

Performativity, marketization and market-based central banking

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Abstract

Central bankers have become technocratic authorities with an active role in macroeconomic management. This active role was due to the transition to inflation-targeting, in which prevails the 'expectational governance', the central banks having as their ultimate goal the governance of the future through a symbolic-discursive role. This governance of the future, however, is dependent on financial system. This system exerts a structural power, given its importance in monetary governance processes, which leads to an infrastructural entanglement between the financial sector and the central bank. The latter governs through financial markets, so it is motivated to support structured products markets and other financial practices that facilitate the smooth transmission of liquidity, necessary for the easy implementation of monetary policy. But post-crisis, how liquidity has dried up, there was a crisis of communication, which forced the Federal Reserve and the ECB to resort to an active "balance sheet policy", necessary to preserve securitization processes, ABS and MBS markets, but also market liquidity. In this way, post-crisis, liquidity management becomes more relevant to monetary governability than inflation targeting.

Keywords

Central Banking; Market-based Finance; Liquidity; Power; Structured Assets; Repo.

Introduction

The global financial crisis has highlighted the new trend of market-based finance. This new financial reality is not exclusively the result of innovations in the private sphere, but is also linked to monetary governability, and this governability "(...) generally serves as a grid for the analysis of the power relations, be they micro powers or micro relations of power, concerned at a level of governmental policies" (Aguero 2010).

In this context, the financial sector exerts a structural power (Culpepper 2015), which leads us to the hybrid analysis of the new financial structure, in which prevails the deep integration of the financial sector with central banks, the latter becoming market-based institutions. There is an infrastructural entanglement between these two entities, given that the central bank work through financial markets (Yellen 2014), which means that preservation and even the creation of a liquid financial structure is a prerequisite for governability. Equally, behind this infrastructural entanglement lies the financialization itself, which is a "pattern of accumulation in which profit making occurs increasingly through financial channels rather than through trade and commodity production" (Krippner 2005), financialization facilitated by the marketization of the balance sheets of banking institutions.

Starting from these, the involvement of central banks in enforcing securitisation processes is well known, which have been the basis for the emergence of structured assets that play the role of collateral in debt relationships. That is why it has been stated that the Federal Reserve's policies are geared towards "the well-being and accommodation of finance" (Jacobs & King 2016: 15). But this Anglo-American financial model has also extended to European Central Bank officials through primary training from certain academic institutions (Lebaron 2013), what strengthened market-based finance. This financialization managed to transform the liquidity in the markets (Chiapello 2017), which forced a rethink of monetary policy.

Since the 1980s, central banks have gained a visible role in macroeconomic management, becoming technocratic authorities. They thus began to rely on future-oriented governance techniques, specifically "politics of expectations" (Beckert 2016: 80), replacing hydraulic policies, in which the emphasis was on the trade-off between inflation and unemployment. In this way, the implementation of monetary policy was no longer achieved through monetary aggregates, but by modeling expectations using a discursive frame. But this governance of the future through expectations worked until the beginning of the financial crisis, at which point we witnessed a crisis of communication. This was when central banks, notably the Federal Reserve and the ECB, made the decision to use active 'balance sheets' policies to maintain governability. Starting from these, the involvement of central banks in enforcing securitisation processes is well known, which have been the basis for the emergence of structured assets that play the role of collateral in debt relationships, which confirms the existence of an infrastructural entanglement between the two entities (Braun 2015). Thus, the transition to a "balance sheet policy" was necessary to preserve the institutional context and certain mechanisms on which financial capitalism is based, that is why both the Federal Reserve and the European Central Bank have strongly intervened during the great financial crisis in the markets of asset-backed securities and mortgage-backed assets, which play an essential role in the processes of liquidity transmission and in private collateral production. Equally, even the transition to a floor operating monetary system confirms this infrastructural entanglement, this operating system allowing a central bank to assist financial markets with greater ease. As a methodology, this paper will use the process-tracing approach, which is "a procedure designed to identify processes linking a set of initial conditions to a particular outcome" (Vennesson 2010).

This paper is organized as follows. In the first section we will analyze the transformations of the traditional business model of the banking system, these transformations being due to the processes of marketization and implicitly securitisation. The second section will aim at analyzing the active involvement of central banks in securitisation and financialization processes, namely how central banks were 'institutional enablers' of these practices. In the third section we will discuss in detail the performative, future-oriented role that a central bank plays with the advent of inflation targeting. The fourth and fifth sections discuss the crisis of discursiveness and the active use of the balance sheet to improve the governance capabilities of central banks (Sassen 2006). The last section concludes.

Marketization and integration

The banking transformations that we will discuss in this section are supposed to have had a root cause, although it is not the only one, namely the emergence of liability management (LM) (Beck & Knafo 2020), through which banks became interconnected with money markets. This management was a consequence of the funding pressures that commercial banks encountered

with the advent of Regulation Q and implicitly of the advent of Money Market Mutual Funds (MMMFs). These regulations made commercial banks no longer able to rely on customer deposits as a source of funding, with institutional clients being incentivised to invest in MMFs as they offered a higher interest rate, and Regulation Q forbade commercial banks to change this rate at will. As this way of funding has been considerably reduced, commercial banks have started to use money markets for funding (Beck 2021; Konings 2007), these being the wholesale markets where very short-term credit instruments (IOUs) are traded. Accessing money markets has enabled commercial banks to obtain funding through very-short and short term instruments, such as certificates of deposit (CD). This liability management not only allowed banks to finance their activity, but also to increase leverage (Dutta 2020), to extend credit, and, implicitly, to actively trade securities in money markets. But this leverage and the new trades involved higher risk, all the more so as banks began to open up ever wider positions. And an organic way in which they managed to reduce the risk assumed was marketization, which gave rise to securitisation processes, which is the process by which non-tradable and illiquid assets, such as mortgages, are transformed into tradable securities.

