

“Below, but close to”: the pragmatic origins of incomplete

Central Banks’ targets

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Despite the recommendations of many economists, most Central Banks have not decided to define their inflation target with a univocal number, preferring to maintain some ambiguity via a rate range or a comparative formulation (such as “below, but close to”). This article accounts for this puzzling fact from two angles. First, four possible explanations are drawn from the social science literature on Central Banks. Second, through a historical analysis of the Belgian Central Bank, we test these four explanations and propose a fifth one, inspired by the pragmatist trend in organization studies. According to this last hypothesis, the inflation target constitutes a device whose vagueness allows for an intra- and inter-organizational compromise.

Keywords: Central Bank; organization; quantification; pragmatism; Social Studies of Finance

1. Introduction

As organizations responsible for issuing money, Central Banks have long been confronted with metrics. However, the role of metrics has been radically transformed during the “Quiet Revolution”: in the 1990s, the functioning of Central Banks has become more deliberative, transparent and market-oriented (Blinder, 2004). The instruments used by Central Banks to implement their monetary policies were reformed in this sense in several countries: market-based instruments, such as open market operations, gradually replaced “administered” instruments, such as regulatory credit limits. With these new “market-oriented” transmission channels, the success of a monetary policy now depended on its reception by market professionals (Holmes, 2013); it became essential that the latter *follow* the Central Bank’s intervention, in a triple sense: that they monitor it, understand it and comply with it. Central Bankers were thus confronted with new issues of *visibility*,

pedagogy and *credibility*. And certain monetary metrics will occupy a central place in this new landscape.

In order to be received by “the market” in accordance with the intentions of Central Bankers, the objective of monetary policy has been quantitatively defined and publicly communicated – which was rarely the case. In theory and in practice¹, these quantified targets are intended to serve as “anchor points” in the formation of expectations of economic agents, that is, – first and foremost – financial market professionals (Braun, 2015; Issing, 2019). It was quickly noticed that these targets did more than enable the use of market-oriented instruments: they (partially) replaced them. The mere announcement of targets led market professionals to act in such a way that the target was reached before any open market operation; if traders expect the Fed to lower short-term interest rates (because they are higher than the communicated target), they will lend dollars to take advantage of the “too high” rate, which will result in the rate falling. This performativity, known as the “signal effect,” has been well identified and attested in the literature (e.g. Woodford, 2005; Hayo & Neuenkirch, 2015; Hansen & McMahon, 2016; Wansleben, 2018; Anand et al, 2021), to the point that it is sometimes considered a tool in its own right: the “open mouth operation” (Guthrie & Wright, 2000).

Despite this success story-like development, a mystery remains. Central Bank targets have managed to polarize the views of market professionals better than expected, even though they have not generally taken the form of the full quantification advocated

¹ We will see that this concordance is less the result of a discovery than of the effect of theory on practice. Since Callon’s (1998) seminal proposals, the Social Studies of Finance have regularly uncovered the performativity of financial theories (e.g. MacKenzie, 2004).

by theory. As economists frequently remind us (e.g. Galí, 2002; Svensson, 2007), targets must be perfectly defined: this makes them better understood and more credible. Yet the Central Banks that have complied with this prescription are more the exception than the rule. If we limit ourselves to the 73 Central Banks that have bound themselves to an inflation target (according to the *Central Bank News* census of April 2022), only 19 have announced a fully quantified target (i.e. identifiable by a single number). All the others maintained ambiguity in their quantification, whether in the form of a corridor around a rate (35), a range of rates (13) or a comparative assessment such as “below” or “on average” (6). The two largest Central Banks – the Fed and the ECB – belong to this last subgroup. The former resisted any quantification for a long time, before announcing in 2013 a target of 2%, which it then made more flexible in 2020 via the concept of “Flexible Average Inflation Targeting” (the 2% target now concerns *average* inflation “over time”). The latter specified its objective in 2003 – “below, *but close to 2%*” – and then followed a path close to that of the Fed by announcing a new target of 2% “*over the medium term*” (ECON committee, 2021).

This article proposes to approach this puzzling fact – the persistence of incomplete quantification of monetary targets – from two angles. On the one hand, it will identify the possible explanations that can be found in the scientific literature. Several social scientists have studied the functioning of Central Banks and have put forward – most often implicitly – hypotheses as to the reasons for this quantitative vagueness. On the other hand, we will mobilize a historical case study in order to test the four explanatory hypotheses from the literature, and to support an additional path. By tracing the adoption of market-based instruments by the Belgian Central Bank and the communication strategies associated with them, we will uncover an explanatory factor of an

organizational nature: quantitative imperfection can constitute a device that allows for the achievement of an intra- and inter-organizational compromise.

The main contribution of this article is therefore also twofold. The first part offers a systematic overview of the explanations given to an issue that is very contemporary and yet approached in a fragmented and partial manner. It can thus be seen as a thematic review of the literature, centered on the incompleteness of monetary targets. The second part, devoted to the historical analysis of the Belgian case, constitutes one of the first investigations of the “modernization” of this ancestor of the ECB; unlike the Bundesbank (e.g. de Haan, 2000), the Belgian Central Bank has not been the subject of historical investigations focusing on the 1990s – the rare exceptions being orders with a strong promotional character (Maes, 2010; Maes et al, 2005). In addition to this empirical contribution, our case study leads to a theoretical one: the four hypotheses from the literature are tested and discussed, and a fifth one – nourished by pragmatist organizational studies – is elaborated from the Belgian experience.

The remainder of the paper is organized as follows. After briefly recalling the main features of the recent transformations of Central Banks (the Quiet Revolution), we will present the four explanations for the vagueness of monetary targets that can be found in the literature (Section II). We will then present our study of the Belgian experience, in order to understand – at the time of the appearance of quantified targets (1989-1991) – the reasons for their quantitative fuzziness (Section III). We will then be able to evaluate the relevance of the four hypotheses derived from the literature, and to complete them with a fifth explanatory path (Section IV). In conclusion, we will review the main findings of this article and consider its potential extensions, at the crossroads of organizational studies and the Social Studies of Finance.

2. The vagueness of the target: fatal, strategic or ideological?

The transformation that occurred in the early 1990s in the functioning of many Central Banks was fostered by a complex of inextricably political and cognitive influences. In microeconomics, the incentive-based approach – in some ways underpinned by the “triumph” of capitalism over communist experiments – gained popularity. In the field of monetary policy, this took the form of the Barro & Gordon (1983) model, according to which only an independent Central Bank is able to steer agents’ expectations – the public authorities, limited by the election horizon, having an incentive to deviate from their commitments through inflationary stimuli (and the agents anticipating this deviation, so that they do not comply with this “non-credible” policy). In macroeconomics, monetarism – reinforced by the stagflation of the 1970s and driven by the geopolitical climate – is taking precedence over Keynesianism: often under pressure from the IMF, which recently converted to Friedman’s doctrines (Chwiero, 2010), Central Banks are called upon to focus on strictly monetary issues, such as fighting inflation, rather than meddling with the credit allocated to firms.

