

Transforming Financial Governance in Central and Eastern Europe: Liquidity management before EU Enlargement

Lukas Spielberger, Leiden University, Netherlands

Abstract

The widespread presence of foreign banks in Central and Eastern Europe (CEE) was seen as a potential source of instability during the financial crisis of 2008/09. However, foreign banks acted primarily as a stabilizing force by supporting their subsidiaries and forwarding liquidity, rather than cutting and running. In doing so they closed a significant gap in the EU's financial stability framework and prevented both a worse financial crisis and currency crises in the new member states. In this paper, I argue that the expectation that foreign banks would step in as private lenders-of-last-resort was exactly the reason why CEE policymakers had encouraged foreign bank entry around the year 2000. Their policy frameworks looked unsuitable for withstanding a financial crisis, but this was the result of rule and policy transfers from the EU which did not take these unique market structures into account. Indeed, already by 2004 it was clear that foreign banks would manage liquidity conditions in CEE and that monetary policy would, at best, accommodate that. The theoretical contribution based on this is that financial market structures developed to be a pillar of the regional financial system in their own right. Although they emerged without central guidance, high levels of foreign banks ownership had the effect of aligning expectations and resulted in material support during the financial crisis. Balance-of-Payments support, it follows, is not just the result of official cooperation; private actors may wield more control over liquidity conditions than central banks.

Introduction

Foreign banks played a crucial role during the financial crisis in Central and Eastern Europe (CEE) in 2008/09. Representing the widespread expectation that foreign banks might cut their exposure and that central banks would be unable to defend their currencies, Paul Krugman (2008), among many commentators, concluded that "Eastern Europe 2008 = Southeast Asia 1997". Given high levels of foreign currency debt in CEE, uncontrolled currency devaluation would have been devastating (Darvas & Pisani-Ferry, 2008). Yet none of that came to pass and the financial crisis in CEE was resolved much faster than the following drama in the Euro Area. Foreign banks proved extraordinarily constructive in resolving the crisis, supporting their subsidiaries with both capital and liquidity and thereby easing the burden for national governments and central banks (Bakker & Klingens, 2012; Epstein, 2017; Kudrna & Gabor, 2013).

The role of foreign banks in stabilizing liquidity conditions in CEE has often been displayed as a surprising feature of the resolution of the financial crisis. The EU's financial supervision framework contained no provisions that would make it possible to compel banks to maintain exposure. A couple of authors have mentioned the Vienna Initiative, an informal forum of various stakeholders that was established in 2009, as having ensured sufficient commitments (R. De Haas, Korniyenko, Pivovarsky, & Loukoianova, 2012; Pistor, 2011). More recent work by Rachel Epstein (2017) has however contested this notion on the basis that the Vienna Initiative had been started at the request of banks themselves and that they had behaved constructively even before they officially committed to their CEE markets. Epstein argues that foreign banks' business strategies of building 'second home markets' in CEE motivated them to behave constructively.

This paper builds on this research to argue that foreign banks did not just assume this role out of commercial objectives, but that foreign bank entry was instead solicited by CEE governments in order to improve their access to liquidity. This is done by examining the transformation of the financial system in CEE before the year 2004, when eight CEE countries joined the European Union (EU). It is argued that governments sought out foreign investors for financial stability reasons and that, in most cases, domestic monetary policy was subordinated to foreign banks' liquidity allocation decisions. Both policymakers and bankers themselves held the expectation that banks would step in during a financial crisis. These findings are in line with the arguments that emerging markets encouraged foreign bank entry to improve their sovereign credit ratings (Grittersová, 2017) and that outsourcing financial stability is a deliberate policy strategy (Khoury & Wihlborg, 2006).

The reason why this pillar of the financial stability architecture in CEE had gone unnoticed before the crisis was that the EU's financial supervision rules and policy recommendations did not take these market structures into account (Iaydjiev, 2016; Pistor, 2010b). When CEE countries transposed the EU's financial supervisory framework in the process of preparing for EU accession, the official distribution of responsibilities conflicted with the market-based financial stability strategy. In addition, the

European Central Bank (ECB) urged central banks in CEE converge to its practices in order to prepare for euro adoption, even though these recommendations weakened their remaining monetary policy tools. If CEE countries looked ill-prepared for a liquidity crisis, this was because they had to converge to rules and practices that made little sense in their situations. The successful resolution of the crisis was in good part possible because these formal rules were sidestepped in practice.

The remainder of this paper is structured as follows. The following section briefly sets up the article by framing financial integration as a process of regime formation. The first empirical section will look into the transformation of financial market structures and frictions with the EU's financial supervision framework. The second empirical section presents the implications of financial integration for liquidity management by central banks and the impact of ECB recommendations on policy practices before 2004. The penultimate section summarises the changes in regional financial governance in CEE and argues that market structures developed as a pillar of the financial security architecture through a decentralized process. The final section provides an outlook for the implications of this regime for financial market governance after 2004.

