48% of the total currency in circulation a decade ago. That percentage may have risen to around 60% in recent years.

Both factors cannot be quantified ex-ante to explain the discrepancy and uphold a consistent monetary explanation. Nevertheless, this factor may explain at least a good part of the discrepancy; this probable explanation would be a nonstarter had the US been an economy with increasing interest rates and capital outflows during the period under analysis.

A characterization of “monetary policy”

The main conclusion is that QE's and its symmetric deleveraging phase do not qualify as pure monetary policies. Indeed, they were debt management actions aimed at changing the level and the term structure of interest rates.³ During the period under consideration, there was NOT a deliberate policy of determining the amount of money in the system. Instead, active management of interest rates was the instrument aimed at achieving the dual mandate of low inflation and full employment.

1. The federal funds rate was supposed to influence the level of the overall structure of interest rates. The funds' rate stayed near zero from December 2008 until January 2016. It was then raised gradually until reaching 2.4% in January 2019. It stayed at that level until August 2019 when the reduction of rates towards zero restarted.
2. Debt management policy (QEs) changed the term structure of interest rates. When the objective became to accelerate the slow recovery after the 2008/09 recession⁴, the spread between short and long rates was reduced buying medium- and long-term Treasuries and MBSs while using for financing very short debt in the form of deposits of commercial banks in the FED. When full employment and low inflation were considered satisfactory, the FED started in 2018 to unwind its leverage allowing for a less distorted determination of the term structure of interest rates.

A fundamental conclusion is that the old monetarist vision of a Central Bank managing the amount of money does not coincide with reality. It is a model in disuse. We cannot blame the old idea of Milton Friedman of increasing the money supply at a constant rate. Furthermore, we cannot blame a model of discretionary management of the quantity of money either. Modern

³ Debt managing policies aim at changing the structure of assets and liabilities of the government and the central bank, not involving monetary aggregates. Example a. Borrowing external debt and repaying domestic debt. Example b. Repaying domestic debt while increasing reserve requirements. If one of the elements of the swap were pure outside money in the hands of the public (currency), we would enter in the definition of a pure monetary policy.

⁴ A Federal funds rate near zero was failing to do that.

central banks in developed countries have moved universally to manage the nominal interest rate and its term structure. The FED can still control the amount of the monetary base, but the quantity of money and its components is highly dependent on a frequently unstable behavior of banks and the public. When we realize that in this system the behavior of the public is critical to determine the quantity of money and its components, the discrepancies between nominal GDP growth and actual money growth do not need speculative explanations; the discrepancy is an exact reflection of demand factors at work.

Some fundamental facts that explain recent and current developments

There are two fundamental obstacles to the capacity of monetary or interest rate policies to recover growth after a deep financial crisis. A financial crisis leaves banking and financial institutions undercapitalized. They cannot expand credit, even disposing of funds to do that, because they would exceed the limits imposed by prudential financial policies. It is a (regrettable) fact that financial interest fiercely resists financial policies that demand much higher capital requirements. Inadequate capitalization of financial institutions is the primary source of excessive risk-taking and consequential financial crisis. When a financial crisis arrives, capital evaporates. New capital cannot be raised in the middle of the crisis. Bank nationalization would be anathema for a capitalist economy. Recapitalization of preexisting owners takes much time, and in the meantime, banks are not able to work as channels of monetary policy, increasing lending when they receive more deposits.

The failure of the monetary mechanism comes at a moment that is most needed. The financial crisis leaves a sequel of recession, chronic low inflation, and in some cases, deflation. During those periods, risky financial assets are avoided, and the demand for M1 excels. The money available cannot be rapidly increased when the financial channel is broken. Moving to an interest rate policy seems the only alternative. However, forcing interest rates down through debt management policies have a significant limitation. In the process of reducing the interest rate, the opportunity cost of non-interest-bearing monetary assets (M1) is further reduced, and its excess demand multiplies. The system may move quickly to the Keynesian liquidity trap or zero lower bound (ZLB) when a negative shock develops. We have reached this point now after the coronavirus shock produced a colossal recession that may turn into a new financial crisis.

The FED has exhausted most of its traditional arsenal. Banks will not be willing to increase credit when credit risks are exploding. The Federal funds rate is already near zero. There is some room for further reducing medium- and long-term rates expanding the assets of the FED, what is happening to a large scale. The ECB and other countries like Switzerland are already experimenting with long term negative interest rates, but that leaves financial intermediation without a meaningful business except administering vault services where the public stores mountains of paper cash. Even worse, their experiences showed no success in restarting growth of nominal GDP.