This is how the current face of Central Banks (or, at least, the one they displayed until 2008) gradually emerged: focus on inflation via interest rates and/or exchange rates, clear separation between monetary and fiscal policies, “anchoring” of agents’ expectations through transparent communication centred on quantified targets. As we have said, on this last point, the results exceeded expectations, to the extent that the announcement alone has sometimes been enough to produce the expected result. And yet, these targets rarely took the form, advocated by the literature, of a univocal metric – to the dismay of several perplexed economists:

The announcement of an explicit, quantitative definition of price stability [i.e. “below 2%”] – which the Fed, among other Central Banks, does not have – should certainly be welcome. It can only help improve accountability and anchor agents’ expectations (...). [However,] it is just very hard to understand why the ECB would fall short of clarifying this issue once and for all, given the clear contradiction between their operational definition and the conventional view (Galí, 2002: 7-11).

In the remainder of this section, we draw from the social science literature on Central Banks four possible explanations for this “very hard to understand” phenomenon. Although inherited from different theoretical traditions, these four hypotheses share a pragmatist origin that we will discuss in Section IV of this article.

The fate of market economies

In the frequent debates about the quality of monetary policy decisions, it is common for an economist to defend Central Bankers by pointing out that, in a decentralized economy – that is, an economy in which the state limits its interventions in order to allow private initiatives to develop – a regulatory body is not able to control everything, its means of action are limited². In other words, other “forces” affect inflation, so that it is not possible for the Central Bank to announce a single figure as a target. Moreover, given the separation of regulatory authorities, it is not unusual for certain actions by fiscal authorities to constrain the room for manoeuvre of monetary authorities (Sims, 2004).

² Neumann (1991) thus asserted that price stability could not imply price constancy, “*given that the price level is shocked by a variety of random disturbances which cannot be anticipated and given that the Central Bank cannot affect the price level immediately but only with a variable lag*” (Ibid, p. 106).

Finally, the balance sheet resources of Central Banks are also sometimes singled out by economists as a factor limiting their capacity to intervene.

But the main proponents of this first explanation are not so much academic economists as Central Bankers themselves. For example, in a speech entitled *Central Banks: What they can and cannot do*, the Governor of the famous New Zealand Central Bank, regretting that “*the public have come to believe that Central Banks can achieve very much more than they can, in reality, deliver*” (Brash, 2001, p. 1), sought to remind us of the limits of its power: “*monetary policy affects (...) inflationary pressure with a considerable lag*” (*Ibid*, p. 5). The ECB agrees when it invokes the inadequacy of its instruments to argue that “*it would be impossible for any Central Bank to keep inflation at a specific point target at all times*” (ECB, 2003, p. 82). The vagueness of the targets therefore reflects the operational constraints on the exercise of monetary policy in an open economy. Moreover, the few Central Banks that dare to announce a perfectly quantified target expose themselves to a crisis of confidence that would undermine their means of action: market professionals, aware of the limits to which monetary policies are subject, know that a perfectly quantified target is unachievable and therefore non-binding³.

This first explanation was dominant for a long time, but has taken a hit with the generalization of “unconventional monetary policies”. Since the financial crisis of 2007-08, and even more so during the Covid crisis, Central Banks have expanded their means

³ This reasoning is inherited from incentive-based monetary theory (which is itself based on the theory of rational expectations): if a declared target is not “binding”, the Central Bank will have an interest in exploiting this ambiguity; and agents anticipate this, so that they will judge this target to be non-credible and will not comply with it.

of action, including quantitative easing and negative interest rates, and thus increased their control over the economy. Several critics have pointed out the inconsistency between yesterday's declarations of impotence and today's demonstrations of power – both with regard to the traditional objectives of fighting inflation and to “new” objectives such as the redistribution of wealth or the fight against climate change⁴ (e.g. Fontan et al, 2021). The factors that had been put forward to support the limits of monetary policy – weakness vis-à-vis other economic forces, conflict with fiscal authorities, balance sheet constraints – proved to be surmountable when Central Bankers felt it necessary. This highlights the performative dimension of this first hypothesis in its heyday (the announcement of limits contributed to their institutionalization), as well as its possible instrumentalization by Central Bankers anxious to protect themselves from overly demanding claims.

A desire for power

It would therefore appear that Central Bankers are strategists: they invoke the limits of their capacity in order to avoid being subjected to overly ambitious demands. Similarly, they may have an interest in maintaining ambiguity in the definition of their target in order to retain room for manoeuvre – this is the second explanation that can be drawn from the literature (e.g. Jia & Wu, 2021). Two researchers at the *Barings Investment*

⁴ Indeed, on these “new” objectives too, Central Bankers have often been keen to moderate expectations by reminding us of the limits of their power (see the speech by the former Governor of the Bundesbank also entitled *Combating climate change - What Central Banks can and cannot do*).

Institute, for example, have argued that the recent redefinition of the target by the ECB and the Fed betrayed this type of strategy:

By targeting medium-term inflation without defining what the medium term is, the ECB has given itself a flexibility similar to that of the Fed, where average inflation targeting was introduced without providing the slightest detail about the timeframe over which the average would be calculated (Belaisch & Cominetta, 2021).

Some statements made by Central Bankers give some support to this hypothesis. Thus, the Governor of the Fed justified the quantitative imprecision of the new “Flexible Average Inflation Targeting” as follows:

In seeking to achieve inflation that averages 2 percent over time, we are not tying ourselves to a particular mathematical formula that defines the average. (...) Our decisions about appropriate monetary policy will continue to reflect a broad array of considerations and will not be dictated by any formula (Powell, 2020, p. 12).

Indeed, it is easy to understand the risk that a complete quantification of monetary policy may represent for the power of Central Bankers: a rigid target implies that the instruments are more “mechanically” mobilized for the sole purpose of respecting this commitment. Ultimately, an algorithm could then constantly adjust interventions in order to stick, to use the ECB’s formula, “*at a specific point target at all times*”⁵. It is in the light of this apocalyptic scenario that we must understand Powell’s surge of pride (“*Our*

⁵ *The Economist* was considering this scenario as early as 2015 on *Twitter* (<https://twitter.com/theeconomist/status/630922208467132418>). If, to my knowledge, no scientific article has explicitly studied this option, several have focused on the contribution of machine learning to Central Banking (e.g. Doerr et al, 2021).

decisions will not be dictated by a formula”) – the Central Bankers do not want to be reduced to algorithms.