Financial integration from a liquidity perspective

The integration of financial markets has been described as having both a political and an economic dimension. Political efforts to integrate markets are reflected in rules and legislation that facilitate cross-border financial market activities; from an economic perspective it might be reflected in the convergence of financial markets and the degree of international activities of the financial sector (Grossman & Leblond, 2011). An explicitly political economy approach towards financial integration, by contrast, considers these two processes not as separate spheres, but rather as an integrated change in state-market structures (Underhill, 2000). State policy shapes markets and market conditions can affect the government's capacity to meet public policy objectives (Polanyi, 2001). The process that leads to financial integration, however measured, consequently needs to be understood as a transformation of the configuration between public and private authority over the allocation of financial resources across multiple spatial units.

The recognition that financial integration means more than just an increased volume in financial transactions between national financial systems has only recently been reflected in analytical tools. In the wake of the financial crisis in the Eurodollar market, more detailed attention has been paid to the precise nature of international transactions and their implications for policy-making. Economists from the Bank for International Settlements propose to 'break free from the triple coincidence' of GDP unit, decision making unit, and currency area (Avdjiev, McCauley, & Shin, 2016). Instead, gross financial flows, the international circulation of currencies and the management of transnational banks have to be recognized as factors in their own right which may change the payoff calculus for public policy options (Obstfeld & Taylor, 2017). Despite uniquely high levels of foreign bank ownership and foreign currency loans before the financial crisis, this analytical framework has so far not been applied to financial integration in CEE.

Specifically, the goal of this paper is to understand the process of financial integration from the perspective of liquidity. Liquidity, or the ability to make payments when they fall due, refers to the ability of banks to obtain cash or central bank reserves in order to conduct payments. In a fiat money system, the central bank aims to influence the price at which banks can obtain funding and provides liquidity in response to the financing needs of the financial sector (Fullwiler, 2017; Komáromi, 2007). If a central bank operates uses an external anchor, however, it trades off its capacity to control interest rates for exchange rate stability. This means the central bank cannot provide unlimited amounts of liquidity to its financial sector, and as a result loses its capacity to act as lender of last resort (Bindseil & Winkler, 2012). The price at which banks can obtain liquidity is hence to a great extent due to the monetary policy framework that the central bank operates.

Financial integration challenges the capacity of central banks to control domestic liquidity conditions in a number of ways. First, international financial flows can result in changes in liquidity conditions to which central banks have to respond. Especially in emerging markets, financial inflows create a surplus of liquidity in the system that the central bank has to 'sterilize' – that means absorb – in order to reach its interest rate target (S. T. Gray, 2006). Second, the effectiveness of regulatory tools to reduce

liquidity levels, such as raising reserve requirements, can be reduced if banks can access deep international funding pools. Third, the circulation of foreign currencies, in cash or as denomination of loans and deposits, undermines a central bank's ability to affect market rates and liquidity levels. Confronted with an inflow of foreign currency, central banks have the choice between sterilizing inflows, which is costly, or lowering their policy rates, which deters inflows but makes domestic liquidity cheaper. Central banks' capacity to affect liquidity conditions in foreign currencies is constrained by their level of foreign exchange reserves.

Consequently, financial integration can be thought of as a process that weakens the control of central banks over domestic liquidity conditions. The spatial reorganization of financial markets results in challenges for monetary policymakers because the reaches of liquidity conditions and interest rates extend across jurisdictional borders (Rey, 2015). All these problems are nothing new. Charles Kindleberger (1965, quoted in Mehrling, 2015) sketched out the overall rationale of the post-war international monetary architecture as follows:

"The breakdown of the international money market in the 1930s led to the establishment of the IMF after the war; its gradual revival, especially after 1958, has put the IMF last in the line of short-term adjustment devices. First is the market. Then come central-bank operations of the Basle Club type, which had their origin in the measures taken by central banks to stabilize the market after the revaluation of the mark and the guilder in March 1961. Finally, to tidy up, is the IMF, which funds such short-term obligations as are not reversed, after the crisis is over. At any stage, first, middle or last, the country can use its own reserves."

In recent practice, all these instruments have remained relevant. After money markets failed, problems related to liquidity have been resolved through cooperation between central banks, such as the Chiang Mai Initiative (Henning, 2011) and the network of foreign currency swaps set up by the Fed and other central banks during the financial crisis (Allen, 2013; Broz, 2014; Henning, 2015; McDowell, 2012). Lending by the International Monetary Fund is another channel of official cooperation to provide central banks with sufficient foreign liquidity.

[Studying financial integration as regime formation](#)

Financial integration has for the purposes of this article conceptualized as a change in the balance between public and private authority over the allocation of financial resources across multiple spatial units. In order to study this concept, financial integration will be approached as a regime study (Haggard & Simmons, 1987; Young, 1983). Regimes are commonly defined as “implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given area of international relations” (Krasner, 1982). Regimes may differ with regard to their strength, organizational form, scope, and the way in which they allocate resources. What unites them is that they align the expectations of various actors and thereby help to produce convergent practices.