The situation closely resembles early 1930, when the impossibility of an effective monetary policy, left no other alternative than fiscal policy. Accordingly, the emergency measures now include extraordinary fiscal programs that had reached \$ 3,0 trillions and more are being discussed, be it to finance crumbling state finances or an infrastructure program. The fiscal

deficit in 2020 may well exceed 20% of GDP. And will remain abnormally high from 2021 forward as infrastructure programs are executed and the interest service grows.

On the financial side, the FED has reactivated its program of buying Treasuries and MBS. From the end of February until the end of April, the holdings of Treasuries and MBSs increased \$2,2 trillion (10% of GDP).

But the critical news is that the FED has crossed a limit, also creating lending programs to the private sector that imply credit functions and risk taking proper of a commercial bank. Up to the end of April, it has acquired commercial paper for around \$ 500 billions. The emergency facilities also include lending to primary dealers (important brokers) that may borrow providing corporate paper and even shares as collateral. This is a major jump in the functions of the FED. It entails going beyond the function of supplier of liquidity as lender of last resort, to marginally replace a financial system in its functions of providing credit.

A diagnosis and a normative framework for changing the status quo

The economic and financial evolution of the USA seems to be taken the road of Japan and Europe, characterized by stagnation and deflation. There is a vast debt hangout (public and private). Savings rates are low. Productive and financial enterprises are undercapitalized. There is a growing intervention of governments through fiscal deficits and overextended monetary policies. Experiences are looking very similar in all developed countries.

The USA has reached a point too far from the vision of free marketeers like Hayek and Friedman. They pretended, after the Keynesian demise in the '70s, to come back to the old principles of small governments, fiscal equilibrium, and sound money. Quite differently, the USA is on the road towards higher government expenditure, extraordinary fiscal deficits, and a FED that is starting to act as a commercial bank or as a fiscal entity that distributes subsidized credit. The prognosis is polarized between those that expect chronic stagnation and deflation, and others that foresee an inflationary process that will evaporate debt hangouts, but without a sound vision for the aftermath.

Milton Friedman was a believer in free markets, where the free determination of prices was the crucial element for a capitalist economy that was supposed to allocate resources efficiently to achieve maximum growth. He was also a monetarist because he understood that the idea of a fixed, non-discretionary monetary rule was the way to prevent the discretion of central bankers manipulating interest rates and the price level searching for an elusive perfect full employment.

The USA abandoned the ideas of Keynesianism and big government since Reaganomics. Monetary prudence and low inflation were reestablished as priorities. Both parties were, though with remaining discrepancies, on the same boat after the Democrat aggiornamento of the '90s. However, the behavior of Central Banks is far away from the non-interventionist role envisaged by Milton Friedman. The FED today is the great manipulator of interest rates. It is also behaving like a commercial bank, lending, and assuming credit risk. It sometimes behaves as fiscal agency managing bailouts and cross-subsidies.

What went wrong? Why the Central Bank supporter of a free market economy is today a failed dream? The underlying reason is that the FED has many simultaneous objectives. It is a guarantor of the stability of the financial system, in addition to the role of custodian of price stability and full employment. To achieve all these objectives imposes significant trade-offs, and frequently, it is impossible to serve well more than one master at the same time.

The dual mandate of price stability and full employment is itself a source of conflict, further complicated when the mission of stability of a crisis-prone financial system is added. A Central Bank supporter of a free market economy then may become an oxymoron.

It is a significant burden to provide stability to a US financial system that is at the center of the world. It has a considerable size and a high complexity. Besides collecting savings from all over the world, it is overextended in its lending. Under the existing regulations, limited liability banking is prone to excessive risk-taking. The guarantees that support the system make bankers behave imprudently: if they win, all profits are theirs. However, if they fail, the losses are assumed by the government through bailouts.

The attractiveness of capitalism without capital extends to non-financial enterprises, as it is very profitable to get indebted to buy own shares, increasing profits, and reducing risks simultaneously⁵. Consequently, the Central Bank becomes the guarantor of a system of not sufficiently capitalized bankers that lend to not sufficiently capitalized clients. When the system gets bankrupt, the current and future generations of taxpayers will end up paying the bill⁶.

Indeed, capitalism without capital is, beyond the unfairness and inefficiency of remunerating adventurers, an extremely vulnerable formula. It was already proved in the crisis of 1930. However, the proposal of a sufficiently capitalized banking system was rejected then and after every frequent financial crisis. The permissive rules of the financial system proved to be the Achilles tendon of capitalism, but that was not sufficient to overcome the vested financial interests in maintaining the status quo.