In recent decades the marketization of the balance sheet of commercial banks has prevailed, which "(...) entails that banks finance economic activity through market intermediation rather than through long-term personalized loans they hold on their books and which they grant and monitor through a dense network of relationships linking them to other economic actors" (Godechot 2016). This marketization underlines the fact that the financial system has become a market-based one. Equally, marketization demonstrates that we can no longer discuss a dichotomous relationship between banks and markets (Zysman 1983). In other words, the financial system is market-based, as it was stated, but it is deeply integrated with the banking system, that is why we are witnessing a "functional integration of the banking system with capital markets" (Hockett & Omarova 2017). In this way, banks remain relevant, but their business model undergoes changes, these institutions becoming active in non-core activities, such as securitisation underwriting, derivatives transactions or proprietary trading. Which means that banking activity has increased in proportion to financialization (Christophers 2015), expansion of financial social debt relationships leading to an increase in banking services. But banks are also involved in off-balance-sheet activities to skirt capital requirements and to expand their assets under management, precisely the evolution of these vehicles leading to a decrease in liquidity from the regulated balance sheets of banks (Loutskina 2011). That is why we have also witnessed a new phenomenon, "noninterest income makes up a significant portion of most banks' revenue. As of the first quarter of 2018, noninterest income was a full 34 percent of total bank operating revenue" (Haubrich & Young 2019). Therefore, this evolution to a securitized banking shows that "(...) the link between bank credit and broad money has substantially weakened after the mid-1990s because of the changing nature of the credit creation process where nonbanks' role in financial intermediation has greatly increased" (Ozgur & Erturk 2008).

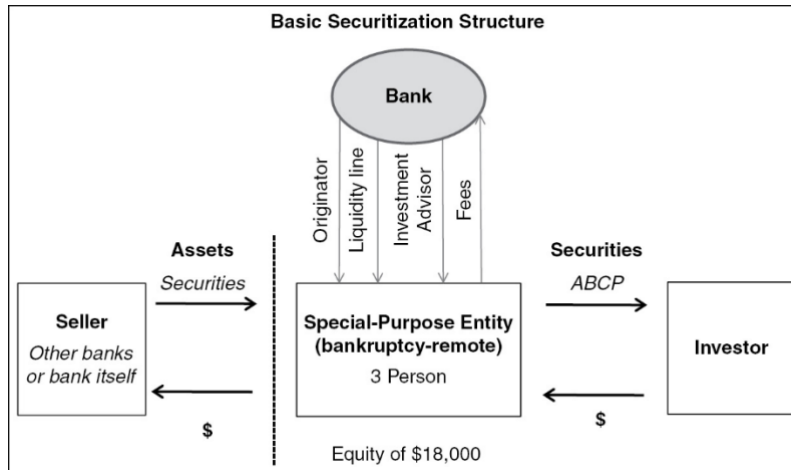
The marketization of both sides of banks' balance sheets underlines the fact that banks are much more actively involved in intermediating loans than in initiating and maintaining them on-balance sheet, "marketization thus combines securitisation—the transformation of financial assets, especially loans, into tradable securities—and growth of trading volumes for each security" (Godechot 2016). On the asset side or in off-balance-sheet vehicles, commercial banks reduced exposure to illiquid mortgages but increased exposure to long-term mortgage-backed assets and asset-backed securities (Pozsar et al. 2010). On the liability side we find wholesale collateralized funding through short-term instruments such as repo transactions. Repo ("repurchase agreement") is a key mechanism for financialized capitalism, a short-term

secured loan whereby financial institutions could lever up and central banks could implement their monetary policy.

Which means that we have witnessed a transition from a deposit-based model to a wholesale funding model. Banks have become active in debt finance, all their actions “(...) in the process of making money have historically come to reshape the latter as liquidity and, in so doing, they have redefined the very 'constitutive rules' (...) of money-making” (Sgambati 2016). This involvement is inherently linked to the transition to non-core activities, which led to a rentier behavior, in which “(...) significant portion of credit is created to finance purchases of financial assets” (Dow 2007). Thus, marketization is an organic consequence of the diversification of bank income sources, but also a way to increase leverage, which helps the new money-making process. Thus, banks have the opportunity to increase leverage by issuing new loans that are to be securitized, they are able to participate in the inflation of the price of some assets, such as the housing sector with the growth of the practice of mortgage securitisation, but also in the creation of new markets. In other words, banks increase their leverage by issuing new loans and engaging in securitisation processes.

As such, marketization leads us to the securitisation process, which represents “a fundamental shift in how finance is done” (Davis & Kim 2015). Securitisation leads to the risk, liquidity and maturity transformations. But these transformations are no longer carried out intra-institutional, but inter-institutional, being a divided process “into several discrete steps” (Helgadottir 2016). The new banking model, deeply integrated with financial markets, is linked to collateral and implicitly repo transactions, securitisation processes helping to create collateral usable in repo transactions, collateral being the “financial lubricant” (Singh 2016). Thus, the structured assets resulting from these securitisation processes, such as residential mortgage-backed assets (RMBS) or collateralized debt obligations (CDOs) could be used by banks to diversify sources of income, but also to increase leverage, given their use as collateral in repo transactions. But in the case of CDOs, it must be specified that they were structured assets divided by tranches, each such tranche having a distinct risk, the lowest default risk having the AAA tranche. Thus, after this structuring process, these tranches became collateral in repo transactions, as discussed, allowing private institutions that held such structured assets to borrow up to 98.4 cents per dollar (Geanakoplos 2010).