In order to study the beginnings of financial integration in CEE, it is helpful to recall Young's (1983) typology of regime formation processes. He posits three ways in which regimes can form, namely by imposition, negotiation, or spontaneously. If a leading power makes others conform to a deliberately established order without their consent, a regime can be classified as imposed; if there is consent between different participants, it is rather a negotiated regime. Spontaneous regimes emerge without any central coordination, but they, too, can result in convergent outcomes and lasting regimes (e.g. Gallarotti, 1995). The regime formation mode may be related to the allocation mode. A hegemon may be able to impose a regime, multilateral cooperation is often the result of negotiations and unilateral decisions can emerge in a decentralized way. However, shifts in structural power can change the nature and operation of a regime over time and eventually bring it to an end.

The study of the transformation of financial markets in CEE will categorise different processes according to the typology of regime formation processes. It is argued that a new regime formed between 1998 and 2003 because the both market structures and monetary policy frameworks changed in a way that fundamentally reorganized the allocation of liquidity across the region. In the following sections, it is documented not just how the authority over liquidity conditions shifted from central banks to West European banks, but also to which extent this was the result of coordination, imposition or unilateral decisions.

Financial markets

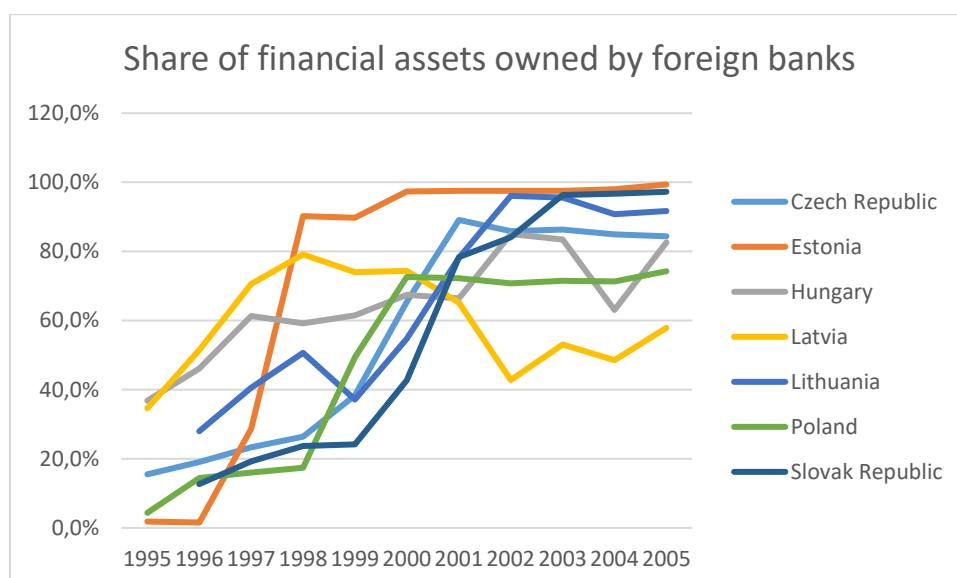
During the transition period, the nature of banking in CEE changed fundamentally. Within ten years, the region went from having a Soviet-style monobank system¹ to being almost entirely controlled by foreign banks. The transition away from socialist payments systems, which meant splitting monobanks into a central bank and commercial banks, opened up wide opportunities for financial sector development (Baliño, Dhawan, & Sundararajan, 1994). The privatisation of formerly state-owned commercial banks, the liberal regulation of banks in the mid-1990s, and loose lending practices resulted in financial crises in most transition economies (Árvai & Vincze, 2000; Tang, Zoli, & Klytchnikova, 2000). After these crises, the financial sectors stabilised as foreign banks developed major market shares in almost all CEE countries. During the pre-accession years, these foreign banks led a process of financial deepening in CEE and became the major channel for financial inflows.

The development of financial markets in CEE happened in parallel with the EU's own plans to move towards deeper financial integration. In line with the Financial Services Action Plan (Commission of the European Communities, 1999), the EU's financial legislation framework was transformed in order to facilitate the integration of capital and financial markets across the EU (Mügge, 2010). EU financial regulation would not just have a major effect on CEE because they would have to be transposed, but also because the FDI in the banking sector came almost exclusively from banks that were headquartered in EU member states. This meant that banks could transmit economic and regulatory developments between the EU and CEE countries (Caviglia, Krause, & Thimann, 2002). The rules for financial supervision developed in this framework would therefore have wide-ranging consequences for the conduct of monetary policy and macroprudential regulation in CEE.

¹ Poland and Hungary had liberalized their banking sectors somewhat in the 1980s already and allowed both private banking and foreign investment before the fall of the Iron Curtain (Aslund, 2012; Bonin & Ábel, 2000)

Bank entry: privatisation, crisis, and business opportunities

The changes in financial market structure in CEE pre-dated the official start of accession negotiations with the EU. From the late 1990's onwards, the share of banks with foreign ownership increased significantly and by the year 2000, more than half of all banking assets in CEE were held by foreign banks after it had been as low as 4% in 1995 (Naaborg, 2007). After 2000, the overall number of foreign banks in CEE did not increase much more, but they grew their market share to more than 80% of all banking assets by 2004, displacing extant domestically-held banks. In Hungary and Latvia foreign banks started developing market shares in 1996, Lithuania and Estonia followed by 1998 and in 1999 the foreign banking share increased in Poland. In the remaining Accession countries, foreign banks needed until 2000 to control 50% of the market; only in Slovenia did the share of foreign banks remain significantly below that. Taken together, this transformation of the banking sector towards foreign ownership marked the severing of state bank ties in most CEE countries (Epstein, 2017).