Permissive financial policies condition monetary and fiscal policy

The financial rules that encourage moral hazard constitute a significant problem for themselves. They comprehend a system of government guarantees to assume credit risks with not sufficient capital. Consequently, intense financial crises happen from time to time with profound political and economic consequences. The subsequent recession, unemployment, and poverty produce a feeling of failure of the capitalist system, and consequently, a revival of interventionist and even

⁵ The deductibility of interest paid on loans at the moment of determining the base of corporate taxation is a huge incentive that explains the profitability of leverage.

⁶ In the position of being the financial haven of the world, the USA started to access to capital for which a previous effort of saving was not necessary. This windfall weakened the culture of work and save before consuming. Instead, it developed the culture of consuming first and work later; and if unable to pay, get bankrupt. A new generation of millennials socialists is, in part, the product of the era of easy abundance, an era in which less effort and irresponsibility are perceived as possible and natural.

Consumers that do not earn and save previously; capitalists that invest and accumulate profits without risking their capital; who finance them? The answer is the old generation that worked and saved for his retirement, and foreigners that brought their savings looking for protection.

populist policies. At a more technical level, a financial crisis condemns monetary and fiscal policy to an interventionist path. During a crisis, failed banks are frequently bailed out. In the aftermath of a financial crisis, it has been evident how undercapitalized banks impede the normal function of monetary policy through the expansion of credit when it may be most needed. The alternative use of interest rates as the control variable entails the problem of affecting relative prices -anathema for a proper working of a free market system-. The combination of recession, deflation, and interest rates at zero, leave the Central Bank without instruments. Government expenditure and further deficits may be the only way out.

The conclusion is evident

A free-market friendly monetary policy cannot be maintained in the presence of a vulnerable financial system. Even more, the economic consequences of financial crises create a political context against free-market economic systems as a whole. The financial systems, as universally applied today following the model of developed countries, is the Aquiles tendon of any free-market economy.

As this holistic view is accepted, the conclusion is that the design of the financial industry has to be drastically changed, moving towards significant capitalization of banks, a full separation from shadow banking instruments and limitations to assume particular risks⁷. Regulation must be as simple as possible, but commensurate to the government guarantees provided. Only then a market-friendly monetary policy could be a sustainable possibility.

The starting point: a sound financial system

Keynesianism and monetarism were the core options for macroeconomic policy discussed 40 years ago. Deficit spending plus lax monetary policies dominated until the '70s. With Reaganomics in the '80s, Volcker reduced and normalized inflation -it had reached 13%-controlling monetary aggregates while short term rates were freely going up to 16%; fiscal policy continued with high deficits but responding to reduction of tax rates.

Since the nineties, the traditional macroeconomic discussion between Keynesians and monetarists was sided. Outright management of interest rates replaced the control of monetary aggregates. This change coincided with an era of exploding financial intermediation. Alan Greenspan put financial development and monitoring of interest rates at the center of the macroeconomic policy. Financial intermediation was supposed to be the centerpiece of globalization and growth; he also believed that excessive leverage was a problem reserved for imprudent developing economies, where financial crises were recurring with increasing frequency. Laissez Faire in banking was better -he thought- than prudential regulation. Greenspan believed bankers knew better the risks they took, and they were adequately autoregulating themselves. He acted as if he were not conscious that abundant implicit and explicit government guarantees made bankers and "shadow bankers" very prone to moral hazard and reckless behavior.

⁷ A change in the Corporate Income Tax to eliminate the deduction of interest payments is also advisable to encourage capitalization of corporations.

The first domestic problem occurred in 1998 with the LTCM bailout. The US financial system then continued to expand under the assumption that whatever the problem, the FED would come to the rescue of the whole system. The bailout of Bear Stern in March 2008 confirmed the case. But after failing to rescue Lehman Bros., the confidence on the FED sustaining the system collapsed. The panic was so deep that the Treasury and the FED hurriedly returned to a full bailout of the rest of the system, implicitly recognizing that letting Lehman collapse was a huge mistake.

The great financial crisis of 2008 "proved" that letting "too big to fail" institutions go bust cannot happen again. That avoiding a new financial crisis is an overriding objective for the Treasury and the FED. Since then, financial institutions felt even more supported to assume lending risks. The anticipated "FED put" became the support for overextended consumer and corporate lending, and for the financing of high risk carry trades of the shadow banking system⁸.