But there may be more than personal pride in this desire for power. In the eyes of some researchers, this maintenance of arbitrariness – in contrast to the demand for transparency that aspires to make any Central Bank reaction predictable – is a functional necessity. Jacqueline Best (2007), in particular, has argued that it allows for better management of the uncertainties inherent in the financial world: the “constructive ambiguity” opened up by quantitative incompleteness gives Central Bankers room to manoeuvre, allowing them to react to different shocks. Conversely, a fully defined *a priori* target does not provide regulators with the means to adjust to non-anticipated problems. Since the publication of Best’s book, the successive crises – subprime, sovereign debt, Covid – have given weight to her position: without the room for manoeuvre that they have been able to preserve (thanks in particular to the ambiguity of their targets), Central Bankers would probably not have been able to deploy this new set of intervention instruments and become so central to the regulation of the world economy.

This second explanation is therefore not lacking in appeal. However, it finds a dissonant echo in the results of several sociological studies on the profile of Central Bankers. The image of rebellious regulators, evading the demands for transparency in order to maintain a grip on the functioning of the economy, that emerges from this second hypothesis does not correspond to the portraits painted by several sociologists. In addition to a very privileged social background, Central Bankers share a certain theoretical corpus that guides the way they conceive their functions (McNamara, 1999; Lebaron & Dogan, 2016). They even increasingly contribute to this theoretical corpus, via publications in monetary economics journals (Claveau & Dion, 2018). Not surprisingly, this corpus

includes several elements of orthodox monetary theory that we have already pinpointed, including the valuation of transparency (Fontan et al, 2018). This therefore casts doubt on the supposed willingness of Central Bankers to escape a principle of transparency in which they mostly believe... But there is more. The majority of Central Bankers would be convinced by the “truth” revealed by market prices and therefore inclined not to “distort” it by excessive interventions. Again, this contrasts with the “desire for power” at the heart of this second explanation of the vagueness of targets. An alternative hypothesis, more in line with these sociological lessons, is therefore welcome.

A free space for the market

The third explanation that can be drawn from the literature is therefore the opposite of the previous one: the vagueness does not reflect a persistent arbitrariness, but – on the contrary – restraint. Central Bankers aspire to interfere as little as possible in the interplay of supply and demand, so that the output (typically short-term interest rates) is or appears to be determined by the market. The quantitative incompleteness of the target would thus make it possible to guide the market without dictating its outcome: the market is “free” to choose its destiny within the open space (e.g. within the range or corridor of inflation rates chosen as targets). Two motivations, undoubtedly complementary, allow us to understand this position of Central Bankers.

On the one hand, as the sociological studies mentioned above have shown, the men at the head of the Central Banks are intellectually homogeneous: in particular, they are generally convinced of the virtues of market allocation and therefore inclined not to interfere with the “sanction of the market”. This attitude, which is the result of the ideological shift in the 1980s and 1990s that we mentioned earlier, has had profound repercussions on the conduct of monetary policy: formerly in a position of superiority

over a market that needed to be rationalized, Central Bankers have increasingly listened to the financial markets, to the point where they are tempted to conform their decisions to what “the market” expects of them. Alan Blinder (1998) was quick to point out this risk of hindering the independence of the Central Bank, not with respect to the political system, but with respect to the financial markets.

On the other hand, leaving room for the market to express itself allows passing on to the market the responsibility for the output: Central Bankers no longer have to assume frontally the consequences of their decisions – which, especially for unpopular anti-inflationary measures, is very valuable. It was sociologist Greta Krippner’s (2011) investigation of the Fed’s decision-making process that uncovered this second motivation: “*in allowing some fluctuation in the rate, the Federal Reserve produced a market-like effect, making the rate appear a bit more market determined than Fed determined*” (*Ibid*, p. 122). And since “the market” is both everyone and no one, the malcontents find themselves without obvious targets.

This third hypothesis has a comparative advantage: its empirical grounding. The two types of motivation that underlie it – ideological and strategic – have been attested by field research. It is therefore difficult to contest. That said, its validity could be very partial, because the last explanation proposes a very different, but at least equally powerful, line of reasoning.

A condition of effectiveness

Unlike the previous two, but like the first, this last explanation is more functional than intentional. Central Bankers *must* maintain this quantitative vagueness if they want to preserve the effectiveness of their instruments. We have seen that the Quiet Revolution gave a market-based orientation to these instruments: the success of the Central Bank’s

manoeuvres (trading in financial securities and changing the terms of loans to financial intermediaries) depends on the reactions of other market participants. According to this fourth hypothesis, a precise target would give too many indications to market professionals, who would then be able to anticipate the actions of the Central Bank and divert the outcome.

The authors who support this hypothesis actually propose an extrapolation of “Goodhart’s law”, according to which “*any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes*” (Goodhart, 1984, p. 96). Conceptually close to the “Lucas critique” in macroeconomics and to sociological research on “performativity”, this law points to the destabilizing effect exerted by the regulator on certain economic variables which, without this effect, would follow a quasi-natural regularity. In a way, it aims to alert us to the *bad* consequences of a statement made by Central Bankers, whereas the concept of performativity explained in the introduction referred to the *good* consequences (those that were in line with the regulator’s intentions). It is therefore the risk of “counter-performativity” that is at stake here.

According to some social scientists, this risk is such that it prevents Central Bankers from being explicit about their objectives:

Central Bank mandates (...) provide little guidance on (...) specific targets that must be reached. This vagueness is motivated by the so-called “Goodhart’s law”: when Central Banks are asked to reach specific targets, financial operators try to anticipate Central Banks’ monetary policy and alter its outcome (Dietsch et al, 2021).

This “alteration” of the outcome can take the form of a movement in the desired direction, but of an excessive dimension: if market professionals anticipate a Central

Bank purchase program by buying the security massively themselves, the price increase can exceed the regulators' intentions. It may also result in a neutralization of the effect of the policy, particularly when the main market players consider the Central Bankers' statement to be non-credible. This fourth hypothesis thus reveals a downside to the "signal effect": while it is true that the announcement alone can have the desired effect, this transmission channel is not immune to overreactions or crises of confidence. So much so that it may be necessary for Central Bankers to limit the predictability of their actions by leaving their target definition vague.