But the development of these structured markets it could not have taken place without the active participation of hedge funds, “the rapid growth in CDOs from 2002 onwards bears a close correlation with the growth of hedge funds assets” (Lysandrou 2012). Which means that securitisation processes would not have had the scale that they had only through the banking system. Thus it can be said that financial innovations could not have occurred without a regulated interaction between the central bank and the traditional banking system, especially when we know that few securitisation processes take place without a direct participation of the traditional banking system (Cetorelli & Perisitiani 2012). Thus, banks became important for these securitisation processes, they were “(...) providers of underwriting services in securitisation (...) This is likely the result of their overall expertise—together with that of investment banks—in fulfilling this important role in bond and equity financing, arranging, and selling the offerings for issuing firms” (Cetorelli & Perisitiani 2012). But banks also have a role in creating and sponsoring off-balance-sheet vehicles through credit lines, but also in issuing loans that are to be securitized. The banks earned an income, i.e. fees, from sponsoring a vehicle. See the following figure:



Source: Thiemann, 2018

In this figure, banks offered direct support to a special purpose entity (SPE), in the form of credit lines, which gives this entity or vehicle a rating close to AAA. To support these securitisation processes, that vehicle issued asset-backed commercial paper (ABCP), a short-term funding instrument. At the same time, the sponsor bank or other banking entities could sell assets to these vehicles in exchange for a fee. This simplistic representation emphasizes the diversification of the sources of income of a bank in the new securitized banking system. For example, between 2003 and 2008 alone, fees from the mortgages sold that were to be securitized totaled \$2 trillion (Gapper 2008).

'Institutional enablers' and the central banking role in securitisation

Central banks played an essential role in the emergence of private money production and securitisation processes, the Federal Reserve being considered the "institutional enabler" (Jacobs & King 2016: 9) of this deep integration between capital markets and the banking system. And this integration has strengthened the trend of financialization, this phenomenon can be defined as "the increasing importance of financial markets, financial motives, financial institutions, and financial elites in the operation of the economy and its governing institutions, both at the national and international levels" (Godechot 2016). The Federal Reserve and the European Central Bank supported these securitisation markets because they ensured the creation of liquidity and private collateral, and made monetary governance more efficient. That is why there has been a symbolic relationship between financialization and the growth of the power of central bankers in the United States (Krippner 2011).

In the case of the European Central Bank, financialization is only the unanticipated result of the attempt to initiate a liquid financial structure, in the form of unified repo markets, through which to strengthen monetary governability. But this process of financial integration did not take place at first through securitisation processes, but by encouraging the cross-border use of collateral (Gabor & Ban 2016). This is why, "in its early days, the ECB actively shaped the creation of shadow euros, that is, of shadow money created against the euro-area securities collateral" (Braun & Gabor 2020). Thus, it created a general collateral portfolio (GC) in which all euro area government bonds were traded under the same liquidity or risk conditions, although, in reality, the ECB required a distinct haircut depending on the market valuation of the bonds (ECB 2000: 43). Thus, ECB pursued a repo-driven integration. And this aspect was essential for the

European Central Bank, any major differences between the yield of these bonds affecting the transmission of monetary policy, given the difference in costs and risk perception. This was the moment when “it decided that it would organize the implementation of monetary policy via shadow euros that treated all euro area government bonds as equal collateral” (Braun & Gabor 2020), monetary policy implementation being carried out through repo transactions. Thus, it used a public instrument, government bonds, to expand private debt relationships, financial entities being stimulated to use these bonds as collateral in private transactions. This is the moment when ECB was the catalyst for the development of market-based finance in Europe.

But this solution had to be accompanied by an increase in securitisation processes and capital markets, necessary to complement bank lending. Securitisation is a funding tool for banks and NFCs. These securitisation processes could alleviate the pressure on bank lending due to the reduction of liquidity constraints, while increasing the access of several financial entities to market-based lending, due to the reduction of market risks. At the same time, the transformation of spatially-fixed assets, such as mortgages, into short-term tradable liquid assets, helps institutional investors, who are net buyers of such assets. Increasing market liquidity would help in the process of expanding capital markets, with real benefits on monetary governability. Which means that the ECB has identified the benefits of securitisation, which is why, “the ECB has helped establish, expand, protect and revive repo and securitisation markets, which serve as infrastructure for the implementation and transmission of monetary policy” (Braun 2018).

In the case of the Federal Reserve, there was direct involvement in these securitisation processes, with the fear that government bonds could not support the growing collateral demand. In other words, the reason why the Fed got involved in the development of securitisation was the decrease of Treasury securities that could have been used as collateral, the preferred solution being the creation of private collateral. Therefore, the Fed aimed directly to use market practices to overcome this potential situation, and the solution came with the proposal “(...) to use shadow money creation in order to create private substitutes for US Treasuries” (Braun & Gabor 2020), which also facilitated the emergence of the aforementioned instruments or structured assets, such as residential mortgage-backed assets.