This dynamic explains why there is today a "financial dominance" over monetary and fiscal policies. The stability of the financial system has become a superior objective frequently conditioning the old-fashioned monetary and fiscal policy goals. The coronavirus Treasury and FED's policies have a high component of lending extended to large and highly leveraged companies, and medium and small firms that are naturally riskier. That is not the role of fiscal or monetary policy. Indeed, it should be the role of commercial banks to refinance and extend new credits to companies, while reserving to the FED the task of securing banks with ample liquidity to do so.

Why is it not happening that way? Because the fear to a new financial crisis coming after the coronavirus recession is high. Many banks and shadow banks are exposed to overcoming solvency problems. We are facing a preemptive fiscal and monetary policy that moves credit risks from banking and shadow banking institutions to the balance sheet of the Treasury and the FED. More bluntly, the government is preemptively socializing private risks assumed initially by lenders.

This state of affairs may seem a natural and unavoidable consequence of the 2008 crisis, but IT IS NOT. Despite hundreds of pages of intrusive Dodd-Frank legislation, the main issues were not addressed. Banks formerly with insignificant capitalization were allowed to operate with still low and insufficient capitalization. Banks could continue lending to shadow banks. Shadow banks were allowed to finance risky bets with short term borrowing from banks and repo markets while securing investors' daily redemptions. Consequently, regulated lenders were finally assuming the potential costs of illiquidity crisis and losses on risky trades made by shadow banks. If Dodd-Frank had prohibited this government guaranteed risk-taking, it would not be necessary that the FED created lending programs to prevent the potential bankruptcies of the shadow banking, extensible to regular banks.

⁸ The Shadow Banking System comprehends all financial intermediation that operates unregulated because they cannot receive regular deposits as banks do. The justification for not regulation is non-substantial as investors of mutual funds and hedge funds can recover their investments immediately at will, without penalty, as if it were a savings deposit. Also, all financial intermediation may freely borrow short term to assume long term risks, in most cases operating without minimum capital requirements. Their regulation should be comparable to the systemic risks they arise, and the implicit guarantees they receive.

Still, the failures of Dodd-Frank were in March 2020 an inevitable reality, and it could be argued that with the remaining vulnerabilities there is no better way than the preemptive bailouts of the Treasury and the FED. Is that right? NO, IT IS NOT. Preventive bailouts are not a contractual guarantee to overextended productive and financial borrowers. Indeed, financial difficulties arising from the coronavirus stoppage was not to be blamed on productive and financial capitalists. But it is not to be blamed on future taxpayers either! Moreover, not all companies of sectors seriously affected by the coronavirus crisis are facing the same survival problems. Those with insufficient capitalization are. The preexisting rules of the game are that overindebted or unlucky shareholders, if unable to refinance their debts, can protect their firms recurring to Chapter 11. Owners may finally lose ownership, but that should be the price to pay when the game of “capitalism without capital” is played and the unexpected happens.

A pragmatic argument is that bankruptcy procedures may be overwhelmed. First of all, it is the function and self-interest of lenders to refinance debts of illiquid debtors. If solvency problems arise, it is their function, and it is to their self-interest to work out solutions, privately or in courts. If bankruptcy and liquidation become unavoidable, they must absorb the losses.

When there is an upsurge in criminality, courts and jail capacity may be overstretched, but that is not an acceptable argument for impunity. In the same way, potentially overstretched bankruptcy courts are not a fair argument to eliminate or suspend essential rules to have a sound, non-adventurous capitalism. Wrong precedents generate wrong incentives. That was the case of the "FED put." It will be the case again if preemptive rescues continue and settle as an authoritative precedent.

A final argument is that, if not timely prevented, a full financial crisis may follow if solvency issues proliferate. THIS SPECULATION IS NOT TRUE EITHER. The US government can, and should, may clear that a "Lehman moment" will not be provoked again. That solvency issues of "too big to fail" entities will be addressed by supporting -and eventually intervening- institutions while proper recapitalization is secured. Transitory government capitalization of troubled entities will not be out of the table, but it will be considered only as an alternative of last resort. In any case, current owners should be the primary responders for losses while taxpayers will be the residual ones. Such communication should be enough to prevent contagious financial runs.

Criticism of the new lending programs of the FED abound. It is argued that those programs go beyond FED's proper functions and legal framework. It is also argued that government credit policy pertains to the fiscal realm, where previous political debate and authorization is needed. Finally, arguments expose the risk of losing FED's independence while assuming discretionary decisions. They are all important.

However, the arguments exposed in this paper have an overriding normative significance. Subsidized government lending is inappropriate, either sanctioned in the Government Budget or obscured in the FED accounts. It is wrong to avoid the intervention of bankruptcy courts, no matter avoidance occurs through Treasury's bailouts or FED's bailouts.