3. The Belgian experience as an empirical test

In this section, we analyze the Quiet Revolution "in the making" at the Belgian Central Bank, known as the *National Bank of Belgium* (NBB). This case study is first based on an analysis of unused NBB archives – mainly reports from the research department, press clippings, and minutes of weekly meetings of the Executive Committee⁶. We also used the NBB's monthly publication (the *Bulletin d'Information et de Documentation*), as well as a few articles from the journal of the NBB's think tank (the *Revue de la Banque*, published by the *Centre d'Études Financières*)⁷. In the course of our account of events,

⁶ The period of confidentiality for such matters is 30 years. The documents related to the period studied (1989-91) are therefore available since 2019-21.

⁷ As far as the contribution of this section to historical documentation is concerned, it seems to us that it can go beyond the Belgian case. Indeed, other research on the genesis of the ECB has shown that the trajectory it took "*reflects different domestic historical legacies from individually distinctive 'defining moments'*" (Dyson & Marcussen, 2009, p. 6), and that the Belgian position was more influential than a German-centric reading might suggest (Maes & Quaglia, 2003).

we will note the factors that motivated the NBB's leaders to define their target imperfectly.

As we have already seen, the importance of targets – and thus of the question of their (im)perfect quantification – emerged during the reform of monetary policy instruments: the new market-based instruments involved a communication effort that led to the construction of quantified targets. Since the pioneering research of Alain Desrosières (1993), we have known that the obstacles to quantification are particularly visible during the emergence phase: the effort of shaping then rapidly disappears in the event of success. Indeed, once stabilized, the convention makes one forget its conditions of production. This is why we looked at the issue of quantifying targets at their inception, that is, when market-based instruments are adopted. In Belgium, this aspect of the Quiet Revolution was adopted in January 1991.

From credit policy to inflation targetting

After the Second World War and until the mid-1970s, the NBB was mainly concerned with the borrowing conditions faced by the three major macroeconomic actors – the government, firms and households (Janssens, 1980). It was not until the instabilities of the 1970s (in particular the oil shocks) that the objective of price stability was added to the “credit policy”. And it was in 1989 that the NBB resolved to confine itself to its modern role as guardian of inflation and exchange rate; only then did the plan to announce a quantified target appear.

Prior to this latest turning point, the NBB's policy was implemented mainly through control of the lending and deposit rates of commercial banks. These rates, central in a “bank-based economy” (Levine, 1999), were linked to the NBB's “discount rate,” first formally (through legal scales), then informally (through recommendations

accompanied by sanctions and through consultations within committees). This rate informed the conditions under which the NBB agreed to rediscount commercial paper held by the banks⁸. For various reasons, both ideological and macroeconomic, it lost importance in the early 1980s. In order to maintain its power of influence, the NBB then mobilized another channel: it transmitted its decisions by setting the interest rates on “Treasury certificates”. It is appropriate to briefly consider this method of operation, which set the pace for Belgian monetary policy from 1981 to 1991.

The NBB set the interest rates for short-term public debt securities (1, 2 and 3 months), called “Treasury certificates” and issued on tap (i.e. at the investor’s request). Given their flexibility and yield, these securities have become highly coveted by Belgian banks, which have subscribed to them en masse. They even became the main instruments of their liquidity management: the banks invested their daily surpluses in new certificates and compensated their deficits by not renewing expired certificates. Consequently, the interest rates on the certificates set by the NBB had a direct influence on the banks’ liquidity management and thus on their lending and deposit rates. This being the case, while these rates now constituted the authentic instrument of monetary policy, the symbolic power of the discount rate remained, to the great displeasure of Central Bankers who did not dare to modify it for fear of sending a signal with unfortunate consequences:

⁸ At the time, it was common for companies to handle their transactions via “commercial paper”, that is IOUs. The creditor company could hand over this paper to a bank in order to receive the amount due immediately (for a fee for the risk of default transferred to the bank). The bank could then rediscount this instrument at the NBB, for a fee represented by the discount rate.

It was the overemphasis on the [NBB]'s rates that hindered their adjustment to changing money market conditions. The focus of commentators' attention was such that they were raised only in the event of a relatively acute exchange rate crisis and lowered only after a delay in the improvement of the foreign exchange market climate. In addition, the symbolic weight of the discount rate has at times influenced long-term interest rates (...). The decision to change the discount rate was therefore likely to be clouded by considerations unrelated to the [NBB]'s objectives (*Bulletin de la BNB*, juillet-août 1985, p. 25).

This fear of a “paralyzing sanctification” of the figures communicated by the NBB is important because it influenced the form of the first target that appeared four years later. It also led the NBB to reform its method of setting the discount rate in 1985, in order to symbolically lighten it. Unambiguously, its only tool of influence was henceforth the issuance of Treasury certificates – which had many advantages already mentioned, but also a disadvantage: it distanced the NBB from financial intermediaries, because, unlike rediscount, the issuance of certificates was not directly managed by the NBB. To get closer to these privileged partners, another monetary instrument was introduced during a reform in 1988: 14-day credits – by auction rather than on tap – were offered to financial intermediaries, but were hardly mobilized (the certificates were sufficient to meet their needs).

The main reform of monetary instruments was therefore of course that of January 1991, the decision-making process of which we will analyze. It can be summarized in three main points. First, the separation of the monetary and fiscal authorities: the NBB ceased to set the rates for Treasury certificates and to grant lines of credit to the government. Second, the exclusive focus on price stability, which implied, in the Belgian case, ensuring the firmness of the Belgian franc within the European Monetary System. Third, the mobilization of market-based instruments in the form of open market

operations and credit auctions. Quantified targets appeared in this new monetary landscape.

Hesitant first steps: a range of rates

The idea of a publicly announced target evolved in conjunction with the reform project. Both came into being in May 1989 when the IMF submitted its conclusions to the NBB's Executive Committee in the context of its annual consultation. These were quite critical of the monetary policy transmission channel: in the eyes of the IMF, the Treasury certificate instrument was tugging at the NBB between the objective of accessible financing for the Treasury (encouraging lower rates) and the objective of a firm exchange rate (encouraging higher rates⁹). The concertation between monetary and fiscal authorities, long seen as a synergistic alliance, is condemned as an inefficient incest. The NBB should therefore focus on the value of the Belgian franc (BF); according to the IMF, the BF is currently undervalued, penalized by the ambiguity of the NBBs' attitude. In practice, the IMF recommends to the NBB *"to affirm its desire to link the fate of the BF to that of the mark"* (Conclusion of the 1989 consultation). It is clear that the communication issue is at the heart of the proposed mechanism.