Source: EBRD

The entry of foreign banks into CEE took the shape of both acquisition of existing banks and greenfield entry. This meant that, rather than just lending across borders², they would themselves establish retail

² As was predominantly the case in the Euro Area

operations and lend to businesses and households directly. Greenfield investment and bank takeover differ because in the former case, a bank sets up entirely new operations in a foreign country; in the case of takeover, it acquires ownership of a bank that is already operating in the target country. In general, foreign banks preferred acquisition over greenfield entry and, consequently, most foreign banks operated as subsidiaries of their parents rather than as branches (European Central Bank, 2005). However, and somewhat surprisingly (see Epstein, 2014), for the governance of international capital flows, entry mode and business model did not make big difference, as will be discussed later.

Table 5 Foreign credit institutions in the NMSs (2003)

	CY	CZ	EE	HU	LT	LV	MT	PL	SI	SK	Total
Number of foreign branches	2	9	1	0	3	1	2	1	1	3	23
Total assets (€ million)	408	7,610	537	0	555	405	4,753	693	205	3,034	18,200
% of total banking assets	2	10	9	0	9	5	27	1	1	13	6
Number of foreign subsidiaries	4	18	3	28	5	7	8	45	5	16	139
Total assets (€ million)	2,921	62,315	5,622	33,708	4,876	3,701	6,662	74,716	3,879	19,834	218,234
% of total banking assets	11	79	97	62	76	44	38	67	18	84	62
Foreign-owned bank assets ¹⁾											
as % of total banking assets	12	96	97	83	96	47	68	68	36	96	72
Number of top-5 foreign banks	1	5	4	4	5	2	4	4	1	5	34
Nationality of top-5 foreign banks	7 AT, 3 BE, 3 DE, 2 FI, 1 FR, 1 GR, 1 NL, 6 SE, 1 UK, 4 IT, 2 TK, 1 US										
Source: BSC.											
1) The percentage share of foreign branches and subsidiaries do not necessarily sum up to foreign-owned bank assets because the latter may also include indirect or minority foreign ownership.											

(European Central Bank, 2005)

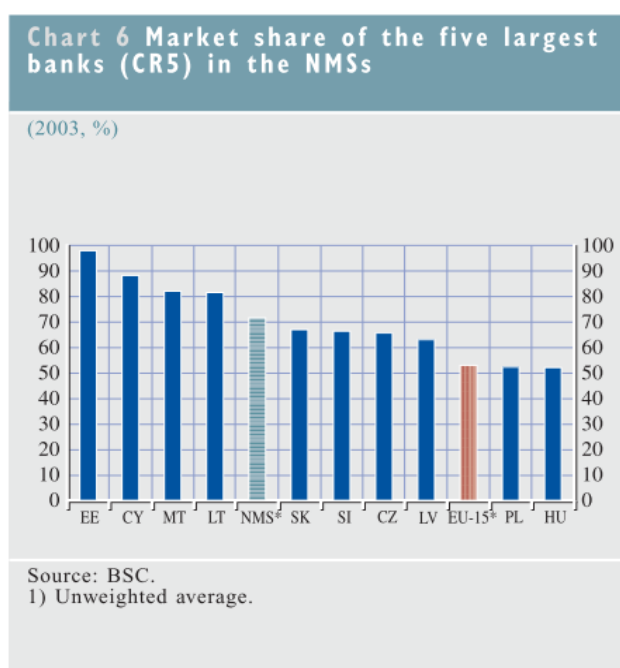
The increasing presence of foreign banks was the result of both political decisions by the CEE countries and banks' business strategies. To begin with, the transition away from a state-owned banking system meant that big parts of the CEE countries' banking systems were privatised. With the exceptions of Poland and Slovenia, the banking sectors of all CEE countries were without significant public ownership when they joined the EU (European Central Bank, 2005). Strategic investors snatched up some of these shares in successive rounds of privatisation, for instance when in Hungary four banks were sold to foreign investors in 1996 (Naaborg, 2007). Governments explicitly sought out foreign buyers for bank privatisation. The Czech Republic offered Austria's Erste Bank and French Société Générale an agreement to ringfence them against losses in the banks that they were buying and Poland set capital

requirements to a level that its domestic banks would not be able to meet (Havrylchyk & Jurzyk, 2006). The presence of multinational banks was fostered deliberately by sovereigns that tried to improve their credit ratings (Grittersová, 2017).

A second factor that facilitated the acquisition of banks by foreign investors were persistent financial crises in most CEE countries (Tang et al., 2000). Bank failures increased foreign bank ownership not just because governments tried to find foreign investors to take over ailing banks, but also because it resulted in the consolidation of the banking sector which increased the relative weight of foreign banks. For instance, in the Baltic countries several banks failed during the financial crises in 1995-97. The expansion of foreign banks' assets to over 90% of total in Estonia was the result of the sale of just two banks, Hansapank and Eesti Ühispank, to Sweden's Swedbank and SEB in 1998. The entry of foreign banks helped to prevent a worse financial crisis because they helped restore confidence (chapter on EE in Enoch & Ötcker-Robe, 2007b).