Preventing commercial credit functions from the FED helps to transparency. So, it may also help to reduce the magnitude of government lending. But it does not make current government-

subsidized credit programs good. And it does not make preventive rescues of the Treasury right either.

The way governments intervene in the onset, during, or in the aftermath of a systemic financial episode, is of the essence to set the implicit rules for future behavior of borrowers and lenders. If the Treasury and the FED action follow the current trend, the vulnerabilities of the financial system will accumulate. The financial dominance over macroeconomic policy will get chronic and pervasive. In particular, the use of interest rates will get further subordinated to growing financial and fiscal vulnerabilities. And the monetary policy will not be able to primarily attend its mission of achieving price stability and full employment. Before addressing this issue in the next section, let us precisely determine the primary changes needed in financial regulation.

The pillars for a sound financial system should be provided by a significant further capitalization of banks; by a complete prohibition to banks to lend to shadow banking institutions and vehicles, and by precise restrictions to shadow banking institutions and products. Regulation must be as simple as possible, eliminating the interpretative discretion of regulators. The equilibrium between regulation and government guarantees should be attained in each case at the lowest balanced level.

Banks should continue to be the centerpiece of the payment system. As such, their stability should be rock solid, and for that purpose, minimum capital requirements should be increased to a level of 20% of all assets. Lending capacity should be limited to 60% of assets. Loans could be extended to a maximum of 5 years. Lending or investing in shadow banks and their products should be prohibited. The remaining 20% of assets could be invested in short term Treasuries, an obligation that the FED could relieve when the monetary policy needs to support the economy through credit expansion. Banks will remain the only institutions offering cash and term deposits, that will be insured up to a maximum to be decided. Banks will also be the only institutions to be supported by the FED's functions of lender of last resort.

As regards to the shadow banking system, the objective should be to eliminate current features that characterize it as "shadow banking." This segment (from now on, the non-bank financial system) will be clearly differentiated as the only supplier of risky financial assets. As such, non-bank products will not guarantee investors the face value of their investments. In all cases, investors will bear the full risk of investments. For that purpose, all investments in non-bank instruments should be registered as shares with floating market valuations. Redemptions should require at least a month advanced notice and may carry penalties. Also, critical, neither non-bank institutions nor any of its investment products could borrow from any source.

With these limitations, the non-bank segment will not need the support of government guarantees, either explicit or implicit; and regulation could be narrowed to requirements of transparency and procedure that protect the uninformed investor.

Freeing monetary policy from the role of custodian of the financial system

Suggested financial policies are justified by the single objective of avoiding financial crisis while preventing the wrong incentives leading to a "capitalism without capital." The history of negative

consequences of recurring financial crisis avails the critical importance of this objective. There is, however, another significant justification: when financial regulation is lax, monetary policy has to balance the benefits of a restrictive stance aimed at controlling inflation, with the potential damage that higher interest rates may produce on a vulnerable financial system. Then monetary policy could be crippled in its primary role of controlling inflation and overheating.

There is an old principle of economic policy design: it is necessary to dispose of as many instruments as ultimate objectives exist. If proper financial regulation is not in place, monetary policy may not be able to attend macroeconomic and financial stability at the same time efficiently. The conflict may not be present in 2020. A loose monetary policy is used to support the financial system, and low-interest rates help avoid deflation and recover the economy from the Covid-19 stoppage.

But as soon as the economy recovers and inflation starts to pick-up, a conflict may surge for adopting a tighter monetary policy. That is, increases in interest rates may put a financial system that has not yet recovered from years of overexpansion and credit failures at risk. The trade-off could be even worse when the public debt is high and increases in interest rates contribute to increasing fiscal deficits.

So, monetary policy is not a sustainable substitute for proper financial crisis management in 2020; and immediate changes in financial regulation. There is an urgent need to free monetary policy from the hijacking imposed by a vulnerable financial system. It is necessary to end the dominance of the custodian's role of financial stability over monetary policy.

Monetary policy also needs to change.

Monetary policy today is scandalous to the principles of Milton Friedman. Monetary policy was supposed to control the quantity of money, expanding it at a pre-fixed non-discretionary rate necessary to facilitate growth with price stability. Friedman's rule indeed required that fiat money had a stable demand. The economic experience proved that a steady demand for money was not granted, particularly during episodes of a banking crisis. Expanding the money supply at a fixed, pre-determined rate proved inapplicable. Further, Central Banks couldn't anticipate the changes in the demand for money to permit Central Banks to issue money at a variable, discretionary rate coherent with price stability.