In the case of the Federal Reserve, the discussion needs to be extended. Securitisation processes could not result without the creation of secondary mortgage markets, these markets being the result of the intervention of government-erected institutions. These interventions led to the emergence of Fannie Mae and Freddie Mac, so it was stated that in the mortgage market we were talking about “the visible hand of the government” (Immergluck 2004). Thus, Fannie Mae and Freddie Mac were helping to increase liquidity in the mortgage markets, given that “they purchase mortgages that meet certain standards from banks and other originators, pool those loans into mortgage-backed securities that they guarantee against losses from defaults on the underlying mortgages, and sell the securities to investors—a process referred to as securitisation” (CBO 2010). Freddie Mac was the very first institution to issue a mortgage-backed asset, back in 1983. And these secondary markets are essential because “(...) channels funds to borrowers by facilitating the resale of mortgages and mortgage-backed assets (MBSs)” (CBO 2010). In this way, Fannie Mae and Freddie Mac indirectly helped to globalize and financialize the mortgage markets, “it is the state that re-regulated the mortgage market to enable growth: the US government was actively involved in making the trade in residential mortgage-backed securities possible, in de-linking investment from place, and in facilitating liquidity/tradability” (Aalbers 2009), which means that these markets have become a global phenomenon, in which there is a risk shift from mortgage markets to financial markets (Aalbers 2008). And it was precisely the securitisation processes that led to the financialization

of the mortgage markets, as the structured assets resulting from this process began to be traded on the financial markets.

The performativity of future-oriented monetary policy

In recent decades, there has been a paradigmatic shift in the implementation of monetary policy, with central banks becoming *performative* entities that govern through expectations. Performativity refers to “being ‘able’ or ‘unable’ to transform the world” (McKenzie et al. 2007: 2) through theory, concepts and communication. But the history of central bank performativity did not emerge immediately after the disappearance of the Bretton Woods, there being a period of time dominated by monetarist thinking. Such thinking could be found at Switzerland National Bank (SNB), which made the targeting of monetary aggregates a source of influence of the Central Bank (Wansleben 2018; Friedman 2002), SNB being also among the first central banks to orient fiscal policy towards monetarist objectives (Wansleben 2018). This monetarist thinking was inspired by the Federal Reserve, which approached a monetarist experiment before making the transition to inflation-targeting. The inflation-targeting policy is based on “new neoclassical synthesis”, where central bank policy implementation is modeled by the Taylor Rule. This transition began in the 1990s. In this monetarist age, countercyclicity was ensured by the lack of transparency, more precisely, by the inability of economic agents to identify patterns based on the neutrality of money. Thus, the effectiveness of these monetarist policies was based on “(...) the inability of private agents to recognize systematic patterns in monetary and fiscal policy” (Lucas & Sargent 1979:58, qtd. in Braun 2017).

But the transition to ‘financialized capitalism’ made the targeting of monetary aggregates, which were the prerogative of a monetarist culture, to be abandoned in favor of money and financial markets, these being used as mechanisms by which monetary governability is ensured, in which the main objective became the better steering of short-term interest rates. Thus, the transition to inflation targeting took place, which is based on a performative function of the central bank, in which the activity of these market-based institutions can be seen “as an example of the present use of the future” (Esposito 2018), the role being the performative coordination of expectations. Central banks have thus become sources of logistical power (Joyce & Mukerji 2017). But this transition brought with it another innovation, namely the rise of central bank operational transparency, in which the central bank sought to give predictability to monetary policy actions, and, implicitly, to *narrativize* its activity, “(...) which, in turn, reduces the uncertainty in financial markets” (de Haan et al. 2007). Thus, the Fed and the ECB began to use financialization in their macroeconomic policy-making. As financialization grew in importance, central bankers began to perceive the money and financial markets as governable entities, dependent on expectations. Money markets are considered to be optimal monetary policy mechanisms due to their ability to inform central bankers about market expectations, therefore “are useful to central banks” (CGFS 1999). This was the point at which central bankers began actively communicating their intentions, which forced these markets to adjust to the objectives pursued by the central bank. In this way, the Fed and the ECB were able to performatively govern through expectations, which gave rise to ‘expectational governance’. In this direction, as the short-term interest rate has a high impact on wholesale borrowing costs and implicitly on liquidity access, this confirms the infrastructural entanglement between the financial sector and the central bank. But precisely setting a short-term interest rate confirms the future-oriented policy of the central banks, given that it can produce real effects today only if the expectations of the financial sector regarding its modification are positive. That is why it has been stated that the management of economic expectations plays a key role in the

implementation of monetary policy (Blinder et al. 2008). Starting from this statement, we understand that a central bank has a performative capacity only as long as it has credibility and its actions are in line with its own discourse.