The expansion of foreign banks into CEE was, however, not just driven by supply factors, but the region was also attractive for foreign investment. The geographical patterns of financial sector investment flows may have reflected proximity and cultural affinity (Epstein, 2017), but banks also pursued straightforward commercial objectives. There was a widespread perception that the region was underbanked and that there were significant market shares that could be developed (Caviglia et al., 2002). Foreign banks' entry into retail markets was seen as a strategic investment where they wanted to develop market shares with long time horizons (European Central Bank, 2005). Competition in domestic markets and market entry by domestic competitors provided another driver for Western banks' expansions (Naaborg, 2007). Banks' return on equity in the Baltics was at 16% in 2003, in Central Europe still above 12%, compared with returns below 10% in the EU-15 states. FDI in other sectors also meant that to some degree banks were just following their customers as Western companies set up operations in CEE (Iwanicz-Drozdowska, Bongini, Smaga, & Witkowski, 2018). In short, CEE was an attractive region for expansion activities of West European banks.

Following several rounds of mergers and acquisitions (Baudino, Caviglia, Dorrucchi, & Pineau., 2004), the financial sector of most countries became very concentrated. On average, the biggest five banks controlled 76% of assets in the region in 2003 (European Central Bank, 2005). Following a round of mergers around the year 2000, markets were consolidated and ended up under the control of a few banks, especially in smaller countries, where the biggest banks controlled more than 90% of assets. In practice, high market concentration and high foreign ownership coupled together meant that CEE was controlled by a handful of international banks (Naaborg, 2007; Pistor, 2010a). In the Baltics, Swedish and Finnish banks were dominant³, while in Central Europe, Austrian, German, and Italian banks were active, as well as individual French and Belgian institutions (Naaborg, 2007 provides an overview). The resulting interdependence was somewhat asymmetrical, because the activities in CEE still represented a small part of banks' businesses even as they controlled big parts of national markets.



Domestic private banks all but vanished from the picture. Foreign banks often introduced more professional lending practices and provided cheaper access to financing for their subsidiaries, which made them more profitable and competitive (R. De Haas & Naaborg, 2006; Iwanicz-Drozowska et al.,

³ Finnish Sampo bank would later sell its banking business to Danske Bank, which is important to understand Denmark's Nationalbank's involvement in providing liquidity support to the Bank of Latvia in late 2008

2018). Two exceptions, however, are notable because they would play a central role during the financial crisis of 2008/09. Hungary's OTP, the successor to the national savings bank, remained without foreign majority owner and even became a regional investor itself (Bonin & Ábel, 2000). In Latvia, domestically-held Parex bank styled itself as a safe haven for Russian oligarchs' money (Åslund & Dombrovskis, 2011). Both banks managed to hold on to their market share, even as foreign competitors pursued aggressive expansion strategies, but would turn into liabilities for their national governments during the financial crisis (Mabbett & Schelkle, 2015).

The shift in financial market structures towards concentrated foreign ownership was hence almost uniform across the region. Still, the decisions by national governments to seek out foreign investors should be understood as a spontaneous process of regime formation. Just as West European banks were not directed to invest in CEE, the targeting of foreign investors for bank privatisation was due to individual decisions on the national level, not centralised coordination.

EU reforms for financial market governance

At the same time as CEE was receiving significant FDI inflows into its banking sector, the EU was just developing its own framework for regulating international banking activities. The Financial Services Action Plan in 1999 set out a five-year schedule for the integration of financial service in the EU, including the announcement of 42 new Regulations and Directives. The package formally distributed responsibilities between home and host country financial supervisors. The creation of a single European passport for financial services, which allowed the establishment of branches in other EU countries, further facilitated cross-border banking. Given that these decisions were taken largely before EU enlargement in 2004, the CEE countries had no voting power on most of the decisions. Still, from 2003 onwards the CEE authorities participated in all Lamfalussy committees as 'active observers' (Altmann, 2006). While many scholars have considered the unsuitability of this package for CEE from the perspective of resolution and capital regulation (Altmann, 2006; D'Hulster, 2012; Iaydjiev, 2016; Pistor, 2010a), this section discusses its major implications for the conduct of monetary policy and liquidity regulation.

The assignment of supervisory roles largely followed a home-country first principle that was based on principles of international finance reaching back to the Basel Committee's guidelines of 1983 (Altmann, 2006). This meant that the overall direction for supervision was towards concentrating more responsibilities with the national supervisor of parent banks than the authorities of the state where a bank had established a foreign branch or subsidiary. The Basel soft law provisions were summed up in the EU's Consolidated Banking Directive (2000) and the Financial Conglomerates Directive (2002), which entrusted the home supervisor with the prudential supervision of all activities of a banking group. This principle was largely based on the assumption that the home authorities would have better regulatory practices (Persaud, 2010), but it was also widely supported by the industry, which saw it as creating a one-stop shop regime for regulation and sidestepped the need to deal with a variety of supervisors (Linda van Goor in Enoch & Ötcher-Robe, 2007b; Mügge, 2010).