It was during the discussion of these conclusions among the members of the Executive Committee that the proposal emerged to link the BF to the German mark by announcing a range: an interest rate differential, in relation to the mark, of between 1.6% and 1.9%. The intention is to prevent the BF from having to compensate for its weakness

⁹ The underlying reasoning is that of the interest rate parity relationship: an increase in the interest rate remunerating investments in the Belgian franc leads to an inflow of foreign capital, that is an increase in the demand for francs and therefore an appreciation.

in relation to the mark with an interest rate that is too high: keeping this interest rate within a range means ensuring that the BF does not deteriorate (too much) in relation to the mark. What interests us most is the justification for this objective and, above all, for its form. The memory of the paralyzing sacralization of the discount rate can be discerned in several remarks, such as that of director Fraeys: “*he believes that it [the range] could vary over time and not be clichéd*” (Minutes, 16/05/89, p. 12). Another member justifies his adherence to the range in a more elaborate way:

In its policy towards the market, a Central Bank must try to adopt a policy that is neither totally unpredictable nor totally predictable. From this point of view, the use of a range (...) is an excellent technique, provided, however, that the range is not “fetishized” (Ibid, p. 13).

We can thus see that the functional argument, presented in the previous section as a variation of Goodhart’s law, was not absent from the original motivations. That said, the purpose of the range was not, as early as 1989, to anchor the expectations of market professionals in the long term, but rather to inspire their confidence by sending a clear signal. The proof is that the band was to be “*reviewed every three months, in the light of the trend in the interest rate differential*” (Ibid., p. 14). However, the Executive Committee was accustomed to a different way of operating, based more on the logic of solving problems through small adjustments rather than pursuing a single objective. So much so that it invested little in shaping and highlighting the target. Nor did it keep to its quarterly review: it was only in September, when the situation had evolved in such a way that the target no longer made sense (the differential was worth 1.25%), that the directors considered “*that it was becoming urgent for the [Executive] Committee to redefine the objectives it had set for itself at its meeting of 16 May last*” (Minutes, 05/09/89). However, no redefinition will be implemented before the following May 16!

The instability of the prevailing European Monetary System was of course a factor that complicated the revaluation of a credible target. But that was not all. The fear of a paralyzing sacralization durably haunted the NBB's leaders. Thus, the Governor regretted, for example, that the rates on Treasury certificates "would suffer the same fate" as the old discount rate: "*this instrument is currently sacred (...). The media, moreover, take a certain pleasure in counting the rate increases that have occurred. This greatly reduces freedom of maneuver*" (PV, 11/10/89, p. 7). The impact of transparency on the room for manoeuvre of Central Bankers is causing teeth to grind. It is a similar fear that motivates NBB directors to intervene in the market at a time when their actions are less visible:

The depreciation of the Belgian franc [i.e. its weak position on the foreign exchange market] is permanently present on the screens – in particular at the time of the fixing – and the level of the [NBB]'s interventions can be more or less hidden, except at the fixing (PV, 01/03/90, p. 3)¹⁰.

In fact, the NBB's attitude toward transparency issues will long be ambivalent: it hopes to benefit from the effects of announcements designed to seduce market professionals, while retaining the power left by the grey areas of its action and mandate. The "neither totally predictable nor totally unpredictable" range was one way to resolve this dilemma. Another example occurred during the discussions on the adoption of market-based instruments: a director proposed that the NBB set itself "*limits on the*

¹⁰ The directors will hesitate for a long time on this subject: "*It is important not to take a definitive position on whether or not the [NBB] should keep its interventions in the foreign exchange market secret. Only circumstances and opportunity should inspire the [NBB]'s conduct in this area*" (PV, 04/01/91, p. 26).

variations of its [foreign exchange] reserves” in order to increase the credibility of its commitment to support the FB and thus enjoy the “*announcement effect*” (PV, 13/04/90, p. 2). The Governor decided in the other direction: “*it is advisable to guard against any dogmatism and to avoid being locked into a kind of straitjacket*” (Ibid, p. 3). Wishing to remain unpredictable and powerful, the NBB’s leaders proposed an imperfectly quantified target and limited their transparency efforts.

An opportunistic step forward

In May 1990, an exceptional situation led the NBB’s directors to reconsider the definition of a quantified target. The horizon of German reunification had weakened the mark to such an extent that a closer linkage between the FB and the mark was possible (see Figure 2). But the success of this project depended on its credibility in the eyes of market professionals. A clear target was therefore seen as a strength, as was a carefully timed announcement: “*It is considered preferable to take advantage of any favorable opportunity to make the new exchange rate policy credible and to avoid any ‘ex abrupto’ political statement that would appear to be artificial and not in line with the real evolution observed in the market*” (Minutes, 16/05/90, p. 5). At the same meeting, the members of the Executive Committee therefore decided that “*the depreciation of the BF against the mark should in the present circumstances be less than or, at most, equal to 0.50%*” (Ibid, p. 3).

To understand this new target, which no longer deals with the interest rate, but directly with the exchange rate, a brief overview of the functioning of the European Monetary System (EMS) is necessary. To guarantee the stability of their exchange rates, the currencies of the EMS member states were all defined with reference to the ECU (the unit of account that was the forerunner of the euro) and were therefore linked to each

other by “bilateral central rates” that could only fluctuate within the margins of the EMS (+/- 2.25%). Thus, in 1990, 1 ECU was worth 39.396 BEF and 1.91007 mark (see Figure 1); the bilateral mark/FB central rate was thus approximately equal to 20.625 (39.396/1.91007) and is represented by the thin continuous horizontal line in Figure 2. The fluctuation band allowed by the EMS implies that this central rate cannot exceed 21.089 (dotted line in Figure 2), but the NBB directors restricted this freedom by targeting a depreciation $\leq 0.5\%$ (thick blue line).

Currencies	Central rates in ECU
German Mark	1.91007
Belgian Franc	39.396
Danish Krone	7.2858
Spanish Peseta	162.493
French Franc	6.40608
Irish Punt	0.792214
Dutch Guilder	2.15214
Portuguese Escudo	195.792

Figure 1 – Central rates within the EMS (from Burda & Wyplosz, 1995)

