



How expectations became governable: institutional change and the performative power of central banks

Leon Wansleben¹

Published online: 21 November 2018
© The Author(s) 2018

Abstract

Central banks have accumulated unparalleled power over the conduct of macroeconomic policy. Key for this development was the articulation and differentiation of monetary policy as a distinct policy domain. While political economists emphasize the foundational institutional changes that enabled this development, recent performativity-studies focus on central bankers' invention of expectation management techniques. In line with a few other works, this article aims to bring these two aspects together. The key argument is that, over the last few decades, central banks have identified different strategies to assume authority over “expectational politics” and reinforced dominant institutional forces within them. I introduce a comparative scheme to distinguish two different expectational governance regimes. My own empirical investigation focuses on a monetarist regime that emerged from corporatist contexts, where central banks enjoyed “embedded autonomy” and where commercial banks maintained conservative reserve management routines. I further argue that innovations towards inflation targeting took place in countries with non-existent or disintegrating corporatist structures and where central banks turned to finance to establish a different version of expectation coordination. A widespread adoption of this “financialized” expectational governance has been made possible by broader processes of institutional convergence that were supported by central bankers themselves.

Keywords Expectations · Financialization · Monetarism · Monetary policy · Neoliberal institutional change · Performativity

For a long time, the practices of central banks reflected the interstitial positions that these organizations occupied in between banking sectors and the state. Accordingly, the art of central banking consisted in mediating between the interests and rationalities of governmental officials and financial elites—work that happened “in the shadows and

✉ Leon Wansleben
l.j.wansleben@lse.ac.uk

¹ London School of Economics and Political Science, Houghton Street, London WC2A 2AE, UK

behind the scenes” (King 2016, p. XI). But in the past 50 years, central banking has been radically transformed. Monetary policy has emerged as a distinct and highly visible public policy domain (Capie et al. 1994; Fisher 1994; Goodhart 2004, 2011; Siklos 2002; Singleton 2011). By claiming exclusive responsibility for this domain, and by giving monetary policy an increasingly prominent role in the broader conduct of macroeconomic management, central bankers have acquired unprecedented power and now count as the quintessential technocratic authorities of our time (Jacobs and King 2016; Tucker 2018).

A diverse set of literatures in political economy, sociology, and anthropology addresses the conditions and processes that have led to this change. While political economy has tended to stress paradigmatic shifts in the conduct of economic policy (Blyth 2002; Hall 1986, 1993) and foundational institutional changes towards “hard money” regimes (Fourcade-Gourinchas and Babb 2002; Goodman 1992; Streeck 2014), more recent studies in sociology and anthropology explore innovations in the central banks’ “performative” expectation management techniques (Braun 2015; Hall 2008; Holmes 2013; Nelson and Katzenstein 2014). The lesson learnt from these literatures is that central banks’ power reflects institutional configurations as well as successful employments of future-oriented, “expectational” governing techniques. This insight is particularly reflected in Greta Krippner’s (2011) work, who combines an original analysis of transformations in the US economy with a detailed account of changing discourses and modes of intervention at the Federal Reserve. According to her analysis, the Fed assumed a facilitative role towards financial expansion and simultaneously used markets to depoliticize the distributional consequences that followed from its own policy regime (see also Konings 2011; Mallaby 2017; Jacobs and King 2016). Braun (2018b) pursues a parallel argument for the European Monetary Union and suggests that the European Central Bank actively fosters a closer integration and expansion of financial markets in order to strengthen its own governing capacities (see also Gabor and Ban 2016).

Krippner, Braun, and others thus reconstruct a particular alliance between the market-based practices of central banking and dominant institutional configurations found in “financialized capitalism” (Carruthers 2015). In this article, I aim to generalize this finding and relate it to a broader comparative frame. For that purpose, I draw on Beckett’s (2016) idea that capitalist democracies are centrally about cooperation and conflict around the definition of hegemonic expectations. Since central banks confront the challenge of orienting expectations towards monetary stability goals, they thus need to assume a strategic, coordinative position within these “expectational politics.” I suggest that, with a comparative lens, we can identify different resources that central banks draw on in order to assume authority over expectations, and that they rely on strategic relations to constituencies with leverage over expectational dynamics in the respective monetary spheres.

Through this lens, we can analyze and compare how two regimes of performative central banking emerged during the past 50 years. The first one originates from experiments with monetarism during the 1970s (Laubach and Posen 1997). There exists much controversy and confusion about this particular historical phase (van Gunten 2015). Some authors closely associate the rise of monetarism with a paradigm shift towards neoliberalism (Fourcade-Gourinchas and Babb 2002; Hall 1986, 1993), while others stress that money supply control never consolidated as a proper monetary

policy technique (e.g., Braun 2015). By showing how central banks and other actors drew on monetarism in order to engage with the broader politics of expectations, I aim to clarify under what conditions “monetarist performativity” succeeded or failed. Central banks that successfully performed monetarism occupied positions of “embedded autonomy” (Evans 1995) vis-à-vis the corporatist institutions of “coordinated market economies” (Hall and Soskice 2001) and orchestrated expectations through a popular rhetoric of monetary stability, discipline, and restraint. The banking sector played a major facilitative role in this concertation by maintaining stable routines of reserve management with central banks (Johnson 1998). But these highly specific “felicity conditions” (Austin 1962) were not met in most capitalist democratic states. Intense labor conflicts (Goldthorpe 1978; Fourcade-Gourinchas and Babb 2002), adversarial politics (Prasad 2006), and fragmented and open financial sectors undermined early attempts in the majority of countries at concerting expectations with monetarist techniques. Authorities in these countries failed to define money authoritatively; they did not accumulate credibility through their targeting frameworks; and they failed to enlist powerful constituencies into expectational coordination processes.

This re-interpretation and contextualization of monetarism will help setting the scene for inflation targeting as the most powerful and most widely adopted expectational governance regime. As mentioned above, Krippner, Braun, and others point to its close association with financialization as a structural process and institutional transformation in capitalist democratic states. Through my comparative lens, I can add two findings to this literature: First, it was the very inability of strategically important central banks to bring about the conditions required for the “felicitous” use of monetarism that explains their subsequent turn to inflation targeting as a fundamentally different version of expectational governance that is reliant on a radically different set of supportive conditions. Rather than using corporatism, inflation targeters rely on weak labor unions (Hung and Thompson 2016) and they actively foster market-based versions of banking in order to generate a version of future-oriented coordination that is oriented towards finance. Secondly, my comparative lens provides a new perspective on the central banks’ recent convergence towards inflation targeting techniques. In contrast to monetarism, inflation targeting could travel beyond its “incubator contexts” in the United States, Britain, and New Zealand (Hetzel 2008; Holmes 2013) because its enabling conditions—interconnected, liquid markets, formal operative central bank independence combined with technocratic prestige, and weak labor unions—spread in conjunction with the respective intervention techniques. Key for the wide adoption of inflation targeting thus was a process of institutional convergence (Baccaro and Howell 2017) partly supported by central banks themselves.

In the following, I elaborate on this comparative perspective by discussing two cases that have played fundamentally different and, in some sense, complementary roles in the broader genealogy of expectational governance regimes. The Swiss National Bank managed to reduce inflation already during the mid-1970s and thereby became a poster child of “applied monetarism” (Brunner 1983). In this article, I show that this early success emerged from the central bankers’ experimental discovery of strategic and political advantages derived from communicating their decisions through monetarist language. The SNB’s embedded authority vis-à-vis corporatist structures allowed the central bank to turn monetarist language into a device for coordinating expectations among diverse constituencies within the Swiss “monetary space” (Dodd 1994). My

contrasting case is Britain—a country that experienced entrenched monetary crises and conflicts throughout the 1970s and where monetarism could not generate any stabilizing performative effects. Particular macro-conditions contributed to a highly adversarial politics of expectations in Britain, and the Bank of England acted from a position of embedded *influence* with the Treasury and City of London that failed to give it sufficient leverage over these broader expectational dynamics. My research largely focuses on these divergent paths, but also suggests how the respective central banks arrived at inflation targeting during the 1990s through fundamentally different avenues: Confronted with accelerated financial growth and globalization, the Bank of England, following the Federal Reserve, became one of the incubator contexts for developing a new regime of expectation management predicated on coordination with interconnected and liquid markets; and the Swiss National Bank, like the German Bundesbank, became a late adopter of this regime, facilitated by a change of liability management techniques among “universalist” banks (Hardie et al. 2013) and a consolidation of employer dominance within corporatist institutions (Baccaro and Howell 2017).

In the following section, I provide a more extensive discussion of the literatures in political economy, sociology, and anthropology in order to position my article within ongoing debates about the construction of monetary policy and the performative power of central banks. Here, I also introduce the concept of expectational politics (Beckert 2016) as a way to extend a promising line of research that integrates institutional-contextual with performativity-focused arguments. I then introduce my cases and methodologies and turn to a detailed reconstruction of experiments with monetarism in Switzerland and the United Kingdom. In the discussion section, I relate my empirical findings to the comparative genealogical perspective on inflation targeting proposed above.

Explaining central bank power: political economy, performativity, and the shape of “expectational politics” in different institutional spheres

As suggested in my opening passages, explaining the construction of a distinct public policy domain of monetary policy and a related growth in central bank power requires paying attention to far-reaching reconfigurations in political economies and connecting these reconfigurations to a process of innovation in central banking that has led to the introduction of future-oriented expectational governance techniques. Central banks’ power is performative; but performativity itself depends on “felicity conditions” that go beyond the rationalized, purposefully controlled variables of monetary policy or isolated aspects of institutional design. The existing literature has long failed to bring these aspects together and develop a more integrated approach. I thus briefly discuss some of the pitfalls in dominant lines of research and argue that Beckert’s notion of expectational politics can inform a broader comparative perspective that extends a promising stream of literature about a symbiosis between inflation targeting and “financialized capitalism.”

One difficulty in understanding the emergence of central bank power arises from strategies in mainstream political economy (PE) of relating institutional structures, programmes of political intervention, and macroeconomic outcomes. To be sure, the

PE literature has provided deep insights on inflation and money politics as symptoms of political-economic crises and conflicts in capitalist democratic states (Burns et al. 1984; Goldthorpe 1978; Offe 1973; Streeck 2014). We can also draw on a wealth of qualitative-comparative and quantitative studies that relate different institutional variables (polity structures, labor relations, etc.) and shifting weights of “macro-groups” to policy priorities and outcomes (Fourcade-Gourinchas and Babb 2002; Hung and Thompson 2016; Ingham 2004, p. 156). But underlying causalities have oftentimes been depicted in mechanical ways. This has tended to blind political economists to the constitutive role that organizational innovations have played in generating new governing techniques (for a related critique, see Herrigel 2010). A related problem is that political economists have been unable to adequately conceptualize expectations—“present futures” (Esposito 2011)—as ontologically distinct problems and resources for monetary governance. The latter problem is particularly reflected in discussions of monetarism, which is often presented as straightforward control of the money supply, complemented in some studies with a theorization of central bank communication as a strategic “Stackelberg game” (Barro and Gordon 1983; Iversen 1998)—i.e., a signaling and decision-making sequence between a utility-maximizing authority and economic agents with rational expectations. But central bank power is derived neither from mechanical causalities nor from rational strategic games. To be sure, central banks can generate diffuse and retarded economic effects through a forceful manipulation of policy levers (i.e., interest rates), as Fed Chairman Paul Volcker did in 1979 (Krippner 2011). But reliable, predictable governability only arises through central banks’ purchase over processes of expectation formation in the economy (Gabor 2008; Laubach and Posen 1997). These processes cannot be captured with rational expectations models because they are ultimately anchored in actors’ *belief* that central banks can maintain monetary stability (Beckert 2016, p. 110; Hancké 2013, p. 18; Nelson and Katzenstein 2014; van Hees and Garretsen 1995; Orléan 2008).