Central bankers never accepted the idea of castrating their discretion. They found it was easier and preferable to control interest rates than the total amount of money in the system. The price of money is the amount of goods it is possible to buy with it. But it is also true that the interest rates work as the opportunity cost of holding idle money (cash or non-interest-bearing deposits). Therefore, the interest rate may serve as a proxy instrument to influence the demand for money. But then the difficulties in estimating the quantity of money demanded, transmuted into the problem of determining the interest rate that will produce an amount of money consistent with the desired inflation.

The only realistic solution for an equally unsolvable problem was the inflation targetting approach that consists of resigning the idea of predicting the demand for money or the interest

rate that produces the equilibrium amount of money. The new guideline for a policy is a reaction function that changes the interest rate fixed by the Central Bank according to the actual behavior of the economy. If current inflation exceeded the desired inflation rate and the economy was overheating, then the Central Bank would increase the interest rate, trying to cool down inflation and economic activity. Conversely, if the inflation rate were below its target and economic activity was below its potential, the Central Bank would reduce interest rates.

Since inflation targetting became a preferred approach, control of interest rates has been associated with it. But the concept of inflation targetting is also accessible through controlling the quantity of money in the system. It will suffice in this case that the monetary base is increased when inflation is below its target level, and economic activity is below its potential. Conversely, the monetary base should be reduced when current inflation exceeded the desired increase, and the economy is overheating. At what speed should interest rates move is as uncertain as at what speed should the quantity of base money be altered. Central Bank's learning by doing is unavoidable in both alternatives, and mistakes are equally possible.

What is the difference that may have made control of interest rates more attractive to central bankers? Most likely, the reason is that interest rates would fluctuate more widely when FED changes the quantity of money, and interest rates react freely. On the contrary, if the Central Bank control interest rates, that does not happen, interest rates would be more stable under Central Bank direct control.

The preference of the Central Bank for stable interest rates is coherent with the interests of the financial system it monitors. Fluctuating interest rates add risks to lending and investing. Regular spreads obtained by borrowing short and lending long may evaporate if an unexpected increase in short term rates occurs when the Central Bank tightens the supply of base money to cool down an overheated economy. Profits become more challenging to obtain, and risks are higher when interest rates fluctuate. The interest of lenders is to minimize their capital and to face a more stable and predictable interest rate environment to increase profits while controlling risks. The financial system demand for "forward guidance" is chronic, and the Central Bank tends to accommodate that demand. The function of custodian of the stability of lenders is more comfortable if banks are profitable. Stable interest rates become even more critical when the financial system is not sufficiently capitalized.

Control and smooth changes in interest rates have been the dominating feature of monetary policy during decades. Monetary policy was different only between 1979 and 1982 under Paul Volker's chairmanship. In that period, the monetary policy prioritized the control of the monetary base while allowing short term interest rates to increase freely up to 16%. An inflation rate that had escaped control to reach 13% was sharply reduced and stabilized to a much lower level. However, once inflation was controlled and stabilized, the preference for using short-term interest rates as the control variable returned and remained so until 2010.

While searching for a rule that limited FED's discretion in controlling the short-term interest rate, John Taylor proposed a formula for guiding FED's decisions on short-term rates. However, Taylor's proposal failed to avoid judgment and choice of the monetary authorities, as critical

elements of his rule (the neutral interest rate, the potential rate of growth, and the natural rate of unemployment) were not objective parameters free of controversial opinion.

A significant move towards interest rate intervention occurred since 2010. The FED started then its quantitative easing programs (QEs), an apparent step towards control of monetary aggregates. The new policy increased the monetary base, but it didn't mean abandoning control of interest rates. On the contrary, one primary objective of quantitative easing was to extend the influence of the FED on medium- and long-term interest rates, on the expectation that aggregate demand would better respond to a reduction of the overall structure of interest rates. For that purpose, the FED heavily bought medium- and long-term Treasuries to reduce its market return. The new bond buying programs implied a first step towards a complete interest rate intervention, affecting the relative structure of short- and long-term rates.

The intention to continue on this interventionist path is well alive. The minutes of the May 2020 FED meeting record the following: "Several participants remarked that a program of ongoing Treasury securities purchases could be used in the future to keep longer-term yields low. A few participants also noted that the balance sheet could be used to reinforce the Committee's forward guidance regarding the path of the federal funds rate through Federal Reserve purchases of Treasury securities on a scale necessary to keep Treasury yields at short- to medium-term maturities capped at specified levels for a period of time."