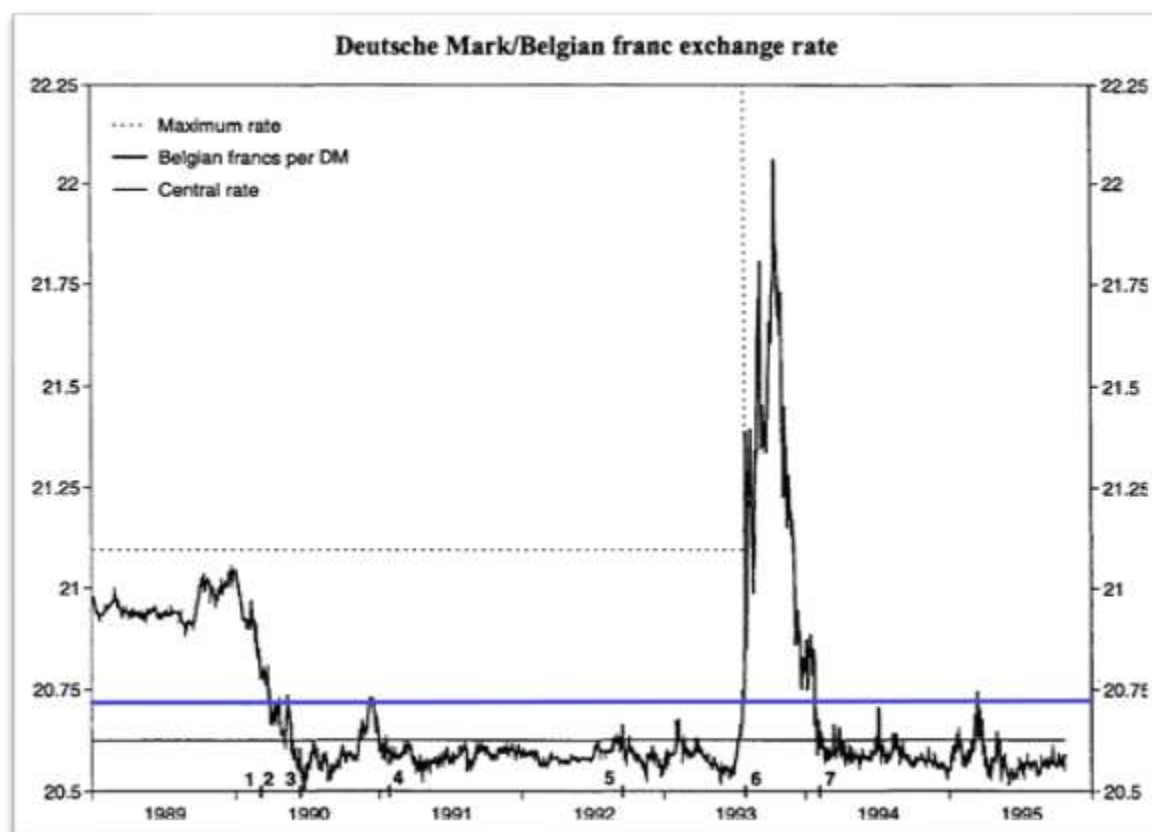


Figure 2 – Mark/BF exchange rate (from Timmermans et al, 1996)

In the new system resulting from the 1991 reform, the NBB mobilized mainly open market operations and credit auctions to support the value of the BF. At the same time, it set itself up as a counterparty to financial intermediaries wishing to sell their surpluses or make up their deficits at the end of the day, but at penalizing rates so as not to substitute for the money market: *“the upper and lower intervention rates should constitute the limits of a band within which all money market rates would fluctuate. These two rates would thus have a precise meaning for monetary policy”* (Annex 1 of the PV, 18/05/90, p. 4). The upper rate of this band – that for advances – was set by the NBB, while the lower rate – that for loans – was set by a historical institution whose existence was threatened by the reform: *“this system [of the band] has the advantage of maintaining the intervention of the IRG [Institut de Réescompte et de Garantie] in the mechanism for settling end-of-day balances, which ensures the survival of this organization”* (Ibid, p. 5). Of course, this concerns the definition of techniques, rather than the target, but it

illustrates an “organizational solidarity” that will come back in the evolution of the exchange rate target.

As for the target itself of a depreciation $\leq 0.5\%$, the NBB’s leaders remained cautious in their communication, especially concerned not to lead to a “paralyzing sacralization.” Thus, the day after the announcement of the target, the Governor replied to a journalist asking about the level of the link to the mark: “*As far as the figures are concerned, we must not be dogmatic*” (quoted in Delvaux, 1990). But this cautious attitude was also motivated by another factor: the NBB was integrated into the EMS and had to justify its new target at the meeting of the Committee of Governors. In particular, it had to demonstrate that the new target did not conflict with the provision of the Basel/Nyborg agreements “*according to which the Governors agreed to make more active, flexible and concerted use of exchange rate variations within the Community band*” (Minutes, 29/05/90, p. 9). The incompleteness of the target was therefore also aimed at not deviating (too much) from the logic of flexibility agreed between the Central Banks of the European Economic Community.

Vague, nonetheless!

In November 1990, the German Central Bank moved its rates slightly. The FB was in a sufficiently favorable position not to follow this small increase, but some directors “*felt that, if only for psychological reasons, the [NBB] should join in the movement*” (PV, 02/11/90, p. 6). In the end, it was decided to make only an anecdotal change, but to reaffirm the NBB’s objective in a press release: “*in the day-to-day management of the money market, the [NBB] will continue to ensure that (...) the Belgian franc oscillates only within narrow margins with respect to the reference currencies*” (Ibid, p. 7). Just as several critics did with regard to the ECB’s “below, but close to”, journalists from *Reuters*

questioned the Governor of the NBB about this vagueness (“*narrow margins*”), alerting him that “*the absence of precise information on this matter worried the market*” (PV, 16/11/90, p. 4). This subject was therefore discussed. The Governor feared “*a certain persistent lack of confidence on the part of market forces in the policy of pegging the Belgian franc to the mark*” (*Ibidem*). This being the case, the Executive Committee maintained the vagueness of the target:

The [NBB] must be careful not to quote any figures concerning the tolerated fluctuation margin for the franc against the mark. Any statement in this area could only get the [NBB] into trouble with its EMS partners (*Ibid*, p. 5).

This point was reiterated when the target was narrowed on the eve of the adoption of the reform instituting market-based instruments:

This target [*“a range of around 0.20%”*], it is understandable, cannot be clearly and publicly formulated, on pain of being accused of non-compliance with the Basel/Nyborg agreements (PV, 21/01/91, p. 4)

Another factor of an organizational nature arose when it came to defining the interest rate differential corresponding to the exchange rate target. Traditionally, the discount rate was set by the Council of Regency (the body that advises the Executive Committee on long-term strategy), but this rate was about to disappear. In order to initiate discussion of this sensitive issue of shared responsibility, one director proposed “*to point out to the Regents that the [NBB] had long since lost its autonomy in setting interest rates, but that it was still in a position to determine the desirable rate differential*” (PV, 25/01/91, p. 2). This is the first time that this justification of insufficient means of action has appeared. And, importantly, it appears in a context of rhetorical strategy. In the end, the solution adopted was that the Council of Regents “*set the lower and upper limits of a*

rate differential range, between which the Executive Committee could vary the differential” (Minutes, 29/01/91, p. 6). The band as a compromise device.