But political economists are not alone in maintaining reductionist accounts. Performativity-scholars following Callon’s (1998) lead have often committed the same mistake (Konings 2018). When reducing performativity to the enactment of expertise, they support a kind of technocratic euphoria that was first brought to life by promoters of inflation targeting regimes (Bernanke and Gertler 1999; Blinder 2004; Mishkin 2007; Woodford 2003). To be sure, most studies with a focus on organizational dimensions of central banking avoid euphoric technocratic claims. They rather offer nuanced and critical perspectives on deliberative framing processes in monetary policy committees (Abolafia 2012; Fligstein et al. 2017; Golub et al. 2015); on communication strategies (Tognato 2012; Velthuis 2015); or on the modeling and forecasting work done in central banks (Hirschman and Berman 2014; Braun 2015). Yet, the mentioned studies fail to *challenge* explicitly the prevalent technocratic framing of these practices in mainstream economics because they provide no independent analysis of the broader institutional ecologies in which central banking is performed. As a result, we know very little about the “felicity conditions” that allow certain versions of expectation management to generate stabilizing effects. These problems particularly surface in Douglas Holmes’s (2013) *Economy of Words*, where he largely depicts the governability of “present futures” as technocrats’ success.

There exist a few works, though, that successfully avoid these reductionisms and that showcase how we can relate transformations in broader institutional configurations

to key innovations in future-oriented, performative policy techniques. In particular, Krippner (2011) succinctly demonstrates how, in the course of the 1980s until 2000s, a symbiotic relationship emerged between accelerated financialization and growing central bank power in the United States (see also Konings 2011). Structural changes in the economy supported a shift of accumulation processes from labor and consumption to financial markets (Krippner 2005; Stockhammer 2008). The Fed was able to profit from and reinforce this transformation by turning its ever-closer coordination with markets around low inflation expectations into a new “paradigm of governability” (Braun 2018a) for the economy as a whole. The neoliberal regime emerging from these developments relied, on the one hand, on expansions in housing and consumer credit (Prasad 2012; Quinn 2017); and on the other hand, the Fed temporarily managed to stabilize this financialized configuration by depoliticizing the resultant imbalances as “natural” market outcomes (Krippner 2011).

My article extends this latter line of research in two respects. First, I seek to provide a more general conceptual foundation for theorizing the described alignments between particular institutional configurations and particular performative techniques. For that purpose, I draw on Beckert’s concept of expectational politics. Beckert (2016) introduces this term when elaborating on the central role of expectations in enabling and coordinating capitalist action. If expectations are built socially under conditions of uncertainty, he argues, it is plausible to assume that power in capitalism critically resides with those actors, who define hegemonic or “doxic” expectations (Bourdieu 1977). Developing this argument further, we can think of the emergence of contemporary monetary governance as a process, whereby central banks rose to a position from where they could orchestrate normative as well as cognitive expectations about monetary order in a way that bolstered their “logistical power” (Joyce and Mukerji 2017) in the economy at large. In order to assume this strategic role, central banks depend on two sets of conditions: First, they need to acquire sources of authority vis-à-vis expectational politics. Their status (e.g., their ability to intervene and to communicate independently), their relations with different constituencies (Maman and Rosenhek 2009), their prestige as technocratic organizations (Abolafia 2012; Braun 2015; Mudge and Vauchez 2016; Rosenhek 2013), and the specific techniques being used in monetary policy, all influence whether central banks can intervene in expectational dynamics authoritatively or not. Secondly, depending on industrial relations, the structure of expert discourses (Van Gunten 2015), and the institutional orders of finance, expectational politics come in different shapes. For instance, expectation management fails to offer a viable strategy of intervention in times of overt distributional conflict. Central banks thus can only construct performative power by connecting to a consolidated configuration of institutional order with dominant political-economic forces, as found in corporatist industrial or financialized capitalism.

Based on this contextual perspective on central bank power, my second contribution is to suggest a comparative scheme for analyzing different central banking regimes that have emerged from different political-economic realms. The mainstream literature on monetary policy has failed to address this question because it almost exclusively focuses on one institutional variable to explain differences between states—whether or not, and how much, “accountable independence” (Lastra 1996) is enjoyed by the

respective central bank (Cukierman 1994). My own comparison takes up critiques of this view, which do not deny that the particular status of a central bank matters (Bodea and Hicks 2015), but that broaden the view to a wider set of institutional conditions that influence the particular shape of monetary policy regimes. Works associated with the “varieties of capitalism” (VoC) approach (Hall and Soskice 2001) have been particularly instructive in this regard. Authors following this approach propose that we can observe different expectational coordination processes between economic agents and central banks depending on whether these processes take place in “liberal” or “coordinated market economies” (Hall and Franzese 1998; Hancké 2013; Iversen 1998; Scharpf 1987). Their focus is particularly on wage bargaining, with the suggestion that more liberal, fragmented labor markets are less conducive to coordination and thus require central banks to intervene with costly disinflation. This contrasts with the situation in economies with centralized wage bargaining, which provides critical institutional support for performing disinflationary policies with communicative means. I here take up this distinction and extend it in two respects. First, the VoC literature has insufficiently accounted for the role and changing shape of finance. Banking sector structures are relevant as the immediate ecologies in which central banks attempt to implement and transmit their policies (Braun 2018b; Johnson 1998: 9; Krippner 2011). Finance also matters because the more public and private resources are channeled through financial markets, the more these markets develop into the primary “insider audience” (Braun 2015, p. 369) for monetary policy makers. Second, as argued above, key for central bank power is actors’ *belief* in central banks’ ability to govern monetary relations. We therefore need to overcome the game-theoretic underpinnings of many VoC models and include ritualistic procedures and narratives as constitutive features of monetary policy regimes. Accordingly, one key distinction to be drawn between different regimes is what types of procedures and narratives can gain credibility (Beckert 2016) with key constituencies, including observers that are conceptualized as “rationalized others” (e.g., journalists, think tanks, and financial analysts) in neo-institutionalist theory (Meyer et al. 1997).

The comparative outlook of my study should not lead to a one-sided emphasis on difference, though. Rather, the very problem posed by the genealogy of central bank power is how a world with different regimes of central banking adapted to highly specific institutional settings has gradually given way to a world in which central banks increasingly look alike and use highly codified techniques that apparently generate reliable performative effects in a variety of countries. The existing literature proposes two broad strategies of looking at this development. One resonates with the political economy school discussed above and emphasizes processes of *institutional convergence* (e.g., in industrial relations) during the past decades (Baccaro and Howell 2017; Polillo and Guillén 2005). The other focuses on the growing similarities in central banking techniques and explains this development in terms of transnational epistemic communities (Marcussen 2005, 2009) and the dominance of a particular conception of economic science (Fourcade 2006). In this article, I try to relate *both* trends to more specific histories of experimentation within, and translations between countries, showing that successes and failures with expectation management in particular settings were critical for the gradual emergence of a widely adopted monetary policy regime (McMichael 2000). As discussed below, this story begins in the 1970s.

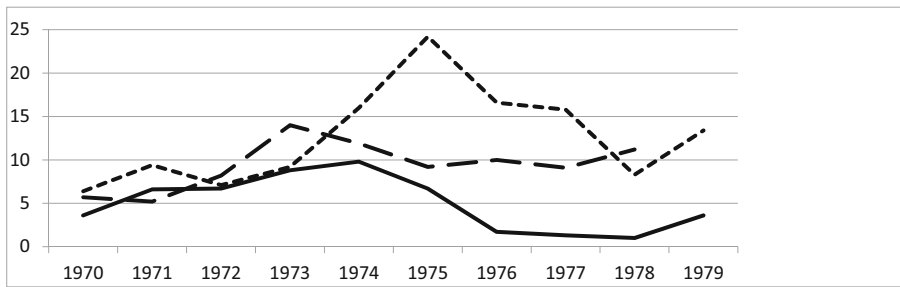
Case selection and methodology

Since the aim of this article is to trace how central banks began to engage reflexively in expectational politics and how they constructed performative power on these grounds, I need to go into considerable empirical detail and thus must limit the number of cases I discuss. In the following comparative analysis, I focus on just two: Switzerland and the United Kingdom. I selected these two countries because they represent two dominant and complementary paths towards performative central bank power (see Fig. 1). The Swiss National Bank succeeded in taming inflation already during the 1970s and thereby became an early “role model” of how to use monetary policy tools effectively (Brunner 1983). With its strong parallels to the German case (Laubach and Posen 1997), Switzerland allows us to reconstruct how corporatist institutional configurations and monetarist expectation management became aligned. In many respects, Britain stands on the opposite end of the spectrum. During the 1970s, the Bank of England proved unable to mobilize monetarist techniques in order to assume authority over a highly contentious expectational politics characterized by distributional conflicts and ideological polarizations (Bernanke and Mishkin 1992, p. 214; Bernanke et al. 2001). But as I attempt to show in the “Discussion” section below, the Bank of England’s early failure was even more consequential for the long-term development of monetary policy than Switzerland’s early success. For it was on the back of the central bank’s inability to use monetarist techniques performatively in a “liberal market” context that inflation targeting, as a “financialized” expectation management regime, emerged. In that sense, the British case can be likened to the US trajectory, as succinctly characterized in Krippner’s (2011) and Konings’s (2011) works.

The evidence being used in the following section comes from a diverse set of sources: I collected documents from eight archives in Switzerland and Great Britain and conducted oral history interviews with persons who were involved in policy making or policy debates during the 1970s.¹ While the interview data suffer from possible false memories and biases frequently found in personal retrospective accounts, I could often triangulate interviewee statements with historical sources and thereby evaluate the truthfulness of accounts. A list of interviewees, including biographical information, is provided in the Appendix Table 2.

I have bundled this voluminous and heterogeneous empirical material to reconstruct trajectories of experimentation during the 1970s and their divergent outcomes. In the next section, I provide detailed narratives of these trajectories. In the Discussion-section, I then use this analysis to contextualize early experiments within longer, convergent trajectories towards inflation targeting regimes.

¹ The respective archives in Switzerland are: Swiss National Bank Archive (SNBA); Swiss Federal Archives (SFA); Swiss Economic Archive; online archive of the *Neue Zürcher Zeitung* (NZZ); Archive of the Swiss Bankers’ Association (SBA Archive). In Britain, I visited the Bank of England Archive (BoE Archive) and the National Archives (NA). I also used the archive of the Bank for International Settlements (BIS Archive). Abbreviations of the archives’ names are used for referencing purposes.



Inflation statistics (annual percentage changes in consumer price indices) for Switzerland (solid line), Great Britain (short dashes), and OECD average (long dashes); source: OECD.

Fig. 1 Inflation statistics (annual percentage changes in consumer price indices) for Switzerland (solid line), Great Britain (short dashes), and OECD average (long dashes); source: OECD

Divergent paths of monetarist experimentation in Switzerland and the United Kingdom

Switzerland: from “sleepy” central banking to the orchestration of monetarist beliefs.

The collapse of Bretton Woods marked a key event for the subsequent development of monetarist expectation management in Switzerland. The central bank itself had abandoned a fixed exchange rate of the Swiss franc to the US dollar in January 1973 when it was confronted with a massive wave of capital inflows from Italy and the United States (Halbeisen and Straumann 2012; Straumann 2010). But at the moment of their decision, the central bankers did not see the transition to flexible exchange rates as a turning point. Rather, the SNB took this consequential decision for short-term reasons – because extensive US dollar purchases were perceived as a threat to domestic monetary stability and because the central bank feared losses on the growing amounts of dollar assets on its balance sheet.²

Rather than being perceived as an opportunity, a regime of flexible exchange rates thus first triggered a larger political and institutional crisis in Switzerland. For most of the 1970s, the central bankers and the Secretary of Finance envisaged a return to fixed exchange rates. However, Swiss plans to join a European regime of fixed parities failed because the Swiss were initially unsure about the terms and conditions for joining and later encountered opposition to their membership from France (Halbeisen 2005). This meant that Switzerland continued to struggle with an appreciating currency that posed serious difficulties for the country’s sizable export industry. In that same period, inflation also rose from a moderate 3.5% in 1970 to almost 9 % in 1973 and up to 10 % in 1974. Even prior to the SNB’s decision to “float,” the government and the central bank had attempted to contain this inflationary trend. But when the crisis became more pressing, there existed no adequate basis for a response. It became increasingly clear that the informal and temporary anti-inflation

² In the SNB’s press release from 23rd and the protocol of the SNB Directorate meeting from 25th January 1973, floating is presented as a “temporary” measure (SNBA).

measures that had been used during much of the post-war period (*Gentleman's Agreements* with commercial banks) were no longer effective (Bernholz 2007). Moreover, entrenched opposition to centralized state power and vested banking interests prevented the legal reforms needed to introduce more draconic controls over the domestic credit supply.