However, the responsibility of bank liquidity and monetary policy remained with the host authorities. The Consolidated Banking Directive is clear that host states would be in charge of ensuring the liquidity of subsidiaries, even as liquidity for the group was under the control of the home authority; for branches, both home and host were responsible. The responsibility for providing liquidity for banks' operations in CEE would officially fall on central banks in CEE, which would have to act as lender-of-last-resort in case of a crisis. On the side of the Euro Area, liquidity provision also remained a national responsibility, while the ECB maintained its stance of "constructive ambiguity" as to whether it would play the role of LOLR (Schüler, 2003). The ECB had alluded to the possibility of national central banks acting as LOLR by providing emergency liquidity in its 1999 Annual Report (European Central Bank, 1999), but clarified that the costs for that would be borne by national central banks and that these measures would be sterilised by the ECB if they threatened price stability in the Euro Area.

The EU's framework for governing liquidity, it follows, provided a somewhat contradictory picture regarding who was in charge of managing liquidity risks in integrated financial markets. Supervisory authorities were national, but the supervision of bank groups remained with the home authorities, while host authorities would officially have to intervene to support subsidiaries and even branches

that faced liquidity problems. Financial regulators tried to circumvent such issues by signing Memoranda of Understanding (MoU) that set out principles for cooperation and information sharing between national authorities. The Bank of Austria concluded its first agreements on supervisory cooperation with its counterparts in Hungary, the Czech Republic, and Slovenia in 2001 (Altmann, 2006). Latvia concluded agreements with various EU authorities between 2000 and 2003⁴. On the European level, a secret “Memorandum of Understanding on high-level principles of co-operation between the banking supervisors and central banks of the European Union in crisis management situations” was agreed in 2003. The principles of that agreement were translated into concrete operating procedure for information-sharing by MoUs between the Nordic central banks and between the Dutch and Belgian central banks (European Central Bank, 2006).

Supervisory cooperation in the region within CEE took place in parallel with the EU developments. In 2000 the central banks of the Baltic countries also agreed on procedures for liquidity provision for branches in each other’s country⁵. They, too assigned the roles of LOLR to the host authorities for branches and subsidiaries. At the time only Estonia’s Hansapank, which was ultimately Swedish-owned, had expanded into Latvia and Lithuania (Naaborg, 2007). Given their rigid exchange rate regimes none of these central banks could plausibly claim to be able to act as LOLR, but this evidence shows that the Basle Principles on home/host task division were implemented in the Baltics before the EU had its own procedures in place. The emergence of (non-binding) agreements between central banks regarding freedom of establishment, information sharing and prudential regulation was a widespread phenomenon.

In the context of supervisory rules it can hence more easily be argued that the official framework for liquidity provision was imposed. The CEE countries had no voting rights in the negotiations of the rules,

⁴ <https://www.fktk.lv/en/about-us/cooperation/agreements-on-co-operation-and-exchange-of-information/?l=3>

https://www.fktk.lv/wp-content/uploads/2019/05/Bank_Estonia.pdf

https://www.fktk.lv/wp-content/uploads/2019/05/Lietuvas_bankas.pdf

yet they were required to implement them in order to be able to accede the EU. Yet the formal rules made little sense for governing liquidity given the shape of financial markets and the exchange rate regimes under operation in the Baltic countries. While the EU mandated national control over liquidity conditions, in fact, CEE governments had surrendered a considerable degree of control to foreign banks.

Financial market governance in practice

Inside the EU, the establishment of foreign branches and subsidiaries was not common and, in many regards, financial markets in the old member states remained a national business. For CEE, by contrast, the division of regulatory authority between the home and host authorities meant that they had to share several policy instruments with the home authorities of the foreign banks that controlled their markets. The fact that most foreign banks' operations happened through subsidiaries, which are in theory self-standing units with their own capital base (Epstein, 2014), was not reflected in actual management practices. Instead, they were largely considered branches for all practical purposes. This meant they could enjoy cheaper access to liquidity and capital if needed, managed through the banking group's 'internal capital market' in which the parent bank acted as central treasury (R. De Haas & Naaborg, 2006). As a result, control over liquidity levels shifted towards the parent banks and national authorities would experience both the pleasant and unpleasant sides of financial integration.

One advantage of foreign bank presence was that their proactive lending practices facilitated financial deepening and investments in productive capacities. After 2000, the number of foreign banks did not increase significantly anymore, however, they managed to grow their market shares significantly faster than domestic competitors. This was in part thanks to the absence of constraints on the liability side of the subsidiary banks. The subsidiaries were given ambitious growth targets, both concerning annual credit growth and future market shares. Funding management, the provision of sufficient capital and liquidity to meet local requirements, was relegated to an 'operational' issue from the perspective of the parents (R. De Haas & Naaborg, 2006). This meant that even as regulators set comparatively high

requirements for central bank reserves and capital, foreign banks would be able to comply with them and expand credit. The EU's Consolidated Banking Regulation imposed limits on credit exposure to a single counterparty equivalent to 25% of bank capital, but these constraints could be circumvented by allocating new capital to the subsidiary instead of issuing loans (R. De Haas & Naaborg, 2006). Even during economic downturns, as in Estonia in 2000, foreign bank subsidiaries did not curtail lending, which contributed to economic stabilisation (R. T. A. de Haas & van Lelyveld, 2004; R. de Haas & van Lelyveld, 2006).