This governance emphasizes that the central bank can control policy by directly influencing economic agents' expectations regarding inflation rate, stock market prices and so on (Beckert 2016) through a symbolic-communicative activity. In this way, central banks no longer base their policies on the rate of inflation per se, for example, but above all on expectations about it. Hence the statement that "expectations matter so much that a central bank may be able to help make policy more effective by working to shape those expectations" (Bernanke 2013). But this performative role gave a central bank the ability to narrativize the future and thus influence it. It has the performative ability to use its own imaginative mechanisms for direct purpose "(...) to produce decidability and actionability" (Power 2007: 5). In this way, narrativization aims to influence economic agents to adjust their financial behavior to suit the expectations created by the central bank. Through this narrativization, it is considered that a central bank can maintain stability in all those financial segments (i.e. money markets) or macroeconomic variables (interest rate) upon which the financialization resides. Thus, the central bank has the ability to control the valuation of financial assets, to help the optimal functioning of market liquidity, so that market-based financial structures become the main tools of monetary policy in the era of financialized capitalism. In this way, through the symbolic-communicative activity and implicitly narrativization, the central bank tends to create certain future-oriented expectations in which uncertainty, as a fundamental entity, becomes contingent, and the future "look like the present" (Martin 2007: 4). In other words, narrativization aims to coordinate the economic agents' expectations through a story-telling process, in which there is an imaginative function. That is why central bankers "are making the economy (...) as a communicative field" (Holmes 2014 qtd. in Braun 2015). Central bankers use narrativization and formalization to give a calculable meaning to uncertainty, by imagining potential situations that can be quantified and calculated, but also by formalizing some economic variables. Central bankers therefore base their policy-making on assuming the possibility of mathematically calculating the natural interest rate, the potential output, necessary for determining the mathematical models. It is precisely this imaginative character that gives central bankers the ability to introduce technologies necessary to intervene on these imagined situations, hence the statement that formalization "(...) of rules, policies, and procedures helps to ensure coordination and can therefore increase global integration" (Gibson & al. 2019). The formalization was achieved by introducing actualized computing devices through which the information is simplified and the future is narrated, such as indicators and graphs, which tell a story about the potential evolution of an economy, which could ensure a more efficient coordination process (Braun 2015: 371). But these computing devices had to be integrated into certain models in order to obtain a future-oriented significance, to become evaluation schemes. Thus, this coordination of expectations was necessary in the context in which there is no full knowledge of the fundamental structures of the economy (Pigeon 2011).

Thus, through narrativization and implicitly modeling, a central bank obtains the ability to exercise authority over expectations, to "govern the future" (Braun 2015). Modeling is important because it will be the basis for optimizing the behavior of economic agents, hence the statement that "the private sector could in principle not be modeled without specifying the monetary policy rule" (Poole & Rasche 2000).

This means that uncertainty cannot be avoided without narrative. It is precisely by imagining potential situations and offering formalized solutions that a central bank can become credible,

making a direct commitment to macroeconomic stability. And it is precisely this imaginative or narrative capacity of the central bank that makes economic agents rely on the fundamental analyzes of this institution, they consider that the central bank has the performative capacity to bring the future to the present, but also to coordinate expectations, which gives it credibility and allows it to achieve its goals, such as low inflation. This rate becomes a communicative problem, there is an intertemporal commitment to keep the inflation rate in line with existing models. This commitment led to a joint relationship, i.e. infrastructural entanglement, between the central bank and the financial system, in which there is a consensus policy between the two entities, with the Federal Reserve “following the market” (Blinder 2004).

But the drying up of post-crisis market liquidity led to a “crisis of discursive central banking” (Gabor & Jessop 2015), which forced the Federal Reserve to resort to a “balance sheet policy” (Borio & Zabai 2016) and a long-term interest rate focus, as we will discuss in the next two sections, to preserve the structured assets markets.

From performativity to actionability

In the next two sections will be analyzed the need for the interventions of the Federal Reserve and the European Central Bank to preserve the securitisation processes, the processes for which the two institutions were 'institutional enablers'. These interventions underline that the Fed and the ECB have become market-based institutions, being involved in the development of financial processes. Thus, starting from the active nature of financial and banking institutions, the Federal Reserve and the European Central Bank they had to implement other monetary instruments, giving up relying strictly on the symbolic-communicative dimension. In other words, these financial practices have strengthened the financial entanglement, with the two central banks having to ensure the optimal functioning of structured asset markets. Thus, as we specified, post-2007, as a “crisis of discursive central banking” (Gabor & Jessop 2015) emerged, both central banks made the transition to a “balance sheet policy”.

As we know, in the modern monetary system we find a complex shift to a market-based financial system, in which tradable securities and dealer-banks prevail, which connects cash portfolio managers, such as MMFs, with risk portfolio managers, such as hedge funds. Thus, the Federal Reserve began to play a role of dealer of last resort to preserve this system, necessary for effective monetary governability. In this direction, in the new monetary system, banks are only a component of liquidity intermediation chains, in which we find other participating institutions, such as shadow banks, but also an increase in the importance of wholesale money markets.

This role of dealer of last resort came naturally in the third stage of monetary interventions post-Lehman Brothers, the first two being the lowering of the interest rate from 5 to 2%, respectively emergency loans (Grad et al. 2016), which we will discuss in this section. Eventually, with the collapse of money markets, “(...) the Fed stepped in as dealer of last resort in the money market, standing between borrowers and lenders who had previously dealt directly with one another in the money market. This intervention more than doubled the Fed’s balance sheet in a matter of weeks” (Grad et al. 2016). Put differently, this was the moment when not only the composition of the balance sheet was affected, but also its size. Prior to this event, we witnessed the emergence of emergency lending programs, which we will discuss further.

After the beginning of the global financial crisis, the Federal Reserve sought to create new “centers of calculation” (Latour 1990), which would improve the effectiveness of interventions

in the context of the shadow banking system and changes in the traditional banking system. Before the financial crisis, Fed aimed to implement an atemporal monetary policy, in the sense that it tried to “pull the future into the present” (Hope 2010), in which the expectations about the future are a fundamental part of the present, as they have the performative capacity to produce results in the present. Which means that the future changes the present, the present becoming a consequence of the future and not vice versa. Thus, monetary policy resided in the governability of “present futures” (Esposito 2015), a future-oriented policy that takes into account the structural changes of modern finance. Post-crisis, the Federal Reserve's goal has been to provide a backstop that would incentivize financial institutions to re-commit to credit provisions. Which means that all the policies that we will discuss immediately do nothing but strengthen the Federal Reserve's finance-oriented policy making (Braun 2018), given the infrastructural entanglement between this central bank and the financial sector. As such, the Federal Reserve has made the transition from a discursive policy to active commitment policies.