However, despite these clear signs of crisis, it is important to note that pressure on the authorities from politicians, experts, and interest groups remained weak. Political opposition to government policies and electoral competition for alternative solutions were virtually absent in Switzerland. To be sure, parliamentarians from different parties stressed their concerns for inflation as national problem “No. 1”³; most policy makers also promoted a proto-monetarist interpretation of the crisis.⁴ However, the political culture of “Concordance” and the weakness of electoral competition in Switzerland meant that political mobilizations had hardly any impact on actual policy-making.⁵

A similar argument can be made about the role of economic expertise. Monetarism quickly assumed a hegemonic status in academic debates. In contrast to other countries, post-war Keynesian macroeconomics had never taken hold in Switzerland. Many professors instead maintained their sympathies for Hayekian and *ordo-liberal* ideas. The new scientific monetarism developed in the United States thus found fertile ground among the Swiss academic elite. Two economists were particularly important in this cross-Atlantic translational work (Ban 2016; Bockman and Eyal 2002): Karl Brunner, a Swiss national who had taken up a professorship at the new University of Rochester Business School in 1971 (Fourcade and Khurana 2013); and Juerg Niehans, also a Swiss with a chair at Johns Hopkins. Besides Milton Friedman, Brunner counts as the eminent figure in advancing and promoting monetarist ideas.⁶ In Switzerland,

³ See, e.g., the protocols of parliamentary debates on 5th March and 18th September 1974 (SFA).

⁴ In a parliamentary initiative—the “Motion Franzoni” (named after the initiator Enrico Franzoni)—in September 1974, some twenty conservative parliamentarians asked the government and central bank to bring monetary growth into line with the growth of real GDP and additionally urged the government to reduce the federal deficit (See Motion Franzoni, protocol of parliamentary debates from 17th September 1974, SFA). Nello Celio actually agreed with these proposals, arguing that “excessive liquidity and a circulation of too much money are the main causes of inflation. We must, by all means, try to reduce the money supply.” (Protocol of parliamentary debates, 5th October 1972, FSA). Also see the protocol of a meeting of the SNB Directorate on 23rd October 1974 (SNBA).

⁵ The “magic formula” for distributing the seats in government among the different parties remained identical from 1959 until 2003. This also implied that ruling policy makers were not sanctioned on the grounds of their “wrong” decisions and power was not redistributed to those politicians with alternative economic policy agendas. To give just some examples, Federal Councillor of finances Nello Celio (1968–1973) remained in power even after his foreign exchange policy had dramatically failed and was succeeded in 1974 by a member of the same party (Liberal-Radicals), George-André Chevellaz (1974–1978). In the economics department, Ernst Brugger (Liberal-Radicals) remained Councillor for almost the entire 1970s (1970–1978). The only party that had consistently advocated flexible exchange rates from the late 1960s onwards, the *Alliance of Independents*, actually lost votes in the election following the involuntary float.

⁶ Brunner is founder of two academic journals (*Journal of Money, Credit and Banking* and *Journal of Monetary Economics*), two important conference series (*Rochester-Carnegie Conference Series on Public Policy; Konstanz Seminars on Monetary Theory and Monetary Policy*), and co-founder of the *Shadow Open Market Committee* (SOMC).

he effectively served as the monopolistic translator of US-style monetarism (e.g., Brunner 1971). But despite their considerable influence in academic circles, neither Brunner nor Niehans succeeded in shaping policy through these ties. Academics in the 1970s generally had weak leverage over economic policy issues. There existed no apparatus of technocratic policy advice and Swiss politicians and bureaucrats held low regard for economists' abstract models and "lofty" ideas.⁷

One would also misread the Swiss case when viewing the arrival of monetarist monetary targeting as a consequence of powerful banking interests prevailing over those of workers and industry, as suggested in many discussions on monetarism (e.g., Ingham 2004; Streeck 2014). First, there existed wide agreement among the various interest groups, and particularly among middle-class savers, that inflation posed a serious concern (Bernholz 1974, p. 119). Secondly, even if we can theorize, following the logic of monetary economics (Mundell 1968), that Switzerland faced a difficult trade-off between stabilizing the domestic price-level *or* avoiding an appreciation of the Swiss currency (under conditions of free capital flows), the implicit interest group conflict associated with this trade-off (Frieden 2002) was not clearly understood. This is best illustrated with reference to the large commercial banks who supported a fixed parity regime that, under conditions of free capital mobility, would have considerably constrained the conduct of monetary policy.⁸ More broadly, then, strong ties and cooperative consultations among bankers, corporate leaders, and trade unionists led to similar, even if inconsistent and poorly rationalized, demands and views.

Weak pressure from politicians, experts, and interest groups thus gave the central bank considerable room to maneuver in this situation of crisis. But the central bankers first felt overburdened by a situation characterized by radical uncertainty. The idea of shaping monetary expectations through their policy tools was not intuitive for bureaucrats, who had spent most of their professional lives safeguarding a fixed parity regime. At the time, the incoming SNB

⁷ In a classic defense of "traditional" central banking, the SNB Director Leutwiler claimed at the very same conference where Brunner promoted his scientific monetarism that, when it came to the question of how to control the money supply, "theory gets lost in the lofty heights [...] Always, in the economic sphere, there will exist a gap between theoretical ideas and political reality" (Leutwiler 1971, p. 278, my translation). Another good example of the feeble role of economics is provided by the absence of serious interventions by economists in the debate about fixed versus flexible exchange rates. For instance, within the SNB's own advisory body, equipped with several professors from Swiss universities, economists expressed diverging opinions regarding exchange rate policies. However, nobody in this group ever tried to develop a policy solution for the central bank, based on "hard" evidence. Even strong advocates of flexible exchange rates, associated with the Mont Perélin Société, failed to challenge the central bank on that matter. Moreover, while being more cautious than Councillor Celio in their critique of economics, the two SNB Presidents Edwin Stopper and Fritz Leutwiler also expressed disbelief in the formalization of economic expertise (see SNBA 2.1 2383). Karl Brunner aimed to change this situation but he personally was too busy with his cross-Atlantic crusade for monetarism and free market politics to do the necessary empirical work for developing specific monetarist policy prescriptions for Switzerland.

⁸ Interview Bernholz with Lademann; see also Bulletin des Schweizerischen Bankvereins Nr. 3 1966: 55 and a UBS bulletin from 1973 (found in SNBA J.217); Loepfè (2011, pp. 244, 392).

President expressed a sense of institutional impotence by remarking that he had “no idea” how to practice monetary policy under flexible exchange rates.⁹

Only changes within the organization and incremental learning from policy experimentation altered this state of affairs. A small but consequential step was taken in the early 1970s with the recruitment of new personnel for the SNB’s small research unit. While occupying a marginal position within the organization, the incoming researchers did important groundwork for introducing scientific monetarism to the SNB. For instance, Alex Galli embarked upon doctoral research for the development of Switzerland’s first systematic monetary statistics.¹⁰ Brunner played a supportive role in this project as a mentor for the young economist. The second recruit was Kurt Schiltknecht, who joined Galli in 1974 to work on a monetary policy strategy, which was informed by Brunner’s ideas. These two economists wrote a proposal for targeting the monetary aggregate M1 (consisting of current accounts plus cash) and suggested that the SNB could hit this target by controlling the central bank’s provision of reserves (cf. Brunner 1968). The respective forecasts used for this strategy were based on crude regression analyses with limited amounts of data; the economists also made a huge leap of faith when stipulating that the central bank could unilaterally control the volume of commercial bank reserves (Goodhart 1983, p. 48).¹¹

But despite its shaky foundations, the economists successfully pitched this strategy to the SNB’s governing body, the Directorate, which adopted their proposal in December 1974.¹² There is a strong indication, though, that this adoption was based on a considerable dose of ignorance among the Directorate and did not imply a pro-active choice for Brunner-style “monetary base targeting” as the SNB’s new strategy. In the press release announcing the first monetary target, the Directors only mentioned the monetary target figure in combination with other measures (e.g., voluntary credit restrictions) and as a political objective to be pursued together with the federal

⁹ Interview Bernholz with Schiltknecht. Halbeisen confirms that “[w]hen the Swiss National Bank discontinued its dollar purchases for exchange rate support purposes on 23 January 1973, no theoretically-backed monetary policy procedure existed that could be applied in a flexible exchange rate environment” (2005, p. 103) Indeed, the whole central bank organization at the time seemed unfit for implementing something like a monetary strategy. The 400 or so employees were trained and employed in order to administer the SNB’s reserve holdings, implement transactions with banks, control the issuance of currency and, above all, produce proper documentation of all these operations; but they were not trained in addressing conceptual problems of monetary policy. Alexander Galli, who joined the central bank’s Economics and Statistics Department (“VOSTA”) in 1973, gives a nice description of the corresponding organizational culture: “At the beginning of the 1970s, the SNB was just one state institution among many. I still remember my first days there: This was a dusty organization with many old ladies, who would sit at their rumbling calculators and produce files. They were all very industrious. And at 12 o’clock, everybody went for lunch. Silence. And at half past one, everybody returned and work continued until five. After that, it turned dark” (Interview with author).

¹⁰ Some attempts in that direction had been made during the late 1960s and early 1970s (by Professor René Erbe in 1969 and the Basle Centre for Economic and Financial Research in 1970); but these attempts had remained unsystematic. As a result, in the early 1970s, the SNB still published monetary statistics with unclear meaning and a dubious calculative basis. Galli was the first to address this shortcoming (see particularly Alexander Galli, “Die Definition der Geldmenge,” 16th June 1972 SNBA 2.1/2406).

¹¹ In their first Proposals for Money Supply Policy in 1975 from 21th October 1974, Schiltknecht and Galli wrote: “In order to better capture the importance of the monetary base for the central bank’s money supply policy, we *assume* that the National Bank can determine the monetary base” (SNBA 2.13.11, pp. 4–5; my translation and emphasis).

¹² SNB press release on 8th January 1975 (SNBA).

government, not as a stand-alone monetary policy adopted by the central bank. Initially, the Directors were also much more concerned about their inability to avoid Swiss franc appreciation and thought that this situation would disallow the conduct of independent monetary policy.¹³ Lastly, and most importantly, the Directors continued to decide on the central bank's policy interventions primarily with an eye on the Swiss franc's external value, not in an attempt to hit their monetary target.¹⁴

This situation changed only gradually, due to situational opportunism and incremental learning inside the central bank. This process was crucially supported by broader economic developments. After the abandonment of a fixed parity in January 1973, the Directors had already considerably downscaled their US dollar purchases and thereby also reduced the rate of expansion of the central bank's balance sheet—what monetarists call the “monetary base” (Rich 1987, p. 5). Partly as an unintended consequence of this move, a recession had begun in 1974, which had contributed to a sudden fall in money-demand and inflation. This implied that a critical precondition for the disruption of an ongoing inflationary process—a drastic change in economic conditions—had been accomplished incidentally, *before* a strategy of monetary targeting had been adopted. When the results of this incidental disinflation became evident in the mid-1970s through reduced inflation rates, the central bank Directors finally found virtue in the researchers' monetarism because it allowed for a post-hoc rationalization of their earlier interventions. In particular, the monetarist framework suggested that disinflation was achieved by an intentional policy move, not by the Directors' unsuccessful attempts at managing the rate of foreign exchange.¹⁵

This experience motivated the Directors to translate the advice from their internal experts into a future-oriented policy language that was conducive to internal sense-making and to public communication (Abolafia 2010). Internally, the targets articulated assumptions about changes in the banks' reserves that were ultimately anchored in relatively stable routines of banking and liquidity management. This meant that, even though targets were frequently based on wrong forecasts or missed, they maintained a certain degree of plausibility within stable routines. On the back of this stability, the SNB then promoted monetary targets in its public communication. In particular, the central bankers soon realized that narrating central bank decisions through monetarism helped depicting the ongoing disinflation as successful constraint of the money supply and to divert attention away from exchange rate developments that troubled the export industry. By the second year of targeting, the SNB officials explicitly stressed these “psychological-political” effects that their targets brought about and consciously used

¹³ In a speech in April 1975, Fritz Leutwiler argued that flexible exchange rates brought more problems than previously assumed and that monetary policy, even under these conditions, was not independent of foreign influences. He explicitly expressed his support for a return to fixed parities (Die Notenbank zwischen Inflation und Konjunkturrückgang, *Neue Zürcher Zeitung* 24th April 1975).

¹⁴ Six weeks after the first announcements of monetary targets, the economist Kurt Schiltknecht contacted President Fritz Leutwiler to claim that the SNB's actions did not correspond to its strategy. In particular, Schiltknecht complained that the Directorate continued to intervene in the foreign exchange markets in an attempt to avoid further Swiss franc appreciation and thereby expanded the monetary base beyond the target (Interview Bernholz with Schiltknecht).