The allocation of liquidity and capital via banks' internal capital markets stood somewhat in contrasts with the legal status of subsidiaries as self-standing units. However, in CEE, above all in the Baltic countries this was not necessarily seen as a problem. Given the constraints of operating a currency board, in particular the inability to act as LOLR, the parent bank might be in a position to step in during a liquidity crisis (Khoury & Wihlborg, 2006). Commenting on Nordic banks' presence in Estonia, Eesti Pank president Vahur Kraft wrote that "this development has somewhat lessened our concern for immediate liquidity and capital of the banks" (Kraft, 2003). This expectation was echoed by the European Commission in its first Progress Report on Estonia:

"In the context of Estonia's currency board, the growing participation of foreign capital in local banks is an important development. With the role of the central bank as lender of last resort strictly limited, easy access by banks to foreign funds (in particular via their parent company) improves confidence in the resilience of the financial system in case of a slow down [*sic*] of the economy or large capital outflows." (European Commission, 1999)

Likewise, the central banks of Poland and the Czech Republic declared that they expected foreign parents to provide emergency liquidity (R. De Haas & Naaborg, 2006). Notwithstanding the rules that assigned lending of last resort to the host authorities, policymakers were convinced that parent banks would support their subsidiaries in a crisis.

The parent banks were aware of this expectation and several of them explicitly assured host authorities of their support. Both the long-term investment horizon that they pursued when they set up operations in CEE and the reputational costs associated with abandoning a subsidiary were cited as reasons for that (R. De Haas & Naaborg, 2006; Epstein, 2017). In Central Europe, several parent banks

assured host authorities that they would maintain exposure through “comfort letters” (R. De Haas & Naaborg, 2006), and the heads of both Swedish parent banks visited the Baltic authorities and to reassure them that they were considered part of the banks’ home market (Banincova, 2012). In Hungary parent banks did show that they kept their word and act as LOLR for their subsidiaries already before Accession (Barisitz, 2005). There have also been instances of parents abandoning their subsidiaries, as in the case of Rijecka bank in Croatia (Barisitz, 2005; Naaborg, 2007). More often, however, foreign bank entry increased confidence in financial stability, as during the crisis in 1998 in Estonia when the entry of SEB and Swedbank was followed by a reduction in lending spreads.

Yet, foreign banks also made the conduct of macroeconomic policy more difficult in a number of ways. Even with faithful information sharing on banking groups between home and host supervisors, there were some conflicts of interest between them. The first one was that considerations at the group level were not necessarily appropriate for subsidiaries. Virtually unconstrained lending by subsidiaries could not be held in check if they had a permanent credit line to their bigger parents. In addition to that, direct cross-border loans provided another way for parent banks to channel credit to CEE (R. De Haas & Naaborg, 2006).⁶ Whereas the national regulators in CEE imposed higher capital and liquidity requirements on the subsidiaries, they had no control over the level of liquidity on the group level or the actual reliance on internal capital markets. High prudential requirements could ensure the stability of the subsidiaries, but had little effect in containing credit growth (Enoch & Ötke-Robe, 2007a). At the same time, it meant that instability in the home market of a bank and ensuing regulatory responses towards the parent bank could spill over into the host markets.

Another related problem was that monetary policy measures, in so far as they were available, were rendered less effective. Foreign banks could access deeper funding markets and enjoyed better credit ratings than their domestic competitors, which allowed them to sidestep domestic monetary policy

⁶ Although local tax codes discouraged cross border lending because profits from cross border loan would be taxed at the same level as in the home country, whereas for local lending the local rate would apply, which could be as low as 0% (in Estonia) if earnings were reinvested (R. De Haas & Naaborg, 2006)

measures and offer lower interest rates. The funding from parent banks was predominantly denominated in euros which the subsidiaries would subsequently swap into local currency if needed (R. De Haas & Naaborg, 2006). Local currency funding might be done by the subsidiary itself, but foreign currency exposures on the liability side were managed on the parent bank level. Lower funding rates in euros were passed on to customers, with lower interest rates for euro-denominated loans even in countries with currency boards (Chapter on Lithuania Enoch & Ötcher-Robe, 2007b). It is important to note though that domestic banks also engaged in foreign currency lending to companies and households, which they funded wholesale (Brown & De Haas, 2012).

The transformation of financial market structures thus implied a major shift of control over liquidity conditions from CEE authorities to foreign banks and their home authorities. The entry of foreign banks facilitated credit growth and improved competition and creditworthiness, but it also meant that some residual channels for macroeconomic policy became ineffective. A Latvian regulator indicated that foreign bank subsidiaries had ‘almost unlimited access to resources’ from their parents (Enoch & Ötcher-Robe, 2007b) and foreign currency funding, together with improving swap markets, rendered domestic interest rates less effective in constraining funding conditions. A significant share of liquidity allocation was driven by aggressive expansion strategies of foreign banks, which were supervised by their home authorities. While the development of the EU’s new financial governance framework was still progressing, the practical arrangements in CEE were already put in place⁷.