At this point, the Federal Reserve governability seeks to ‘create the markets’, not just to follow them, which represents an abandonment of the communicative-symbolic function. This central bank had to implement other instruments to ensure monetary governability. In conditions of liquidity disruption, the communicative capacity of the central bank is altered, it loses its performative capacity and must be replaced by tools that directly shift the market expectations. These are necessary to avoid the expectational crisis. In the case of the Federal Reserve, emergency lending and the role of dealer of last resort implied the implementation of a fundamental change of macroeconomic governance that would fit the financial reality. Thus, the change in the governance paradigm followed as the risk perceptions of the financial sector and implicitly the functioning of market liquidity became essential post-crisis. In this way, the Fed aimed to introduce two novelty processes. First, it turned macroeconomic governance into a strategic problem (Morris & Shin 2008: 88), in which financial expectations must be directly supported by active balance sheet policies, through the transition to the dealer of last resort role. Second, the asset purchasing programs were aimed at “creating the market”, the purpose being also to influence the long-term interest rate and to create a context in which securitisation processes can continue to function, the latter complementing the first objective.

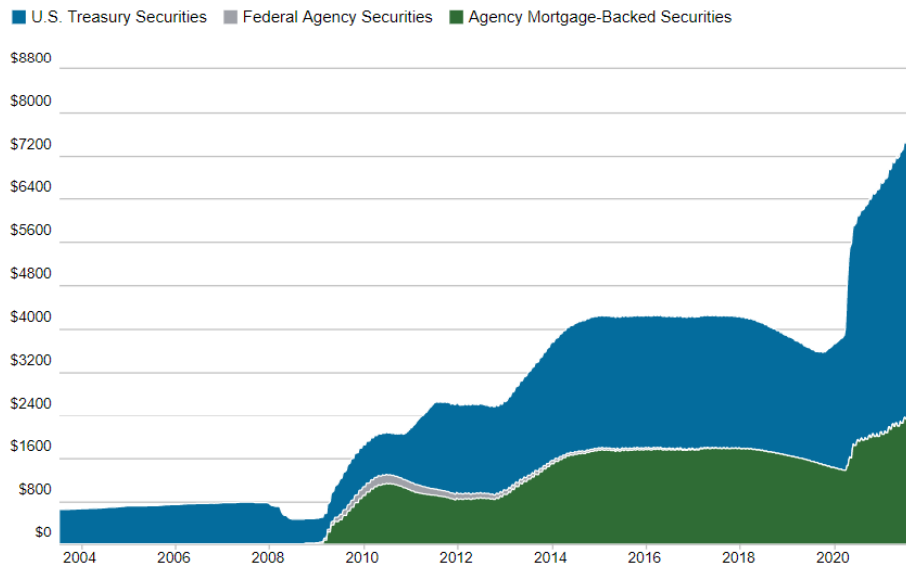
Federal Reserve aimed to create markets by introducing two facilities, namely Term Auction Facility (TAF) and Term Securities Lending Facility (TSLF). The first facility aimed to lend reserves through auctions over a specific period of time, “initially \$20 or \$30 billion, then \$50 billion, and then \$75 billion per auction for terms of 28 or 35 days” (Cecchetti 2008). These loans were collateralized, but unlike the Bagehot rule, the Fed allowed depository institutions to pledge illiquid collateral, such as mortgage-backed assets. Through this facility, the Federal Reserve's balance sheet size has not undergone any changes, as these loans have offset the decrease in outright holdings of securities. But the permissibility to use these illiquid collateral in the form of structured assets was a direct attempt to keep the ABS market active (Cheun et al. 2009). The second facility was a pivotal shift in Federal Reserve strategies (Geithner 2014: 143). This facility was centered on tri-party repo markets. TSLF allowed primary dealers holding agency debt or mortgage-backed assets (MBS) to exchange these structured assets for Treasury securities for a period of 28 days, securities that could then be used in repo markets to meet liquidity needs. Thus, the Fed also became a securities dealer. After these introductory discussions, we noticed that the Federal Reserve not only intervened in the ABS market, but also in the mortgage-backed assets market, these structured assets being essential in the new financial structure. Put differently, as these structured assets played the role of collateral, the worsening market conditions led to a vertiginous increase in haircuts applied to them. Equally, the foreclosure of this market tended to affect securities dealers. Which means the Federal

Reserve had to intervene in this private market, to preserve the liquidity of the system. Especially since the disappearance of this market would have irreparably affected the securitisation market and the implicit private production of collateral. Thus, “from the start of 2008 through the end of 2016, the U.S. central bank’s balance sheet grew from \$900 billion to \$4.5 trillion, with assets now principally consisting of long-term U.S. Treasury notes and bonds (\$2.3 trillion) and mortgage-backed securities (\$1.8 trillion)” (Cavallo et al. 2018). And it is precisely these private interventions in the MBS market that have allowed the continuation of securitisation processes, “(...) knowing that the Fed stood ready to buy, Fannie and Freddie stood willing to purchase and package mortgages” (Grad et al. 2016), which was a performative effect from the Fed. Thus, we observe the Fed’s attempt to act on long-term interest rates through the asset side of its balance sheet, important given that short-term interest rates are already at zero lower bound. Thus, it is no longer based solely on expectations, but on the direct action by which it compresses long-term yield.