¹⁵ In the proposals for money supply control in 1976, the economists proposed a new procedure of decision making. According to this procedure, economists would set monetary targets annually and specify quarterly sub-targets. They would then provide quarterly assessments of whether or not actual money supply corresponded to these targets (SNBA 2 13.11), correcting, if necessary, the targets for the subsequent quarters.

monetarist language to manipulate public expectations about their policy course.¹⁶ To maximize these symbolic effects, they introduced press conferences, official publications, background conversations with journalists, and regular gatherings with different peak associations.¹⁷ A press department was established to give these actions professional support.

These communicative efforts proved highly successful. Quickly, officials and politicians in Berne absorbed the monetarist message and even oriented *fiscal* policy towards monetarist aims (Baltensperger 1984; Guex 2012; Prader 1981, p. 566).¹⁸ Equally, the representatives of peak associations, who were members of the SNB's own supervisory body, adopted monetarist beliefs and taught their own members—e.g., trade unionists—to articulate their own interests in monetarist terms. The influential daily *Neue Zuercher Zeitung*, which had long-established ties with the central bank, helped promoting the SNB's narrative about how “monetary targeting” supposedly worked.¹⁹

This broad endorsement of monetarist beliefs in the Swiss polity empowered the central bank, which could perform monetary policy by concerting expectations based on these beliefs—a concertation that worked all the better because expectation-coordination was facilitated by strong corporatist structures (Katzenstein 1985) and still rather cohesive and powerful networks between elites (Bühlmann et al. 2012; Kriesi 1980). When, in the late 1970s, it became increasingly evident that the SNB frequently missed its own targets, the central bankers themselves realized that their own power and authority had become partly decoupled from the central bank's ability to steer the banks' volumes of reserves. Leutwiler expressed this understanding in the following words:

The development of monetary aggregates shows that the central bank is far away from achieving its ideals. Indeed, the volatility of monetary aggregates in Switzerland is *greater* than, for instance, in the United States. At the same time, the US monetary authorities face much harsher criticism than the Swiss. If you look for an explanation of that paradox, it is important to recognize that the *results* of monetary targeting are more favorable in Switzerland than the volatility in aggregates would suggest [...] We here have to acknowledge the importance of *psychology*: It is of secondary importance whether the monetary target is three, four or five per cent. *What matters more is that the message sent together with the aggregates is properly understood*: This message consists of the declared will to be serious in fighting inflation; the primary issue thus is *credibility*, which—as shown in the US case—is easily destroyed but difficult to re-build.²⁰

¹⁶ SNBA protocols of the Directorate, 25th November 1976.

¹⁷ The SNB started to hold annual press conferences on its monetary policy course in January 1975.

¹⁸ For instance, in a public defense of the proposed central banking law, the Finance Department stated: “Because money influences the economy, monetary policy focuses on controlling the money supply. Its optimal volume depends on economic growth [...] It is beyond doubt that control of the money supply provides a necessary condition for a stable level of prices over the long term and is inevitable for the smooth functioning of money and capital markets” (Message of the Federal Department of Finance in support of a change of the Federal central banking law, pp. 773–775, SFA).

¹⁹ See, for instance, NZZ articles from 27th November 1976; 2nd February 1978; 16th/17th September 1978; 12th/13th May 1979; 21st August 1979; 15th/16th December 1979.

²⁰ Protocol of the SNB Bank Council meeting 12th June 1981 (SNBA).

It is no wonder, then, that the Swiss National Bank sustained its commitment to monetarism long after Brunner's and Friedman's doctrines had fallen out of favor with academics (Snowdon and Vane 2005, p. 196). Monetary targeting had turned into a source of symbolic power for the central bank that facilitated expectational coordination within a political-economic context held together by consensual politics, strong corporatism, and interconnected elites.

Great Britain: from coordinated macroeconomic policy to expectational crisis.

Britain is the paradigmatic case of “monetary policy failure” and ideological polarization around money politics in the 1970s. In the political economy literature, this case thus has often been cited to exemplify how Keynesian demand management ran into a “stagflation” crisis (Hall 1986); how political-economic conflicts fueled inflation (Goldthorpe 1978; Streeck 2014); and how neoliberals capitalized on this situation with their militant use of monetarist ideas (Fourcade-Gourinchas and Babb 2002; Hay 2001). In this case analysis, I aim to show how these different developments culminated in a crisis of expectations in the late 1970s and why the Bank of England, despite the production of sophisticated expertise and clever maneuvering, failed to intervene in the politics of expectations in effective ways.

A key difference to Switzerland was that in Britain, a powerful “macro-economic policy executive” (Fforde 1983, p. 52) had developed in the post-war era, with HM Treasury at its heart (Peden 2000, p. 438). The decision-making processes within this executive were *not* much challenged by the collapse of the fixed exchange rate system named after Bretton Woods. Rather, the Treasury, under the watchful eyes of the Prime Minister, continued to decide on fiscal policy, monetary policy, the broader strategies of debt management, and exchange rate interventions (Burnham 2007). Meanwhile, the Bank of England maintained control over banking politics (Moran 1984, 1991) and over the money market and debt management instruments used for influencing short- and long-term interest rates (Needham 2014, pp. 14–18).

In the early 1970s, signs of crisis popped up on several fronts. First, in 1967, Great Britain had experienced a current account imbalance crisis. The International Monetary Fund (IMF) had been willing to provide support, but in return requested measures to reduce excess demand resulting in a notorious external deficit. British officials successfully lobbied against the Fund's attempt to apply the IMF's own monetarist model (discussed in Polak 1997) to the UK economy and prevented the imposition of hard “conditionalities.” The compromise found was that Britain would voluntarily constrain “domestic credit expansion” with the use its own macroeconomic policy tools (Goodhart and Needham 2018).

The second problem confronted by the authorities came from the expansion of financial market activities outside the regulated sector, including “offshore” Eurodollar trading and growth in the so-called “fringe” sector (Moran 1984). The authorities themselves had readily accepted these developments in an attempt to restore the international prestige of London as an “entrepôt” for offshore capital (Burn 1999; Green 2016). By the late 1960s, however, Bank of England officials realized that the expansion of offshore finance threatened domestic banking (Ross 2004) and thereby undermined the effectiveness and legitimacy of the Bank's relations to the City (Capie 2010: 488; Turner 2014). Key officials in the Bank thus believed that the central bank

needed to alter fundamentally its banking politics, reducing the regulatory burden on recognized institutions and re-establishing a “level playing field.”²¹

First experiments with monetarism in 1971 resulted from an attempt to resolve these two problems simultaneously by devising new methods of monetary restraint, *not* from any belief in Chicago-school ideas.²² Crucially, the proposal was to put restraint of the money supply at the heart of the government’s broader macroeconomic policy procedures, creating “consistency and coherence of fiscal and monetary decision-making within the wider governmental apparatus” (Fforde 1983, p. 52). This gave rise to a distinctly British version of monetarism called the “counterparts approach” (Goodhart and Needham 2018; Hotson 2010). The idea behind this approach was for the macroeconomic policy executive to coordinate the use of its various tools—fiscal policy, debt management, monetary policy, banking regulation—in order to control the different components that made up the broad monetary aggregate M3 (consisting of cash, current and saving accounts) (Goodhart 1986, p. 81). There prevailed a hope in the Bank and some parts of the Treasury that the executive could thus achieve monetary control by constraining bank credit to the government (i.e., by reducing the fiscal deficit or by selling more government bonds) and to the private sector. These measures should help complying with IMF demands in a way that moved banking politics away from direct credit controls.

While negotiations about these changes took place on an executive level, a new research unit within the central bank provided intellectual support.²³ Within the newly established Economic Section (later called Monetary Policy Group), Charles Goodhart and colleagues justified the Bank’s cautious turn to monetarism by suggesting that monetary policy changes could indeed have an effect on M3 and that changes in M3 would trigger adjustments of prices and GDP (Needham 2014, p. 26; Needham and Hotson 2018).²⁴

²¹ “The lending ceiling created friction and led to a public exchange of letters between the Chairman of the Committee of London Clearing Bankers, David Robarts, and the Governor [...] Relations deteriorated further in 1969, when the Bank ‘fined’ the clearers by halving the interest paid on special deposits [...] Fforde noted in March 1969, ‘cooperation and persuasion have been pressed to their limits already’” (Needham 2014, pp. 30–31).

²² The draft “The Money Supply and Expenditure”, by A.D. Crockett 29th May 1968 and 15th October 1968; and a note by Dicks-Mireaux on the same issue, 12th September 1968 express strong scepticism towards the “American literature” (both from BoE Archive 2A128/1). For journalistic accounts of monetarism in Britain during that period, see e.g., The Money Supply: the Great Debate, Financial Times, 25th October 1968.

²³ “Organisationally, the Economic Section was set up alongside the pre-existing EID structure [...] Staff of the Section –whether permanent or contract staff – tend to be recruited and used as (nevertheless generally able) specialists, e.g., in economics, econometrics or mathematical techniques [...] The direction of EID’s development has already been set with the establishment of the Economic Section with the explicit purpose of providing an economic perspective to policy discussion. This step was not taken to replace the peculiar strength of the Bank’s contribution to UK policy-making which derives from our special relationship with financial markets and institutions. It was rather in recognition of the fact that, despite our ‘market’ expertise, we should be increasingly exposed to a loss of standing and influence unless we also match the growing economic professionalism of those with whom we deal” (Review of EID “George Report”, 29th September 1975, BoE Archive 7A152/1)

²⁴ In their paper on the *Importance of Money*, Goodhart and Crockett (1970) argued that the interest-elasticity of money demand provided no strong evidence for the view - articulated for instance in the Radcliffe Report from 1959 of a continuum between money and financial assets; but also no strong evidence for the monetarist assumption of a negligible substitutability between monetary and financial assets. This implied, for the Bank economists, that the traditional British doctrine of an impotent monetary policy had to be abandoned (Needham 2014: 26), but that, at the same time, any understanding of monetary policy presupposed the careful study of the peculiarities of the British monetary system. Moreover, the Bank economists, while initially identifying relatively strong correlations between money supply and money income, stressed that correlation had to be distinguished from causation, and that money supply could not be treated as exogenous.

Monetary targeting thus made sense to the extent that it allowed authorities to account better for monetary stability concerns and domestic banking interests within otherwise continuous procedures of macroeconomic policy. However, these first attempts at informal monetary targeting failed. The Bank's wish to establish a level playing field triggered a largely unexpected, competitive rage in bank lending (Pepper and Oliver 2001, p. 6), which inflated one of the "counterparts" of M3. In theory, this private lending boom could have been contained with higher reserve requirements or hikes in interest rates. But banks found ever better ways to circumvent the central bank's reserve requirements (Goodhart 1989); and key members of government blocked the Bank's attempt to raise rates. The Prime Minister and the Chancellor feared that higher rates would lead to higher public borrowing costs and wanted to prevent higher charges for mortgage holders and corporations in order to support growth (Needham 2014, pp., 70–71). The Bank officials also failed in their lobbying for interest rate hikes because M3 actually expanded much faster than the larger macroeconomic scenario would have suggested, discrediting monetary targets as useful indicators for a macroeconomic policy based on integrated methods of econometric forecasting (Hotson 2010, p. 8; Oliver 2014).²⁵

First attempts at integrating monetary targets into the coordinated procedures of macroeconomic governance thus failed. This meant that, from the mid-1970s onwards, labor unions more militantly demanded wage hikes in excess of inflation, thereby fueling an ongoing wage-price spiral (Goldthorpe 1978); and participants in the market for government debt occasionally entered into "buyers' strikes," suggesting that existing interest rates insufficiently compensated for the expected real devaluation of the government's promises to pay (Davies 2012). When in March 1976 such a buyers' strike reoccurred in conjunction with a 25% devaluation of the Pound, Britain had to demand IMF assistance yet another time.