On the occasion of the first review of market-based instruments, the issue of transparency was again discussed. The Committee decided not to increase its communication efforts, because “*the [NBB]’s monetary policy strategy should not be too clear to market participants*” (Minutes, 04/02/91, p. 6). This motive was thus transversal to the discussions within the NBB between 1989 and 1991.

In concluding this case study, it is worth mentioning something that structured many of the Committee’s discussions and probably favored the form of the range, even if it was never explicitly invoked to justify it. Most members of the Committee, and especially the Governor who held considerable power, were staunch liberals. This ideological orientation is reflected, for example, in their willingness, during the reform of the instruments, to apply the “market rate” to auction credits; this position is of course paradoxical, given that monetary policy is justified by the need to modify the market output. Moreover, if the NBB’s lending rate were the market rate, the Central Bank would be depriving itself of its famous “official rate” scrutinized by market professionals! It was explicitly this issue that motivated the reappearance of a discount rate in June 1991: “*this rate will be used to send signals to the market in specific circumstances*” (Annex 1 to the minutes, 15/04/91, p. 3). This respect for the market rate undoubtedly favored a flexible target that allowed the truth about prices to emerge.

But this was certainly not the only reason. The table below shows the main factors identified, together with the corresponding hypotheses from the literature.

Explanations of the vagueness	Occurrences at the NBB	Importance
The fate of market economies	✓ Negotiations with the Regents (<i>“the Bank has long since lost its autonomy in setting interest rates”</i>)	Weak
A desire for power	✓ Resistance to transparency: hidden interventions, deliberate ambiguity about monetary strategy ✓ Renunciation of certain announcement effects that are too costly (limitation of foreign exchange reserves)	Moderate
A free space for the market	✓ Confidence in market output (“market rate” for credits) ✓ Willingness not to show intervention (hiding behind the market?)	Weak
A condition of effectiveness	✓ Range of rates (which cannot be “ <i>totally predictable</i> ”) ✓ Cross-cutting fear of “paralyzing sacralization”	Moderate
An organizational compromise	✓ Respect for EMS agreements (no substitute for the +/- 2.25% band) ✓ Share responsibilities with the Regents (they set the boundaries, the Committee navigates within them) ✓ Maintenance of the IRG (it sets the lower limit for intervention rates)	Strong

4. The Fifth Organizational Path

Before presenting the fifth explanation, it is appropriate to do justice to the first four, each of which has found some echo in our study of the Belgian case. Their heuristic effectiveness is partly due to their origin: these four hypotheses were derived from empirically well-founded social science research – which limits the risk of “scholastic illusion” (a greater threat to hypothetical-deductive models). This common characteristic gives them a pronounced pragmatist tone. The attention paid to the constraints carried by the institutional “already-there” that weigh on decision-making is a pragmatic trait shared by the first and fourth explanations: the multiple forces that impact an open economy (1) or the strategic reactions of financial market operators (4) weigh on the shaping of the target. Investigation, understood as an experimental method that makes it possible to move forward in a situation of uncertainty, is then what makes it possible to justify the

“constructive ambiguity” of the target and the room for manoeuvre that it leaves for the arbitrariness of regulators (2). Finally, the identification of the use by Central Bankers of economic theories allowing them to “hide behind the market” is in line with the spirit of pragmatist research on performativity (3).

The explanatory path we propose in this article extends this pragmatic approach by analyzing the target as an *organizational device*. Because of its centrality in the current economic system, the Central Bank has been more studied as a monetary institution (Touffut, 2008) than as an organization. The result is a widely shared conception, especially since the diffusion of the “independent Central Bank” model, of a body that is both autonomous and homogeneous. However, a more detailed study of the functioning of Central Banks reveals the density of organizational issues. In the case of the NBB, the Quiet Revolution constituted an inter-organizational *test* (with the EMS partners) and an intra-organizational one (between the Executive Committee and the Council of Regency). As we have seen, the target – in its incompleteness – allowed for a compromise between conflicting commitments and prerogatives.

This fifth explanation thus highlights what the incompleteness of the target, understood as a device, *does* to the organization of the Central Bank – in particular, the problems it allows to be solved and those it generates. It seems to us undeniable that this hypothesis works well in the case of the NBB, which saw its birth. The remaining question is the generality of this validity. In keeping with our pragmatist stance, we cannot answer this question *a priori*: only other surveys, conducted from within the former or current Central Banks, will be able to test the validity of this organizational explanation. However, it is clear from the empirical studies already cited that contemporary Central Banks are still grappling with inter- and intra-organizational issues, that is, issues of

dependence and heterogeneity. For example, Fontan's (2016) research has highlighted the permanence of these issues and the challenges they pose in the case of the ECB, despite its reputation for great autonomy. Could the persistent vagueness of its target have anything to do with it?

5. Conclusion

At the end of this article, it appears that it would be both too easy and inappropriate to condemn the vagueness of most Central Bank's inflation targets as mere nonsense. Through a review of the thematic literature and a historical analysis of the Belgian case, we have been able to identify several possible explanations for this state of affairs, which the macroeconomist Galí considered "very hard to understand". The pragmatist dimension of these five explanations reminds us of the contribution of empirical approaches to a fine understanding of contemporary economic phenomena.

In this regard, it would be relevant to investigate the motives of other ambiguous devices that operate at the heart of economic organizations – and that are usually considered delusional or trivial by economists. Research in Social Studies of Finance has already done this work in various fields, such as order-matching software (Muniesa, 2007), grades of listed products (Pinzur, 2016), trader compensation formulas (MacKenzie & Spears, 2014), or stock market indices (Dutermé, 2022). But many other economic devices would deserve to be explored, in order to uncover the factors that have fostered their current form and their effects on the organization they occupy¹¹.

¹¹ To remain in the financial sphere, it would be interesting, for example, to investigate the investment fund ranking system (*Morningstar* style) that plays a central role in contemporary hedge funds.

References

- Anand, A., Basu, S., Pathak, J., & Thampy, A. (2021). “Who Moved The Market”? Analyzing The Role of Federal Reserve Speeches. *IIM Bangalore Research Paper*, 622.
- Barro, R. J., & Gordon, D. B. (1983). Rules, discretion and reputation in a model of monetary policy. *Journal of Monetary Economics*, 12(1), 101–121.
- Belaisch, A., & Cominetta, M. (2021, July 22). Central Banks can take advantage of enhanced ambiguity. *OMFIF*.
- Best, J. (2007). *The Limits of Transparency: Ambiguity and the History of International Finance*. Cornell University Press.
- Blinder, A. (2004). *The Quiet Revolution: Central Banking Goes Modern*. Yale University Press.
- Blinder, A. (1998). *Central Banking in theory and practice*. MIT Press.
- Brash, D. (2001). Central Banks: What they can and cannot do. *Reserve Bank of New Zealand Bulletin*, 64.
- Braun, B. (2015). Governing the future: The European Central Bank’s expectation management during the Great Moderation. *Economy and Society*, 44(3), 367–391.
- Burda, M., & Wyplosz, C. (1995). *Macroéconomie : Une perspective européenne*. De Boeck Supérieur.
- Callon, M. (1998). Introduction: The Embeddedness of Economic Markets in Economics. *The Sociological Review*, 46, 1–57.
- Chwieroth, J. M. (2010). *Capital Ideas – The IMF and the Rise of Financial Liberalization*. Princeton University Press.