Last but not least, another facility that confirmed this infrastructural entanglement was the Primary Dealer Credit Facility (PDCF), which confirmed the important role played by securities dealers in the new financial structure. This facility was created in March 2008 and provided access to traditional Federal Reserve facilities to non-bank primary dealers, such as broker-dealers. At the same time, through this facility, the Federal Reserve “(...) opened the discount window to investment banks for the first time since the Great Depression” (Paulson 2010: 116). Through this facility, non-bank primary dealers could borrow again using structured assets as collateral, such as MBS and ABS. Thus, the Fed again ensured that the securitisation processes will continue to work, as this facility aimed “to reduce interest-rate spreads between the asset-backed securities that can be used for collateral in these loans and U.S. Treasury securities, thereby improving the ability of investors to buy and sell asset-backed securities in financial markets” (Cecchetti 2008), which facilitated the reuse of these structured assets in private markets, given the backstop offered by the Fed.

Finally, post-2008, central banks began to fulfill a role of market maker of last resort, which confirmed the increasing influence of the financial system in monetary governability.

In other words, as “the intensifying financial turmoil over the course of 2008 required larger and larger injections of liquidity into the financial system and made it infeasible for the Federal Reserve to sterilize the resulting increases in reserve balances by redeeming or outright selling Treasury securities from the System Open Market Account (SOMA) portfolio” (Bech et al. 2012), The Fed has made the transition to a floor operating system, in which a massive balance sheet prevails. Thus, “(...) the Fed moved to replace its temporary loans to various elements of the financial sector with permanent holdings of mortgage-backed securities, essentially loans to households” (Mehrling 2010). At the moment, the Fed’s balance sheet is close to \$8 trillion, with US Treasury (UST) and mortgage-backed assets representing the main holdings.



Source: Federal Reserve Bank of New York, 2020.

This transition allows the Federal Reserve to fulfill with greater ease the accommodation of reserves not only to the banking system, but also to other institutions relevant for the transmission of liquidity in the new market-based financial system, such as broker-dealers or Money Market Funds (MMFs). Put differently, this transition naturally followed active interventions in the financial system, being specifically designed to provide a broader backstop to new financial institutions. Thus, for the first time, liquidity and credit structures have become policy concerns, the Federal Reserve becoming a stabilizer, an essential function when a communication crisis has occurred. Through these interventions, the Federal Reserve has ensured that it anchors the confidence of economic agents in the ability to maintain financial stability and governability on long-term. Thus, post-crisis, the new paradigm of governability is not low inflation, but market liquidity management and long-term interest rates, which once again highlights the importance of finance in macroeconomic governance and implicitly in economic growth.

ECB, structured assets and the public backstop of securitisation markets

The evolution of private money production has forced a rethink of monetary policy, “from state institutions to markets” (Krippner 2011). This evolution underlines the public-private hybridity of the financial system (Pistor 2013), given the integration of financial markets with the central bank, where the production of money is private and the liquidity backstop is public. And this integration refers to the tools and purposes of interaction of monetary policy with the private sector, especially when we emphasize that a central bank governs through financial markets, which gives these markets greater importance in the new financial system, “(...) central banks have always shaped financial markets – by changing how they transact with private counterparties, by privileging certain types of financial instruments over others, by building up entire market segments, or by lobbying governments for policy changes” (Braun et al. 2020). This means that central banks are obliged by circumstances to ensure the optimal functioning of financial markets in such a way as not to affect their governability capacity. That is why they have also resorted to certain monetary innovations to preserve the current financial structure, as we will discuss further. Thus, we understand that central banks are not exclusively regulatory

entities, but these public authorities actively participate in financial markets (Hockett & Omarova 2014).

As an infrastructural entanglement prevails between the ECB and the financial sector, this central bank has sought to preserve market liquidity by continuing securitisation processes, which allows it to coordinate in a distinct way the expectations of economic agents. In this direction, the ECB also gave up discursivity and began to actively use its balance sheet, aiming to “change public expectations of their actions tomorrow in a way that improves macroeconomic performance today” (Campbell et al. 2012). Thus, post-crisis, the performativity of the ECB came through the decisions to include longer-term bonds in the asset purchase program (APP), this central bank assuming the role of market maker of last resort. The announcement of these acquisitions was intended to change expectations, not only through the portfolio rebalancing channel, but also through expectations regarding the financial implications of these acquisitions. The mere announcement of the acquisition of assets and the implicit guarantee that the ECB will do “whatever it takes” made economic agents get involved in new securitisation processes.