Critical for my argument is what happened in response to this crisis of 1976. Bank of England officials had gone through a disappointing experience with monetarism in the first half of the 1970s. They had not been able to muster enough influence on the Treasury and the Prime Minister to achieve interest rate hikes or restrain fiscal spending. Additionally, though, they had been disappointed by their exercise in forecasting monetary developments with monetarist tools. As Goodhart and his colleagues had discovered through continuous econometric research, the causal connection between M3 and money income and, more generally, the money demand function expressing relationships among the volume of money, its velocity, and economic output had broken down. As Goodhart wrote in a conference paper in 1974, "[i]t has not been

²⁵ "This research [showing a fairly stable relationship between money holdings and current and prior incomes and interest rates, *lv*] provided some supporting rationale for the major change of policy in 1971, with the adoption of Competition and Credit Control; nevertheless such research had a fairly peripheral role; the main objective of the policy change being to get rid of the incubus of credit ceilings, whose disadvantages were being increasingly noxious." (Goodhart, Bank of England Research on the Demand of Money Function, 2nd September 1974, 2A128/12, p. 9) See also Needham (2014: 35; 45), who sees a positive role for research in convincing those responsible for open market operations that more flexibility would not be harmful for expectation formation in the gilt-edged market.

possible to discern clearly in the UK the effect on the economy of altering the rate of expansion of the monetary aggregates.”²⁶

Executives within the Bank of England thus settled upon a strategy that would put monetarism to a quite different use. Instead of promoting monetary targets as indicators with technical credibility within the procedures of macroeconomic planning, they suggested to the Chancellor a different reason for endorsing monetarism: Publicly announced M3 targets would send a signal of confidence to the government bond market that had become increasingly attentive to the monthly monetary statistics published by the Bank (Hotson 2017, pp. 137–138; Oliver 2014, p. 218); and, as a useful side-effect, the language of “targetry” should allow the Chancellor to discipline internally other government departments in defense of fiscal austerity. The central bankers believed that, should the Chancellor accept this strategy, the targets gave them more leverage over macroeconomic policy because they were the experts observing market developments. Publicly announced targets would thus be outward-oriented to shape the “climate of opinion, expectations and attitudes” (cited in Oliver 2014, p. 218) in finance; and they would internally serve to put “a tighter robe around the Chancellor’s neck” (cited in Needham 2014, pp. 90–91).²⁷ Indeed, Chancellor Denis Healy—to the distaste of Keynesian Treasury officials—reluctantly accepted these Bank of England proposals. As these officials noted in 1977 “since July 1976, the [Bank of England, Iw] Governor had pushed the Chancellor further and further towards the acceptance of a target for M3 growth” (cited in Hotson 2010, p. 10). This acceptance also changed the context of subsequent high-level discussions on the Bank’s policy rate, in which considerations for monthly M3 developments, measured continuously by central bank researchers, took an increasingly prominent role (Hotson 2010, pp. 3, 9).

On the back of its negative experience in the early 1970s, the Bank of England had thus decided to propose a Treasury-led strategy of expectation management that would also maximize the central bank’s own influence as the government’s bond market expert. Another option had also been briefly considered—namely to become more outspoken publicly about the monetary policy course that was favored by the Bank. This would have implied exposing disagreements between the central bank and government. While such public disagreement could have potentially proved useful (e.g., when political majorities shifted), the obvious danger was that the central bank would lose its most important political capital—“private influence” inside the Treasury and with the Chancellor of the Exchequer. As one official wrote in 1977:

²⁶ Bank of England Research on the Demand of Money Function, 2nd September 1974, 2A128/12, p. 2; “attempts to fit demand for money equations to the post-1971 period yield generally unsatisfactory results. The implausible parameter estimates on the lagged dependent variable confirm the trend towards such instability suggested by Hacche’s earlier work.” (Paper on Special Deposits, 31st January 1977, BoE Archive 6A50, p. 3). See also Price (1972) and Williams et al. (1976).

²⁷ “The problems of restraining public expenditures to planned limits could still prove difficult. In these circumstances we judge it all the more necessary to include in the package an explicit monetary target for this year, with a commitment to a further and lower target for next year. Influential opinion abroad, including the IMF and the predominant contributors to the GAB, regards the adoption of a normative monetary target as a matter of great importance.” (Unknown author to governors: Money supply target 19th September 1976, BoE Archive 6A50/18)

“The Bank advises but it is the Government who decides” [...] This is a stark but accurate description of the Bank’s constitutional position. So long as this position exists the essential questions are, first would speaking out publicly on policy weaken or seriously harm *private influence* with governments; and secondly, if so, would it matter? Many of us think that the answer to both questions is “yes.”²⁸

Judged on its own terms, the Bank’s decision to use “private influence” and invoke “market opinion” proved successful. William Keegan writes that, “[d]uring the period of the late 1970s, when monetary policy came to the fore, the Bank’s influence was seen to increase” (1984, p. 133). At the same time, pushing the government to use targets for shaping bond market expectations failed in addressing the underlying problem confronted by the British state, namely, how to pursue its coordinated economic policies vis-à-vis an increasingly fractured field of economic beliefs, expectations, and claims. Labor unions certainly remained unresponsive to the executive’s monetary announcements, also because the Treasury and trade unions discussed on different terms than those suggested by a bond market-oriented monetarism. The unions’ reactions to government policy rather exposed the latter’s failure in using incomes policies as a complementary economic policy tool (Gilmour 1982; Scharpf 1987). The more these contradictions became explicit, the more the credibility of monetary targets was lost. Moreover, analysts from the financial markets, particularly government debt (gilt) brokers, had begun to comment critically on every interim result of targeting with the help of monthly published monetary statistics (Oliver 2014, p. 214; Davies 2012). Healy’s reluctant commitment to monetary targets thus exposed him to ongoing scrutiny in terms of a highly volatile statistical aggregate. It did not help that the most prominent among the market commentators was a committed monetarist, Gordon Pepper (Capie 2010, p. 676), who rejected any excuses for allowing the money supply to slip.²⁹ Additionally, the Bank saw itself subject to “abuse, misrepresentation, belittlement etc.” from an emergent group of orthodox monetarists in academia and think tanks (Foot et al. 1979; Fourcade 2009, pp. 172–173).³⁰ These critiques resonated with Margaret Thatcher, the new leader of the Conservative party, who drew on monetarist vocabulary to establish a morally charged distinction between the “half-baked” fight against inflation allegedly pursued by Labour versus a more resolute, consequential version of anti-inflationism promised by the Conservatives themselves (Gilmour 1982).³¹

Entangled in these disjunctive claims and expectations, economic policy makers could not give their targets enough credibility to turn them into expectation coordination tools. Rather, labor conflicts deepened, ideological controversies became more polarized, and political entrepreneurs successfully contested decades-old procedures of

²⁸ Unknown author, Externalising the Bank – second note, 23rd May 1977, note to all governors, BoE Archive 7A127/1, p. 1. This position had a long tradition in the Bank; in front of the Radcliffe Committee, Cobbold had argued that “it would quite certainly make Bank relations with Government intolerable if discussion and argument were conducted by the Bank and Treasury in public instead of between us.” (cited in Allen 2013: 208)

²⁹ E.g., Gordon Pepper, A Monetary Base for the UK, W. Greenwell and Co Monetary Bulletin No. 61; Brian Griffiths, How the Bank has Mismanaged Monetary Policy, *The Banker* 126 (610): 1411–1419, 1977.

³⁰ MacMahon, Another Note on Externalising the Bank, 24th June 1977, BoE Archive 7A127/1.

³¹ Margaret Thatcher, Speech at Conservative Local Government Conference, London, 3rd March 1979, Margaret Thatcher Foundation Archive (<https://www.margaretthatcher.org>, retrieved 5th March 2016).

macroeconomic management. This was fertile ground for a political leader like Margaret Thatcher to achieve a landslide victory in the election of 1979.

Discussion

The trajectories described above are part of a broader genealogy. Since the 1970s, central banks across globe have gradually accumulated performative power over monetary expectations and now frequently hold exclusive authority over monetary policy. But the narratives above also indicate that the genealogy of central bank power is marked by various discontinuities and twists. Rather than moving in synchronicity towards a “central bank-led capitalism,” central banks in different institutional contexts took divergent and winded paths. Two paradigmatic instances are reflected in the Swiss and British case. The Swiss National Bank first assumed authority over monetary developments during the 1970s through its successful use of monetary targeting. By the 1980s, the SNB had established itself as one of the most powerful policy organizations in the Swiss polity and in the central banking world.³² The Bank of England failed to construct a comparable regime for Britain, where the monetary crisis continued into the 1980s. However, in the course of the 1990s, the Bank gradually emerged as one of the pioneers in inflation targeting. This strategy helped the British central bank to carve out a jurisdiction of monetary policy based on expectation management—a process that preceded the decision by the British government, in 1997, to grant operational independence to the central bank. Inflation targeting then travelled the globe, and since 1999, even the Swiss National Bank conducts monetary policy based on a similar regime. The Swiss path resembles, in many ways, the German trajectory that led from the Bundesbank’s widely acclaimed monetarism to a reluctant acceptance of inflation targeting as the primary strategy of the European Central Bank (ECB); and the British path is strongly entangled with that of the United States, where the Fed Chairman Paul Volcker developed an incipient version of inflation targeting during the 1980s (Hetzl 2008) and where Ben Bernanke emerged as one of its key theorists.

To explain these trajectories and their interrelatedness (McMichael 2000), I suggest looking at the ways in which central banks have assumed strategic, coordinative positions in what Beckert calls “expectational politics.” An important aspect of this process is central banks’ search for sources of authority and means of intervention through which they can render expectations governable. But this search does not happen in a technocratic vacuum. Rather, central banks need to connect to the dominant forces in institutional configurations in order to make sure that their interventions are legitimate and generate economy-wide performative effects. Accordingly, just as VoC scholars have argued, differences in institutional orders matter for expectation-based monetary policy (Hall and Franzese 1998); but so do structural shifts in the centers of power in capitalist states, e.g., those reconstructed in industrial relations (e.g., Baccaro and Howell 2017) or financialization research (Stockhammer 2008).

³² By the early 1980s, the Swiss National Bank had therefore emerged as the unquestioned authority over monetary relations. When the Swiss were asked about their central bank in a public survey in 1981, “almost all respondents” said that they would “readily consider anything that the SNB did as right”. Reported during a board meeting of the Swiss Bankers Association on 29th June 1981 (SBA Archive).

Through this lens, we can thus identify two regimes of central bank power that have emerged from different contexts, at different times, and have shaped the broader genealogy in different ways. The first is associated with the period studied above. The breakdown of Bretton Woods at the beginning of the 1970s, currency crises, and the surge in inflation reflected the dissolution of institutional settlements upon which “quiet” central banking had relied. Distributional conflicts became visible, (Maier 2004) reflected, for instance, in price-wage-spirals (Goldthorpe 1978) and skyrocketing interest rates (Streeck 2014). Central bankers responded to this constellation by gradually turning to monetary expectations as their primary objects of governing. This turn is evidenced in Switzerland and Britain, where policy experiments were increasingly used to manipulate expectations in explicit, reflexive ways. Yet, in the course of these experiments, certain “felicity conditions” for the performative use of monetarist techniques became visible that were met in Switzerland, but not the United Kingdom. The roles of the respective central banks, broader processes of capitalist coordination, and the structures of banking led to divergent outcomes in this first experimental period for performative monetary policy.

The Swiss National Bank managed incrementally to turn its experts’ monetarist ideas into an effective strategy because it possessed ample room of maneuver *and* strong ties to powerful political and economic constituencies. The SNB’s role can thus be characterized as a version of “embedded autonomy” (Evans 1995, p. 12), which combines discretion over key decisions (e.g., over monetary operations and public communications) with the ties necessary for mobilizing support. For instance, all major peak associations were represented in the SNB’s supervisory body, the Bank Council; the central bank Directors thus had regular occasions to communicate with key constituencies. This contrasts sharply with the British situation. Some commentators have depicted the Bank of England’s role as an extended arm of the Treasury (Collins and Baker 1999), directing their focus on its lack of operational independence (Cukierman 1994). However, it is equally important to point to the Bank’s status vis-à-vis the financial sector. The British central bank derived most of its “behind-the-scenes” influence from a strategic brokering position in between the government and the City of London. But this “City-Bank-Treasury Nexus” (Burn 1999) also constrained the reach of the central bank and limited its engagement in expectational politics. The Bank of England had no direct ties to corporative actors, nor to the broader political sphere. As documented above, during the late 1970s, the central bankers increasingly felt these limitations when they realized their inability to advocate a restrictive macroeconomic policy publicly and to respond to criticisms from parliament, experts, and the media.