The interventionist bias of the FED, that is naturally incoherent with the principles of a free market economy, keeps growing. Since 2010 it started to manage medium- and long-term interest rates. Since March 2020, it started to act as a commercial bank, lending, and assuming credit risk. Lately, it is considering assuming direct control of the whole structure of interest rates. The interests and vulnerabilities of the financial system are increasingly conditioning a FED interventionist path.

Myths around low-interest rates

Moving away from low and stable interest rates seems to be against conventional wisdom. It may be argued that low-interest rates guarantee financial stability, abundant credit, and economic growth. The alternative vision is that low-interest rates forced by the Fed's actions are not reasonable by themselves. They may be suitable only when they are the result of free markets in the presence of an independent monetary policy whose primary objective is achieving price stability and potential growth over the medium and long term. Long term interest rates should be market-determined according to the natural forces of demand and supply of capital and inflationary expectations. Short term interest may be additionally but transitorily influenced by the inflation stabilizing actions of monetary policy.

Are artificially low-interest rates good for increasing aggregate demand? The experience of the last decade in developing economies put a big question mark on this common belief. Japan and the Euro area have been unsuccessful in generating nominal income growth with a deliberate policy of meager and even negative interest rates. Also, the aggressive experience with QE's in the USA did not produce a significant and fast increase in nominal income growth during the last decade.

Lower lending rates may indeed create more incentives to borrow and spend. But this is not granted. New lending may be used to buy shares back instead of financing new productive investment. Furthermore, it is also true that lower returns on savings would reduce the income of savers, forcing them to spend less. This negative impact on the demand from savers could be aggravated on the expectation that their social security savings will be insufficient at retirement. Both opposite effects on borrowers and savers are present when interest rates trend lower. And there is no way to know ex-ante if one of them, and which one, will prevail.

Portfolio reallocation adds to the uncertain effects of lower interest rates on aggregate demand. When interest rates are reduced and get close to zero, savers have less incentive to put their savings at risk. They prefer to allocate a more significant portion of their portfolio to cash. When this is the case, the amount of loanable funds is reduced, generating a negative net effect on available credit and aggregate demand.

It may be the case then that the increase in the money base associated with a QE program may not generate a net increase in aggregate demand. The increased demand for monetary base at least partially sterilizes the impact of the rise in the monetary base.

Unfortunately, there is no econometric method that could solve ex-ante the uncertainty over the impact of interest rate reductions on aggregate demand. We can only judge them ex-post by its results. The experiences of Japan, the Euro area, and the FED during the last decade do not show an evident success in increasing the growth rate of nominal GDP. Japan and the Euro area have also been experiencing with negative rates, with no positive results at sight.

Hidden costs of manipulating long-term interest rates

The downward manipulation of long-term rates is bad policy per se, beyond its potential ineffectiveness as a short-term aggregate demand instrument.

First, at the top of its problems is the intergenerational income redistribution against the older generation that lives from fixed income flows; and against the adult generation that is accumulating retirement savings in pension funds.

In the process of declining long-term rates, the (one-shot) capital gains made on long-term bonds may compensate for the income loss. But this compensation will be lost in the future under any of the possible circumstances. If long term rates rise back to normal levels, the original capital gain will reverse into a loss, and the decline of interest income in the inter-period will have no compensation. Damages could be higher if inflation is significant in the inter-period. They could be even worse if inflation follows while interest rates remain capped at low levels.

Second, as any wrong economic policy, manipulation of long-term interest rates generates strong vested interests that oppose its reversal. Those that initially benefited from capital gains on long term bonds will not want to lose their profits. Institutional savers forced to invest in long term bonds would demand compensation if, by regulation, they were not able to hedge the losses of a reversal of long-term rates. This argument will be even more forceful if the solvency of regulated institutions was at stake.

Investors and lenders would argue that they managed their business according to the forward guidance of the FED. That the solvency problems they may have got into are originated in regulations and equivocal forward guidance. Consequently, any FED commitment to maintaining interest rates low becomes a road with no or very costly return. A promise to cap long term rates is particularly vulnerable to this argument. It is very worrying that members of the FED board are looking forward to this kind of policy.

Summary of conclusions and recommendations.

A financial reform that addresses the significant issues of not sufficient capitalization and wrong incentives to excessive lending and risk-taking in the financial system, is an unavoidable prerequisite. It avoids incentives for capitalism without capital. It is justified by avoiding recurrent financial crises that promote social and political reactions against the capitalist system. But it would also be warranted for the benefit of freeing monetary policy from the burden of putting financial stability first in detriment of the objectives of macroeconomic stability.