Indeed, there were secondary objectives. For example, the decision to include corporate bonds in APP is not related to price stability, but to an independent motivation, “which is to support the European Commission’s project for a Capital Markets Union (CMU)” (Klooster & Fontan 2019). This Capital Markets Union would help to diversify sources of income, but also to an easy transmission of monetary policy. It would also help promote market-based finance, which would be an alternative to the bank-based economic system (Braun & Hubner 2020). That is why it has been stated that “(...) ECB acts as a genuine market maker in supporting the corporate securities market and promoting the Capital Markets Union project” (Klooster & Fontan 2019), which was also confirmed by the inclusion of asset-backed securities in the APP. Also, “by taking suddenly-illiquid ABSs onto its balance sheet, the ECB gained leverage over the securitisation market, while at the same time becoming more dependent on it” (Braun 2018), which means that the ECB has been looking performatively to improve the securitisation capacity and to ensure the functioning of market liquidity today. In the absence of these interventions, securitisation would have lost its importance, which would have affected the volume of eligible collateral, with negative effects on interbank and repo interest rates, and this would have affected the transmission of monetary policy. In this way, the ECB actively participated in the creation of market liquidity during a period when it dried up, knowing that the performative activity aimed at maintaining active securitisation processes is dependent on the *ex post* effects expected by economic agents. This is exactly what made the ECB play an important role in this structured asset market also through the loan-level data initiative, which ultimately led to Securitisation Regulation through Regulation (EU) No 2017/2402. This regulation is important because it has created a framework for the STS securitisation, i.e. simple, transparent and standardized securitisation. This framework aimed to increase transparency in the ABSs market, becoming an optimal mechanism for the transmission of liquidity in the financial markets. Otherwise said, “the creation of STS securitisations represents a new age for EU Securitisations” (Shiren & Collins, 2019). The very involvement in this regulatory process, which exceeds the attributions of a central bank, represented a performative paradigm shift, this being a guarantee of the securitisation market support.

That is why the European Central Bank also responded with changes to the Eurosystem collateral framework, which once again confirms the infrastructural entanglement. As the interactions of the central bank with private markets take place through collateralized transactions – repurchase agreements –, this public authority can modify market practices,

reordering the risks of assets that will play a role of collateral. Thus, ECB can affect this collateral framework through two channels, the scarcity channel and the structural channel (Corsi 2019). In the case of the first channel, ECB intervenes through repo transactions or outright purchases in the supply of collateral, which affects their availability. In the case of the structural channel, the ECB "(...) affect the degree of pledgeability of assets" (Corsi 2019), by changing haircuts or the eligibility criterion. Or even by modifying the institutions' access to the permanent facilities of this central bank. This confirmed the ECB's objective to do "whatever it takes".

In the case of ABS, ECB intervened through the structural channel. In other words, until 2014, ECB steadily lowered the eligible rating of ABS, from A-in 2010 to BBB - in 2014, which led to the situation in which "banks did not hold on to those securities, however, but pledged them as collateral to obtain reserves from the ECB" (Braun 2018). In this way, ECB has used a quasi-floor system applicable to the prices of these structured assets. This gave them increased protection and actively participated in the continuation of these financial practices.

Returning to the asset purchase program, this was the moment when the ECB's balance sheet changed not only its composition, but also its size, an event that led to the emergence of the role of dealer of last resort, especially in ABS market. This program was called The Asset-Backed Securities Purchase Programme (ABSPP) and it was precisely aimed at preserving securitization in the euro area. In other words, it represented "a signal from the ECB to markets of its belief that this asset class is an important and sound one" (Bindseil 2015).

This supply of excess reserves led to the change of the monetary operating system, namely the appearance of a floor-type operating system and a massive quasi-permanent balance sheet. Put differently, until October 2008, ECB estimated the liquidity needs of the banking system, and based on these estimates offered liquidity in the form of collateralized loans to commercial banks. Then there was an auction of commercial banks to obtain this liquidity. At the end of the process, the banks that obtained this liquidity indirectly performed a role of primary dealers, which means that they redistributed the liquidity obtained in the interbank system. But the global financial crisis has dried up the interbank market, with commercial banks avoiding redistributing liquidity, raising interest rates on these auctions. That is why, with 2008, ECB switched to a fixed-rate full allotment system, which means that the existence of eligible collateral allows commercial banks to directly borrow all the necessary liquidity, without the need for auctions. This means that this system allows commercial banks to borrow more than in the previous system, this factor also contributing to the increase in excess liquidity. But we emphasize once again the importance of eligible collateral represented in the form of structured assets, such as ABS.

And this transformation underlines once again the infrastructural power of finance, the type-floor system allowing the European Central Bank to formally pursue the objective of financial stability but also keep money market rates low, "(...) an important – albeit by no means the only – role of excess liquidity is to firmly anchor short-term interest rates at the levels judged appropriate by policymakers" (Coeure 2019). But, equally, there is a greater footprint of the financial system in the Eurosystem's monetary policy. At the same time, this new system is "robust to a further expansion of the balance sheet to serve monetary policy or other policy objectives" (Resinek 2019), which means that the ECB will be able to expand its interactions with private financial institutions on behalf of its monetary policy objectives, becoming a financial market-maker.

Conclusions

This paper detailed the performative role that a central bank played in the era of inflation targeting, which depended on the financial sector for both monetary governability and coordination of expectations. One way in which this monetary governability was ensured was through securitisation, which actively participates in the emergence of new collateral usable for the implementation of monetary policy. This is why finance gains a structural power that underlies infrastructural entanglement with central banks. This performativity was based on the symbolic-communicative dimension of the central bank, a dimension that changed post-crisis, when a “crisis of discursive central banking” emerged. At that point, the Fed and the ECB were required to make a commitment to directly rescue these securitisation processes by adopting a balance sheet policy, necessary given that market liquidity was drying up. Thus, along with this point, the communicative role of the central bank has diminished, increasing in importance the active use of the balance sheet, but also the targeting of the long-term interest rate. In this way, central banks have gone from ‘following the market’ to ‘creating the market’.

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