As discussed below, in later decades, the Bank of England turned this limitation into key resource, using its historically strong relations to finance as a foundation for a distinct governance regime. However, the situation in the 1970s was different because, in an ongoing inflationary spiral, it was critical to engage with the wage-setting process. The Swiss National Bank succeeded in doing so because it could connect to existing routines of coordinated wage bargaining. Swiss corporatism thus provided the fertile ground for gaining direct purchase over the articulation of inflation-expectations. By contrast, a central bank with influence constrained to the financial realm and a government with contradictory macroeconomic policy priorities proved unable to address the capitalist conflicts observed in the United Kingdom (Fourcade-Gourinchas

and Babb 2002; see Hall and Franzese 1998, p. 530 for relevant indicators). The production of orthodox monetarist counter-expertise can be seen as an attempt by politicians and experts to exploit these conflicts for their own strategic advantage. The result was a broader “expectational crisis” in which monetary targeting, adopted in 1976 and again tried under Thatcher, failed to generate any stabilizing effects.

My study of the Swiss and British trajectories in the 1970s also exposes the critical role that banking sectors played in facilitating or complicating the use of monetarist techniques. Because monetary targeting relied on stable relationships between the banks’ reserve holdings with the central bank, their different liabilities, and overall economic activity, this technique could only be successfully conducted in contexts of conservative, “universalist” banking (Johnson 1998: 9). Banks conducting active liability management and operating across different financial markets undermined the credibility of any monetary targeting regime. We find these contrasting situations in Switzerland and Britain. In the 1970s, Swiss universalist banks still cooperated with the SNB to maintain relatively stable amounts of reserves, and in the absence of rapid innovation, customers customarily kept stable amounts of money holdings with their deposit banks. By contrast, in Britain, by the 1970s, banking techniques imported from the United States began transforming domestic banking; the clearing banks’ interest rate cartel was given up. Moreover, a financial sector that had been compartmentalized into distinct business areas (“clearing banking,” “merchant banking,” “building societies,” stock brokers, etc.) began its transition towards the dominance of financial conglomerates (Needham and Hotson 2018; Moran 1991). In this transitional period, credit expansion exploded and the Bank of England lost control over the management of liquid reserves. As Goodhart, the chief translator of monetarism inside the Bank of England argued, “[u]nder these circumstances the appropriate dividing line, or definition, of ‘money’... is becoming fuzzier” (1986, p. 98).

Hence, the ironic result of my above analysis is that a radical, highly consequential innovation in economic policies, towards performative central banking, was first accomplished in rather “conservative,” corporatist configurations found in countries like Switzerland and Germany. In these settings, the respective central banks managed to use their embedded autonomy to turn monetary targets into a symbolic source of central bank power (Friedman 2002), and they got corporatist actors to accept the premises underlying monetary targets by engaging them with monetarist beliefs (Orléan 2008). The central banks’ ability to promote these beliefs and to give them a coordinative role derived from the institutional conditions encountered in the respective political economies, i.e. the existence of a consensus-oriented polity, corporatist routines (e.g., in wage bargaining), and conservative commercial banking practices. By contrast, where these conditions were not found, and where the central banks directed their efforts to the more circumscribed contexts of governmental policy and finance, as in the United Kingdom, even sophisticated monetary analyses and clever strategizing by the respective actors failed to generate stable regimes.

However, while the successful symbiosis of monetarism and corporatism proved highly influential and drove home a widely observed “lesson,” namely that central banks *can* control inflation, the monetarism-corporatism regime remained highly circumscribed in its geographical reach and historical impact. For understanding convergent developments towards inflation targeting regimes, it is therefore critical to turn to those contexts where the monetarist regime could not take root. These were the

liberal market economies like Britain and the United States. The key here is to understand that, while the British and US monetary policy failures of the 1970s were compared with the German and the Swiss success, the respective central bankers could not emulate the “felicity conditions” to turn monetarism into a stable regime (Needham 2014). Corporatist institutions and cultures cannot be simply imported into a political economy, as the twisted history of European monetary integration attests (Hancké 2013). Moreover, once offshore markets and innovative financial market techniques had precipitated, attempts at re-regulating finance towards “conservative” domestic banking encountered high technical and political obstacles (Konings 2011). For these reasons, the successes with monetarism in countries like Switzerland and Germany articulated a double challenge for the Bank of England and comparable central banks: First, they needed to find alternative sources of authority in order to intervene successfully in expectational politics; and secondly, they needed to identify a different set of institutional conditions that would allow them to establish macro-coordination processes.

I would suggest that it is out of this challenge that an alternative, “financialized” regime of expectation management emerged. The United States, Britain, and New Zealand provided the relevant incubator contexts for these innovations. For it was in these countries that monetarism had dramatically failed and where prevailing institutional conditions directed the search for viable expectational governance regimes in a radically new direction. Indeed, while the intensification and expansion of finance had been one major reason for the initial failure of performative monetary policy in Anglo-Saxon economies during the 1970s, the emergent institutions of “financialized capitalism” (Carruthers 2015; Krippner 2011) in these countries ironically provided a set of different “felicity conditions” upon which an alternative regime of expectational governance could be subsequently built. In particular, while highly integrated and liquid money and capital markets had been loathed by monetary targeters, they eventually turned into central banks’ most powerful sources of logistical power (Hetzel 2008; Konings 2011 p. 149; Krippner 2011; Mehrling 2011). The great advantage with these felicity conditions was that, other than corporatist institutions, central bankers were in a position to shape and foster the needed market architectures themselves. Complementary institutional changes, like the weakening of labor’s bargaining power, functioned as important background conditions for this “financialized” version of expectation management to assume a hegemonic macro-economic role.

It is out of this distinction between the “felicity conditions” needed for monetarist-corporatist vs. financialized-inflation targeting expectation management, that I would propose explaining the recent global convergence towards inflation targeting regimes (see Table 1). For, in radical distinction to the institutional conditions undergirding the SNB’s performative monetarism, those required for inflation targeting could indeed be “exported” to other domains. Such export was partly performed by the financial sector, which established American-style money and capital market structures in Britain and other states (Konings 2011; Gabor 2016). Central bankers played an active, facilitative role in the globalization of these market architectures (Braun 2018b; Gabor 2016). Together with a widespread weakening of labor’s bargaining power (Baccaro and Howell 2017; Hung and Thompson 2016) and associated processes of globalization, these processes of institutional convergence allowed for inflation targeting to become a widely used and successful expectation management regime (Braun 2018a).

Table 1 Expectational governance regimes

Expectational governance regime	Sources of central bank authority vis-à-vis expectational politics	Key institutional “support structures” exploited by central bank
Monetary targeting	“Embedded autonomy”: central bank can experiment with money supply targets, communicate independently, and spread monetarist beliefs among key constituencies	Centralized wage bargaining and conservative reserve management practices by commercial banks
Inflation targeting	Formal operational independence and technocratic prestige. Central banks communicate their forecast-based inflation expectations to financial markets and relate their policy decisions to forecasts in “self-correcting” feedback loops	Highly liquid and interconnected money and capital markets, combined with suppressed bargaining power of labor

Conclusion

In a recent book, the former Bank of England Deputy Governor, Paul Tucker (2018) expresses his belief that the liberalization of labor markets in Britain was an important precondition for inflation targeting to become a durable success. But even if the Swiss National Bank President of the 1970s, Fritz Leutwiler, did not publicly promote the opposite, his actions certainly reflected another view: Rather than liberalism, it was strong corporatism that contributed to the SNB’s early success in concerting expectations with monetarist means—a view that is vindicated by political economic research (cf. Hall and Franzese 1998). Relatedly, while today’s monetary experts emphasize formal independence and sophisticated forecasting as the key for successful monetary policy, from the Swiss perspective it might be similarly important to stress broad relations to diverse constituencies, including corporatist actors. Moreover, inflation targeters claim that liquid and interconnected money markets “are useful to central banks” as vehicles for policy implementation “and as a source of information on market expectations” (CGFS 1999, p. 3). But successful monetary targeters in the 1970s and 1980s like the Bundesbank or Swiss National Bank rather opted for highly regulated and constrained liquidity regimes (Gabor 2016). Lastly, Ben Bernanke, in a statement in the Federal Reserve’s decision-making body FOMC, claimed that “monetary policy is a cooperative game. The whole point is to get financial markets on our side and for them to do some of our work for us” (Mallaby 2017, p. 612). This is now perceived as common wisdom (e.g., Braun 2015). But monetarist central bankers did not orient their expectation management towards financial markets; their “targeting” was rather directed at labor unions, employer associations, and fiscal policy makers.

It is important to draw these contrasts as they make visible that, as much as the politics of expectations can differ from context to context, so do the strategies and tools through which central bankers hope to gain performative power. Accordingly, we need to attend to the processes whereby *particular* techniques of central banking and *particular* institutional configurations have become aligned. In this article, I have mostly focused on the first, monetarist regime that has emerged in “conservative” corporatist settings such as Switzerland. Implicitly, though, this analysis was directed at

inflation targeting as the far more influential, structurally important regime. By introducing a comparison with the monetarist-corporatist constellation of the 1970s, I wanted to highlight that, even though inflation targeting is now adopted in a wide variety of settings, we should still understand it as a highly fragile, provincial, context-dependent regime. In particular, inflation targeters have become strongly dependent on financialized institutional configurations (Carruthers 2015) that they have helped bring about (Braun 2018b; Krippner 2011). Accordingly, the widespread adoption of inflation targeting is predicated on a broader process of institutional convergence that has enabled central banks to converge towards similar techniques. There is no certainty that these particular sources of performative power will remain available for central banks.

Acknowledgments I wish to thank the reviewers and Editors of *Theory and Society*, as well as Martin Buehler, Duncan Needham, Alex Preda, and Timo Walter for helpful comments on earlier versions of this article. I discussed research findings presented here with participants of the Swiss National Bank Economic Seminar, the University of Cambridge Social and Economic History Seminar, and the sociology research seminars of the Universities of Konstanz and Lucerne. Andreas Grueter and Martin Wyss supported my archival research, as well as the archivists from the Swiss National Bank and the Bank of England. I also thank all central bank officials that accepted to be interviewed for this project. Funding for this research came from the Swiss National Fund and LSE RIF Seed Fund. *Theory and Society's* Managing Editor Karen Lucas was a supportive person throughout the entire review process.

Appendix

Table 2 List of interviewees

Swiss National Bank	
John Lademann (interviewed by Bernholz in February and March 2005)	Member of Economic and Statistical Section at least since the 1950s, later its Head and Deputy Director (1968–1977)
Kurt Schiltknecht (interviewed by Bernholz in September 2004 and by author in November 2013)	Economics degree University of Zurich; PhD in Zurich and at the University of Pennsylvania (1973); member and later head of Economic and Statistical Section of the SNB (1974–1984), Deputy Director (1982–1984)
Alexander Galli (interviewed by author in November 2013)	Economics degree University of Basle (1971); member of the Economic and Statistical Section of the SNB (1971–1979)
Georg Rich (interviewed by author in December 2013)	Economics degree University of Zurich; PhD Brown University (1969); assistant and associate professor Carleton University Ottawa (1969–1977); member and later head of Economic and Statistical Section of the SNB (1977–1985); SNB chief economist and Deputy Director (1985–2001)
Ernst Baltensperger (interviewed by author in November 2013)	Economics degree University of Zurich; PhD Johns Hopkins University (1966–1968); assistant, associate and full professor, Ohio State University (1968–1979); member of Economic and Statistical Section of the SNB (1977–1978)
Werner Abegg (interviewed by author in March 2015)	Linguistics degree University of Zurich; journalist with Reuters; became the first SNB press officer in the late 1970s and later Head of Communications
Peter Buomberger (interviewed by author in April 2014)	Economics degree University of Basle; Economic and Statistical Section of the SNB (1975–1984)

Table 2 (continued)