In the immediate future, the Treasury and FED's policies should avoid consolidating wrong precedents for the working of a limited liability capitalism. Government bailouts of productive and financial shareholders should be stopped as soon as possible. Preemptive bailouts exercised through the new commercial lending activities of the Treasury and the FED, should also end. The workings of the bankruptcy courts, which include the protection of Chapter 11, are the right system for providing proper incentives.

As regards monetary policy, the FED should immediately reverse the advance towards controlling long term interest rates. Quantitative easing should be exercised only through negotiating short term Treasuries. Fixing of interest rates should be limited to the Federal Funds market. As a consequence, the Treasury should issue medium- and long-term debt to finance coming deficits without the distorting factor of the FED's intervention in those markets. The US Treasury and US Congress should take notice of the genuine market reactions to their policies.

As soon as the suggested financial reform is active, the FED will be able to move to control the quantity of money rather than the level of the short-term interest rate. Whatever the aggregate or aggregates the FED chooses as instrumental, a fixed pre-determined rate may not be operational, as previously argued. It will be significant progress to move to control the quantity of money based on the discretionary principles of inflation targetting. The change will allow the FED to concentrate on its guardian of monetary stability without distorting the critical price of credit and savings. The eventual higher volatility of short-term rates will discourage short term financial arbitrage, pushing the financial system instead to focus on long term financing without the implicit subsidies of government guarantees.

Final remarks on the relevance of the issues involved

What is ahead? Chronic deflation or rampant inflation? It very much depends on what monetary and fiscal policies do next. But if the Treasury and the FED pretend to solve current problems

with preemptive bailouts and accommodative control of long term interest rates, they will be combating fire with gasoline. The incentives for ever-growing indebtedness and under capitalization will work towards increasing the financial system vulnerabilities and larger fiscal deficits.

The FED then will be trapped at keeping short- and long-term rates at a minimum, and fiscal deficits will be the only way to rescue the economy from the liquidity trap. If interest rates were necessary as inflation starts to pick up, the menace of a financial crisis might be sufficient argument to lobby against it. If current deficits keep raising the public debt, any increase of interest rates would rapidly increase the debt service of the Treasury and lay bare the long-term insolvency of the public finances. The interest of corporate borrowers, financial shareholders, and politicians will all be aligned to prefer inflation that liquifies private and public indebtedness.

Consequently, the current trend of policies will trap monetary and fiscal policy in a dead-end road, ending with inflation as the only way back. The interests of crony capitalism without capital will succeed and settle. But then a higher risk appears on the horizon. When the capitalist system relies on government protection and socialization of private bankruptcies, the lousy example spreads, and socialist ideas flourish with arguments in favor of the democratization of government giveaways. Socialism is a natural reaction to crony capitalism.

The issues dealt in this paper are not limited to a technical discussion about how the FED should conduct its policies. Neither is it an academic discussion between monetarists and Keynesians. What is at stake is the future of a competitive capitalist system in a democracy.

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Monetary aggregates USA 2007-2019

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Acum Grwth
Currency in circulation	817	886	921	979	1070	1160	1232	1333	1417	1505	1611	1710	1799	
Annual change %		8,4	4,0	6,3	9,3	8,4	6,2	8,2	6,3	6,2	7,0	6,1	5,2	120,2
M1	1367	1630	1709	1850	2199	2460	2668	2934	3177	3352	3581	3719	3947	
Annual change %		19,2	4,8	8,3	18,9	11,9	8,5	10,0	8,3	5,5	6,8	3,9	6,1	188,7
M2	7468	8216	8469	8810	9639	10154	11026	11693	12356	13203	13830	14412	15328	
Annual change %		10,0	3,1	4,0	9,4	5,3	8,6	6,0	5,7	6,9	4,7	4,2	6,4	105,2
Monetary Base	862	1746	2033	2089	2689	2797	3788	4079	3857	3663	3892	3417	3514	
Annual change %		102,6	16,4	2,8	28,7	4,0	35,4	7,7	-5,4	-5,0	6,3	-12,2	2,8	307,7
FED's Total Assets														
Annual change %	922	2239	2234	2421	2926	2907	4023	4498	4486	4451	4449	4076	4166	
		142,8	-0,2	8,4	20,9	-0,6	38,4	11,8	-0,3	-0,8	0,0	-8,4	2,2	351,8
Nominal GDP	14681	14559	14628	15241	15796	16358	17083	17850	18351	18991	19918	20898	21729	
Annual change %		-0,8	0,5	4,2	3,6	3,6	4,4	4,5	2,8	3,5	4,9	4,9	4,0	48,0