- Claveau, F., & Dion, J. (2018). Quantifying Central Banks' scientization: Why and how to do a quantified organizational history of economics. *Journal of Economic Methodology*, 25(4), 349–366.
- de Haan, J. (Ed.). (2000). *The History of the Bundesbank: Lessons for the European Central Bank*. Routledge.
- Delvaux, B. (1990, May 23). Le gouvernement veut placer le franc belge dans le sillage immédiat du mark. *Le Soir*.
- Desrosières, A. (1993). *La politique des grands nombres : Histoire de la raison statistique*. La Découverte.
- Dietsch, P., Fontan, C., Dion, J., & Claveau, F. (2022). Green Central Banking. *SocArXiv*.
- Dutermé, T. (2022). The engineering of stock market indices: winners and losers. *Journal of Cultural Economy*.
- Dyson, K. H. F., & Marcussen, M. (Eds.). (2009). *Central Banks in the age of the euro: Europeanization, convergence, and power*. Oxford University Press.
- ECB, J. (2003). The outcome of the ECB's evaluation of its monetary policy strategy. *Monthly Bulletin*, 79.
- ECON committee. (2021). *The ECB's Revised Inflation Target*.
- Fontan, C. (2016). Une banque centrale au-dessus des nations ? Faire peser les intérêts nationaux au sein de la Banque Centrale Européenne. *Revue française d'administration publique*, 158(2), 491–504.
- Fontan, C., Carré, E., & L'Oeillet, G. (2018). Theoretical perspectives on the new era of Central Banking. *French Politics*, 16(4), 453–470.
- Fontan, C., Dietsch, P., Claveau, F., & Dion, J. (2021). Central Banking and Inequalities: Old Tropes and New Practices. *SocArXiv*.

- Galí, J. (2002). Monetary Policy in the Early Years of EMU. In M. Buti & A. Sapir, *EMU and Economic Policy in Europe*. Edward Elgar Publishing.
- Goodhart, C. A. E. (1984). Problems of Monetary Management: The UK Experience. In *Monetary Theory and Practice: The UK Experience*. Macmillan Education UK.
- Guthrie, G., & Wright, J. (2000). Open mouth operations. *Journal of Monetary Economics*, 46(2), 489–516.
- Hansen, S., & McMahon, M. (2016). Shocking language: Understanding the macroeconomic effects of Central Bank communication. *Journal of International Economics*, 99.
- Hayo, B., & Neuenkirch, M. (2015). Central Bank communication in the financial crisis: Evidence from a survey of financial market participants. *Journal of International Money and Finance*, 59, 166–181.
- Holmes, D. R. (2013). *Economy of Words: Communicative Imperatives in Central Banks*. University of Chicago Press.
- Issing, O. (2019). *The Long Journey of Central Bank Communication*. MIT Press.
- Janssens, V. (1980). Historisch overzicht van de « Central Banking » in België. *Cahier Du Centre d'Etudes Financières*, 8–9, 101–116.
- Jia, C., & Wu, J. C. (2021). Average Inflation Targeting: Time Inconsistency And Intentional Ambiguity. *Federal Reserve Bank of Cleveland Working Paper Series*, 21–19.
- Krippner, G. R. (2011). *Capitalizing on crisis: The political origins of the rise of finance*. Harvard University Press.
- Lebaron & Aykiz Dogan. (2016). Do Central Bankers' Biographies Matter? *Sociologica*, 2.

- Levine, R. (1999). *Bank-based and market-based financial systems: Cross-country comparisons* (Vol. 2143). World Bank Publications.
- MacKenzie, D. (2004). The big, bad wolf and the rational market: Portfolio insurance, the 1987 crash and the performativity of economics. *Economy and Society*, 33(3), 303–334.
- MacKenzie, D., & Spears, T. (2014). ‘A device for being able to book P&L’: The organizational embedding of the Gaussian copula. *Social Studies of Science*, 44(3), 418–440.
- Maes, I. (2010). *A century of macroeconomic and monetary thought at the National Bank of Belgium*. NBB Publication.
- Maes, I., Buyst, E., & Pluym, W. (Eds.). (2005). *La Banque nationale de Belgique, du franc belge à l’euro : Un siècle et demi d’histoire*. Racine.
- Maes, I., & Quaglia, L. (2003). The Process of European Monetary Integration: A Comparison of the Belgian and Italian Approaches. *NBB working paper*, 40.
- McNamara, K. R. (1999). *The Currency of Ideas: Monetary Politics in the European Union*. Cornell University Press.
- Muniesa, F. (2007). Market technologies and the pragmatics of prices. *Economy and Society*, 36(3), 377–395.
- Neumann, M. J. M. (1991). Precommitment by Central Bank independence. *Open Economies Review*, 2(2), 95–112.
- Pinzur, D. (2016). Making the grade: Infrastructural semiotics and derivative market outcomes on the Chicago Board of Trade and New Orleans Cotton Exchange, 1856–1909. *Economy and Society*, 45(3–4), 431–453.
- Powell, J. H. (2020). *New Economic Challenges and the Fed’s Monetary Policy Review*. Navigating the Decade Ahead: Implications for Monetary Policy, Wyoming.

- Sims, C. (2004). *Limits to Inflation Targeting*. National Bureau of Economic Research, Inc.
- Svensson, L. E. O. (2007). Optimal inflation Targeting: Further Developments of Inflation Targeting. In *Central Banking, Analysis, and Economic Policies Book Series*. Central Bank of Chile.
- Timmermans, T., Delhez, P., & Bouchet, M. (1996). Interest and exchange rate volatility in Belgium. *BIS Conference Papers*, 1, 17.
- Touffut, J.-P. (2008). *Central Banks as Economic Institutions*. Edward Elgar Publishing Ltd.
- Wansleben, L. (2018). How expectations became governable: Institutional change and the performative power of Central Banks. *Theory and Society*, 47(6), 773–803.
- Woodford, M. (2005). *Central Bank Communication and Policy Effectiveness*. NBER Working Paper, 11898.