Jean-Pierre Roth (interviewed by author in March 2014)	Economics degree University of Geneva; PhD Institut universitaire de hautes études internationales Geneva (1975); postdoc MIT (1976–77); member of Economic and Statistical Section and other departments in the SNB (1979–1996); SNB Director and President (1996–2009)
Bank of England	
Bill Allen (interviewed by author in October 2018)	Bank of England staff in different positions (1972–2004): Deputy Director for Monetary Analysis (1994–98); Deputy Director for Financial Market Operations (1999–2002), and Deputy Director for Financial Stability and Director for Europe (2002–03)
Charles Goodhart (interviewed by author in May and July 2016)	Economics degree Cambridge University; PhD Harvard University (1963); assistant lecturer University of Cambridge (1963–64); economic adviser DEA (1965–66); lecturer LSE (1966–69); monetary policy adviser (1969–1980) and chief adviser (1980–85) at the Bank of England
Anthony Hotson (interviewed by author in May 2016)	Economics degree Oxford University; member of Monetary Policy Group, Bank of England (1978–1988)
Rachel Lomax (interviewed by author in April 2017)	Economics degree LSE; Treasury Official (1968–1994), later Deputy Governor of the Bank of England (2003–2008)
Michael Foot (interviewed by author in March 2017)	Undergraduate degree from Cambridge and MBA from Yale; Bank of England officials in different departments (1969–1998)
Ian Plenderleith (interviewed by author in April 2017)	MA from Oxford University and an MBA from Columbia Business School; Bank of England official (1965–2002) in various positions, including Private Secretary to the Governor of the Bank of England (1976–1979), Head of Market Operations (1980–1994), Executive Director Financial Market Operations (1994–1997) and Member of the first Bank of England's Monetary Policy Committee (1997–2002)

OpenAccess This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

References

- Abolafia, M. Y. (2010). Narrative construction as sensemaking: how a Central Bank thinks. *Organization Studies*, 31(3), 349–367.
- Abolafia, M. Y. (2012). Central banking and the triumph of technical rationality. In K. Knorr Cetina & A. Preda (Eds.), *Handbook of the sociology of finance*. Oxford: Oxford University Press.
- Allen, W. A. (2013). *International liquidity and the financial crisis*. Cambridge; New York: Cambridge University Press.
- Austin, J. L. (1962). *How to do things with words. The William James lectures delivered at Harvard University in 1955*. London: Clarendon Press.
- Baccaro, L., & Howell, C. (2017). *Trajectories of neoliberal transformation: European industrial relations since the 1970s*. Cambridge: Cambridge University Press.
- Baltensperger, E. (1984). Geldmengenpolitik und Inflationskontrolle. *Mitteilungen der Kommission für Konjunkturfragen*. Bern: Schweizerische Kommission für Konjunkturfragen.
- Ban, C. (2016). *Ruling ideas: How global neoliberalism Goes local*. New York: Oxford University Press.
- Barro, R. J., & Gordon, D. B. (1983). Rules, discretion and reputation in a model of monetary policy. *Journal of Monetary Economics*, 12, 101–121.

- Beckert, J. (2016). *Imagined futures: Fictional expectations and capitalist dynamics*. Cambridge: Harvard University Press.
- Bernanke, B. & Gertler, M. (1999). Monetary policy and asset price volatility. In J Hole (Ed.), *Proceedings of the Economic Policy Symposium*. Federal Reserve Bank of Kansas, p. 17–51.
- Bernanke, B., & Mishkin, F. S. (1992). Central Bank behavior and the strategy of monetary policy: observations from six industrialized countries. *NBER Macroeconomics Annual*, 7, 183–238.
- Bernanke, B., Thomas, L., Mishkin, F. S., & Posen, A. S. (2001). *Inflation targeting: Lessons from the international experience*. Princeton: Princeton University Press.
- Bernholz, P. (1974). *Währungskrisen und Währungsordnung*. Hamburg: Hoffmann und Campe.
- Bernholz, P. (2007). Die Nationalbank 1945–1982: Von der Devisenbann-Wirtschaft zur Geldmengensteuerung bei flexiblen Wechselkursen. In Schweizerische Nationalbank (Ed.), *Die Schweizerische Nationalbank 1907–2007*. Zürich: NZZ Libro.
- Blinder, A. S. (2004). *The quiet revolution: Central banking Goes modern*. New Haven: Yale University Press.
- Blyth, M. (2002). *Great transformations: Economic ideas and institutional change in the twentieth century*. Cambridge: Cambridge University Press.
- Bockman, J., & Eyal, G. (2002). Eastern Europe as a laboratory for economic knowledge: the transnational roots of neoliberalism. *American Journal of Sociology*, 108, 310–352.
- Bodea, C., & Hicks, R. (2015). International finance and Central Bank Independence: institutional diffusion and the flow and cost of capital. *The Journal of Politics*, 77(1), 268–284.
- Bourdieu, P. (1977[1972]). *Outline of a theory of practice*. Cambridge: Cambridge University Press.
- Braun, B. (2015). Governing the future: the European Central Bank's expectation management during the great moderation. *Economy and Society*, 44, 367–391.
- Braun, B. (2018a). Central bank planning? Unconventional monetary policy and the price of bending the yield curve. In J. Beckert & R. Bronk (Eds.), *Uncertain futures: Imaginaries, narratives, and calculation in the economy*. Oxford: Oxford University Press.
- Braun, B. (2018b). Central banking and the infrastructural power of finance: the case of ECB support for repo and securitization markets. *Socio-Economic Review* preprint.
- Brunner, K. (1968). The role of money and monetary policy. *The Federal Reserve Bank of St. Louis Review*, 30, 9–24.
- Brunner, K. (1971). A survey of selected issues in monetary theory. *Schweizerische Zeitschrift für Volkswirtschaft und Statistik*, 107, 1–146.
- Brunner, K. (1983). Has monetarism failed? *Cato Journal*, 3, 23–62.
- Bühlmann, F., David, T., & Mach, A. (2012). The Swiss business elite (1980–2000): how the changing composition of the elite explains the decline of the Swiss company network. *Economy and Society*, 41(2), 199–226.
- Burn, G. (1999). The state, the City and the Euromarkets. *Review of International Political Economy*, 6(2), 225–261.
- Burnham, P. (2007). The Politicisation of Monetary Policy-Making in Postwar Britain. *British Politics*, 2, 395–419.
- Burns, T. R., Baumgartner, T., & Devillé, P. (1984). Inflation, Politics, and Social Change: Institutional and Theoretical Crisis in Contemporary Economy-and-Society. *International Journal of Comparative Sociology*, 25, 73–90.
- Callon, M. (1998). Introduction: The embeddedness of economic Markets in Economics. In M Callon (ed.), *The laws of the markets*, Sociological Review Monographs. Oxford: Blackwell.
- Capie, F. (2010). *The Bank of England, 1950s to 1979*. Cambridge: Cambridge University Press.
- Capie, F. H., Goodhart, C. A. E., & Schadt, N. (1994). The development of central banking. In F. H. Capie, S. Fischer, C. A. E. Goodhart, & N. Schadt (Eds.), *The future of central banking: The centenary symposium of the Bank of England*. Cambridge; New York: Cambridge University Press.
- Carruthers, B. G. (2015). Financialization and the institutional foundations of the new capitalism. *Socio-Economic Review*, 13(2), 379–398.
- CGFS [Committee on the Global Financial System of the central banks of the Group of Ten countries] (1999). *Implications of repo markets for central banks*, Bank for International Settlements, Basle 9 March.
- Collins, M., & Baker, M. (1999). Bank of England autonomy: A retrospective. In C.-L. Holtfrerich, J. Reis, & G. Toniolo (Eds.), *The emergence of modern Central Banking from 1918 to the present*. Aldershot; Brookfield a.o.: Ashgate.
- Cukierman, A. (1994). Central Bank independence and monetary control. *The Economic Journal*, 104, 1437–1448.

- Davies, A. (2012). The evolution of British monetarism: 1968–1979. *Discussion papers in economic and social history Nr 104*, University of Oxford.
- Dodd, N. (1994). *The sociology of money: Economics, reason and contemporary society*. Cambridge: Polity Press.
- Esposito, E. (2011). *The future of futures: The time of money in finance and society*. Cheltenham; Northampton: Edward Elgar.
- Evans, P. B. (1995). *Embedded Autonomy: States and Industrial Transformation*. Princeton, N.J.: Princeton University Press.
- Fforde, J. (1983). The United Kingdom - setting monetary objectives. In P. Meek (Ed.), *Central Bank views on monetary targeting*. New York: Federal Reserve Bank of New York.
- Fisher, S. (1994). Modern central banking. In F. H. Capie, S. Fischer, C. A. E. Goodhart, & N. Schadt (Eds.), *The future of central banking: The tercentenary symposium of the Bank of England*. Cambridge; New York: Cambridge University Press.
- Fligstein, N., Brundage, J. S., & Schultz, M. (2017). “Seeing like the fed”: culture, cognition, and framing in the failure to anticipate the financial crisis of 2008. *American Sociological Review*, 82(5), 879–909.
- Foot, M., Goodhart, C. A. E., & Hotson, A. (1979). Monetary Base control. *Bank of England Quarterly Bulletin*, 2, 149–159.
- Fourcade, M. (2006). The construction of a global profession: the transnationalization of economics. *American Journal of Sociology*, 112(1), 145–194.
- Fourcade, M. (2009). *Economists and societies: Discipline and profession in the United States, Great Britain, and France, 1890s to 1990s*. Princeton, NJ: Princeton University Press.
- Fourcade, M., & Khurana, R. (2013). From social control to financial economics: the linked ecologies of economics and business in twentieth century America. *Theory and Society*, 42, 121–159.
- Fourcade-Gourinchas, M., & Babb, S. (2002). The rebirth of the liberal creed: paths to neoliberalism in four countries. *American Journal of Sociology*, 108, 533–579.
- Frieden, J. (2002). Real sources of European currency policy: sectorial interests and European monetary integration. *International Organization*, 56(4), 831–860.
- Friedman, B.M. (2002). The use and meaning of words in central banking: Inflation targeting, credibility, and transparency. Cambridge, MA: *NBER Working Paper 8972*, National Bureau of Economic Research.
- Gabor, D. (2008). From Rhetorics to practice in monetary policy: a Romanian perspective. *Comparative Economic Studies*, 50, 511–534.
- Gabor, D. (2016). The (impossible) repo trinity: the political economy of repo markets. *Review of International Political Economy*, 23(6), 967–1000.
- Gabor, D., & Ban, C. (2016). Banking on bonds: the new links between states and markets. *JCMS: Journal of Common Market Studies*, 54(3), 617–635.
- Gilmour, I. (1982). Monetarism and history. *London Review of Books*, 4(1), 3–6.
- Goldthorpe, J. H. (1978). The current inflation: Towards a sociological account. In F. Hirsch & J. H. Goldthorpe (Eds.), *The political economy of inflation*. London: Martin Robertson.
- Golub, S., Kaya, A., & Reay, M. (2015). What were they thinking? The federal reserve in the run-up to the 2008 financial crisis. *Review of International Political Economy*, 22(4), 657–692.
- Goodhart, C. A. E. (1983). Implementation of federal reserve open market operations (comment). In P. Meek (Ed.), *Central Bank views on monetary targeting*. New York: Federal Reserve Bank of New York.
- Goodhart, C. A. E. (1986). Financial innovation and monetary control. *Oxford Review of Economic Policy*, 2(4), 79–102.
- Goodhart, C. A. E. (1989). The conduct of monetary policy. *The Economic Journal*, 99, 203–346.
- Goodhart, C.A.E. (2004). The Bank of England over the last 35 Years. *Bankhistorisches Archiv, Beiheft 43: Welche Aufgaben muss eine Zentralbank wahrnehmen? Historische Erfahrungen und europäische Perspektiven*, pp. 29–54.
- Goodhart, C. A. E. (2011). The changing role of central banks. *Financial History Review*, 18(2), 135–154.
- Goodhart, C. A. E., & Crockett, A. (1970). The importance of money. *Bank of England Quarterly Bulletin*, 2, 159–198.
- Goodhart, C. A. E., & Needham, D. J. (2018). Historical reasons for the focus on broad monetary aggregates in post-world war II Britain and the ‘seven years war’ with the IMF. *Financial History Review*, 24(3), 331–356.
- Goodman, J. B. (1992). *Monetary sovereignty: The politics of central banking in Western Europe*. Ithaca: Cornell University Press.
- Green, J. (2016). Anglo-American development, the Euromarkets, and the deeper origins of neoliberal deregulation. *Review of International Studies*, 42(03), 425–449.

- Guex, S. (2012). L'Etat Fédéral et les Crises Economiques du Début du XXe Diècle à Nos Jours: la Suisse, un Bastion Anti-Keyneséen. *Annuaire suisse d'histoire économique et sociale*, 27, 151–169.
- Halbeisen, P. (2005). Cool lover? Switzerland and the road to European monetary union. In P. Clement & O. Martinez (Eds.), *European central banks and monetary cooperation after 1945*. Frankfurt: Adelmann.
- Halbeisen, P., & Straumann, T. (2012). Die Wirtschaftspolitik im internationalen Kontext. In M. Müller, B. Veyrassat, & P. Halbeisen (Eds.), *Wirtschaftsgeschichte der Schweiz im 20. Jahrhundert*. Basel: Schwabe.
- Hall, P. A. (1986). *Governing the economy: The politics of state intervention in Britain and France*. Cambridge: Polity Press.
- Hall, P. A. (1993). Policy paradigms, social learning, and the state: the case of economic policymaking in Britain. *Comparative Politics*, 25, 275–296.
- Hall, R. B. (2008). *Central Banking as global governance: Constructing financial credibility*. Cambridge studies in international relations. Cambridge; New York: Cambridge University Press.
- Hall, P. A., & Franzese, R. J. (1998). Mixed signals: Central Bank independence, coordinated wage bargaining, and European Monetary Union. *International Organization*, 52(3), 505–535.
- Hall, Peter A., And David Soskice 2001. An introduction to varieties of capitalism. *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, P. A. Hall and D. Soskice, Oxford; New York: Oxford University Press.
- Hancké, B. (2013). *Unions, Central Banks, and EMU: Labour Market Institutions and Monetary Integration in Europe*. Oxford: Oxford University Press.
- Hardie, I., Howarth, D., Maxfield, S., & Verdun, A. (2013). Banks and the false dichotomy in the comparative political economy of finance. *World Politics*, 65(4), 691–728.
- Hay, C. (2001). The 'crisis' of Keynesianism and the rise of neoliberalism in Britain: An ideational institutionalist approach. In J. L. Campbell & O. K. Pedersen (Eds.), *The rise of neoliberalism and institutional analysis*. Princeton, Chichester: Princeton University Press.
- Herrigel, G. (2010). *Manufacturing possibilities: Creative action and industrial recomposition in the United States, Germany, and Japan*. Oxford; New York: Oxford University Press.
- Hetzl, R. L. (2008). *The monetary policy of the federal reserve: A history*. *Studies in macroeconomic history*. New York; Cambridge: Cambridge University Press.
- Hirschman, D., & Berman, E. P. (2014). Do economists make policies? On the political effects of economics. *Socio-Economic Review*, 12, 779–811.
- Holmes, D. R. (2013). *Economy of words: Communicative imperatives in central banks*. Chicago: University of Chicago Press.
- Hotsen, A. (2010). British monetary targets, 1976 to 1987: A view from the fourth floor of the Bank of England. *LSE Financial Markets Group Paper Series*. London: London School of Economics.
- Hotsen, A. (2017). *Respectable banking: The search for stability in London's money and credit markets since 1695*. Cambridge: Cambridge University Press.
- Hung, H.-F., & Thompson, D. (2016). Money supply, class power, and inflation: monetarism reassessed. *American Sociological Review*, 81(3), 447–466.
- Ingham, G. K. (2004). *The nature of money*. Cambridge: Polity Press.
- Iversen, T. (1998). Wage bargaining, hard money and economic performance: theory and evidence for organized market economies. *British Journal of Political Science*, 28(1), 31–61.
- Jacobs, L. R., & King, D. S. (2016). *Fed power: How finance wins*. New York: Oxford University Press.
- Johnson, P. A. (1998). *The government of money. Monetarism in Germany and the United States*. Ithaca: Cornell University Press.
- Joyce, P., & Mukerji, C. (2017). The state of things: state history and theory reconfigured. *Theory and Society*, 46(1), 1–19.
- Katzenstein, P. J. (1985). *Small states in world markets: Industrial policy in Europe*. Ithaca: Cornell University Press.
- King, M. A. (2016). *The end of alchemy: Money, banking, and the future of the global economy*. New York; London: W. W. Norton & Company.
- Konings, M. (2011). *The development of American finance*. New York: Cambridge University Press.
- Konings, M. (2018). *Capital and time. For a new critique of neoliberal reason*. Stanford: Stanford University Press.
- Kriesi, H. (1980). *Entscheidungsstrukturen und Entscheidungsprozesse in der Schweizer Politik*. Frankfurt: Campus.
- Krippner, G. R. (2005). The financialization of the American economy. *Socio-Economic Review*, 3(2), 173–208.
- Krippner, G. R. (2011). *Capitalizing on crisis: The political origins of the rise of finance*. Cambridge: Harvard University Press.

- Lastra, R. M. (1996). *Central Banking and Banking Regulation*. London: Financial Markets Group, London School of Economics and Political Science.
- Laubach, T., & Posen, A.S. (1997). *Disciplined discretion: The German and Swiss monetary targeting framework in operation*. Research Paper, Federal Reserve Bank of New York.
- Leutwiler, F. (1971). Theorie und Wirklichkeit der Notenbankpolitik. *Schweizerisches Journal für Volkswirtschaft und Statistik*, 107(1), 275–289.
- Loepfe, W. (2011). *Der Aufstieg des schweizerischen Finanzplatzes in der Nachkriegszeit*. Weinfelden: Wolfan.
- Maier, C. (2004). Two sorts of crisis? The ‘long’ 1970s in the west and the east. In H. G. Hockerts (Ed.), *Koordinaten deutscher Geschichte in der Epoche des Ost-West-Konflikts*. München: R. Oldenbourg.
- Mallaby, S. (2017). *The man who knew: The life and times of Alan Greenspan*. London: Bloomsbury.
- Maman, D., & Rosenhek, Z. (2009). The contested institutionalization of policy paradigm shifts: the adoption of inflation targeting in Israel. *Socio-Economic Review*, 7, 217–243.
- Marcussen, M. (2005). Central banks on the move. *Journal of European Public Policy*, 12, 903–923.
- Marcussen, M. (2009). Scientization of central banking: The politics of A-politicization. In K. Dyson & M. Marcussen (Eds.), *Central Banks in the age of the Euro*. Oxford; New York: Oxford University Press.
- McMichael, P. (2000). Incorporating comparison within a world-historical perspective: An alternative comparative method. *American Sociological Review*, 55(3), 385–397.
- Mehrling, P. (2011). *The new Lombard street: How the fed became the dealer of last resort*. Princeton, NJ: Princeton University Press.
- Meyer, J. W., Boli, J., Thomas, G. M., & Ramirez, F. O. (1997). World society and the nation-state. *American Journal of Sociology*, 103(1), 144–181.
- Mishkin, F. S. (2007). *Monetary policy strategy*. Cambridge: MIT Press.
- Moran, M. (1984). *The politics of banking: The strange case of competition and credit control*. London: Macmillan.
- Moran, M. (1991). *The politics of the financial services revolution: The USA, UK and Japan*. London: Macmillan.
- Mudge, S. L., & Vachez, A. (2016). Fielding Supranationalism: The European Central Bank as a Field Effect. *Sociological Review Monograph*, 64, 146–169.
- Mundell, R. A. (1968). *International economics*. New York: Macmillan.
- Needham, D. (2014). *UK monetary policy from devaluation to Thatcher, 1967–1982*. Basingstoke: Palgrave Macmillan.
- Needham, D., & Hotson, A. (2018). *The changing risk culture of UK banks, manuscript*. Cambridge: University of.
- Nelson, S. C., & Katzenstein, P. J. (2014). Uncertainty, risk, and the financial crisis of 2008. *International Organization*, 68(2), 361–392.
- Offe, K. (1973). *Strukturprobleme des kapitalistischen Staates*. Frankfurt a. M.: Suhrkamp.
- Oliver, M. J. (2014). The long road to 1981: British money supply targets from DCE to the MTFs. In D. Needham & A. Hotson (Eds.), *Expansionary fiscal contraction: The Thatcher government's 1981 budget in perspective*. Cambridge: Cambridge University Press.
- Orléan, A. (2008). Monetary beliefs and the power of Central Banks. In J.-P. Touffut (Ed.), *Central Banks as economic institutions*. Chaltenham, Northampton: Edward Elgar.
- Peden, G. C. (2000). *The treasury and British public policy, 1906–1959*. London; New York: Oxford University Press.
- Pepper, G. T., & Oliver, M. J. (2001). *Monetarism under thatcher: Lessons for the future*. Northampton: Edward Elgar.
- Polak, J.J. (1997). The IMF monetary model at forty. *IMF Working Paper*. Washington, DC: International Monetary Fund.
- Polillo, S., & Guillén, M. F. (2005). Globalization pressures and the state: the worldwide spread of central Bank Independence. *American Journal of Sociology*, 110(6), 1764–1802.
- Prader, G. (1981). *50 Jahre Schweizerische Stabilisierungspolitik: Lernprozesse in Theorie und Politik am Beispiel der Finanz- und Beschäftigungspolitik des Bundes*. Zürich: Schulthess.
- Prasad, M. (2006). *The politics of free markets: The rise of neoliberal economic policies in Britain, France, Germany, and the United States*. Chicago: University of Chicago Press.
- Prasad, M. (2012). *The land of too much: American abundance and the paradox of poverty*. Cambridge: Harvard University Press.
- Price, L. (1972). The demand for money in the United Kingdom: A further investigation. *Bank of England Quarterly Bulletin*, 1, 43–55.

- Quinn, S. (2017). The miracles of bookkeeping: how budget politics link fiscal policies and financial markets. *The American Journal of Sociology*, 123(1), 48–85.
- Rich, G. (1987). Swiss and United States monetary policy: Has monetarism failed? *Federal Reserve Bank of Richmond, Economic Review*, 73, 3–17.
- Rosenhek, Z. (2013). Diagnosing and explaining the global financial crisis: Central banks, epistemic authority, and sense making. *International Journal of Politics, Culture, and Society*, 26(3), 255–272.
- Ross, D. M. (2004). Domestic Monetary Policy 1945–1971. In R. C. Michie & P. Williamson (Eds.), *The British Government and the City of London in the Twentieth Century* (pp. 298–321). Cambridge: Cambridge University Press.
- Scharpf, F. W. (1987). *Sozialdemokratische Krisenpolitik in Europa*. Frankfurt a.M. ; New York: Campus.
- Siklos, P. L. (2002). *The changing face of central banking. Evolutionary trends since world war II*. Cambridge: Cambridge University Press.
- Singleton, J. (2011). *Central banking in the twentieth century*. Cambridge: Cambridge University Press.
- Snowdon, B., & Vane, H. R. (2005). *Modern macroeconomics: Its origins, development and current state*. Cheltenham: Edward Elgar.
- Stockhammer, E. (2008). Some stylized facts on the finance-dominated accumulation regime. *Competition and Change*, 12(2), 184–202.
- Straumann, T. (2010). *Fixed ideas of money: Small states and exchange rate regimes in twentieth century Europe*. New York: Cambridge University Press.
- Streeck, W. (2014). *Buying time: The delayed crisis of democratic capitalism*. London, New York: Verso.
- Tognato, C. (2012). *Central Bank independence: Cultural codes and symbolic performance*. New York: Palgrave Macmillan.
- Tucker, P. (2018). *Unelected power: The quest for legitimacy in central banking and the regulatory state*. Princeton, NJ: Princeton University Press.
- Turner, J. D. (2014). *Banking in Crisis: The Rise and Fall of British Banking Stability, 1800 to the Present*. Cambridge: Cambridge University Press.
- Van Gunten, T. (2015). Cycles of polarization and settlement: diffusion and transformation in the macroeconomic policy field. *Theory and Society*, 44, 321–354.
- Van Hees, H., & Garretsen, H. (1995). Existence and stability of conventions and institutions in a monetary economy. *Journal of Economic Behavior and Organization*, 28, 275–288.
- Velthuis, O. (2015). Making monetary markets transparent: The European Central Bank’s communication policy and its interactions with the media. *Economy and Society*, 44(2), 316–340.
- Williams, D., Goodhart, C. A. E., & Gowland, D. (1976). Money, income, and causality: The U.K. Experience. *The American Economic Review*, 66, 417–423.
- Woodford, M. (2003). *Inflation targeting and optimal monetary policy*. Paper presented at the annual economic policy conference, Federal Reserve Bank of St. Louis, October 16–17.

Leon Wansleben is Assistant Professor of Sociology of the London School of Economics and Political Science. From 2019 onwards, he will head a research group on the sociology of public finances and debt at the Max Planck Institute for the Study of Societies (Cologne). In 2013, he published a book entitled *Cultures of Expertise in Global Currency Markets* (Routledge international studies in money and banking).