⁷ Later, the adoption of all EU rules would lead to other bizarre outcomes because CEE countries would have to adopt regulations for financial products that were not even offered by their financial sectors; capital markets were almost non-existent

Liquidity management

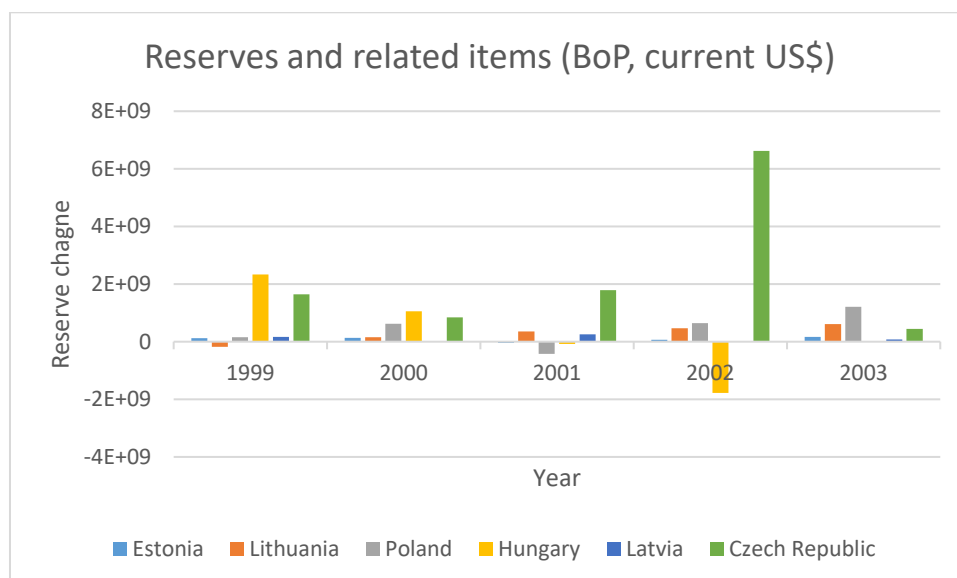
Against the backdrop of changed market structures, it can be asked what monetary policymakers did in order to bring liquidity in line with their objectives. A first note on this is that almost all possible exchange rate agreements could be found in CEE countries. Poland and the Czech Republic let their currencies float, Estonia and Lithuania had currency board arrangements, and the remaining countries pursued currency pegs. Based on that, it is plausible to expect that central banks pursued different objectives and had different policy tools at their disposal. Yet, liquidity conditions across the region were similar in two regards irrespective of monetary policy framework: continued financial inflows led to a surplus of liquidity that central banks had to manage - if they could - and the use of foreign currencies which limited the efficiency of interest rates as policy instruments.⁸ This section will examine the factors that influenced central banks' management practices of their foreign reserves and domestic levels of liquidity. Foreign currencies will receive separate attention.

Foreign reserve management

Given that most CEE central banks regularly intervened in foreign exchange markets, the management of foreign reserves was an important element in their monetary policy frameworks. The transition period had sometimes been problematic from a liquidity perspective, culminating in funding stress in several countries in 1998/99. Yet, with the entry of foreign banks and macroeconomic stabilization, in most countries the first years of the new millennium were characterized by monetary calm. The Baltic countries managed to keep their foreign reserves in line with the backing requirement for their currency boards, while the inflation-targeting central banks brought their reserve management strategies in line with international best practice. The speculative attacks on Hungary's forint in 2003 remained the only instance where reserve management strategies were seriously tested. Solid capital inflows and access to short-term funding compensated for current account deficits, so that there had

⁸ Regarding foreign currencies, all central banks are currency users, which means that their policy space is determined by the level of their foreign reserves.

been only a few instances where countries reduced their foreign exchange reserves as a result of their overall Balance of Payments.



Change in Foreign Reserves due to Balance of Payments, Source: World Bank

To start off, it is important to highlight the connection between the level of foreign reserves that a central bank wants to hold and its exchange rate regime. In a narrow peg arrangement or currency boards, the management of foreign liquidity is the central task of the central bank, while in entirely free floats foreign reserves serve no other purpose than conducting international payments (Bank for International Settlements, 2005). In floating arrangements, central banks' desired level of foreign reserves is customarily defined in response to short-term external financing needs, such as three months of import (Borio, Galati, & Heath, 2008). Holding reserves in excess of these needs, is a cost for the government because, for emerging economies, the returns on foreign reserve assets are usually lower than the interest paid for sterilizing them (Rodrik, 2006).⁹ With liquid foreign exchange markets, there is hence no incentive for central banks to keep significantly more reserves than needed. For

⁹ Suppose the Hungarian central bank held a German bond that pays 3% as an asset, but pays 6% on its sterilisation facility, which is a liability to the central bank. In that case it would incur a loss from this position and be better off selling the bond, reducing its level of foreign reserves

illustration, after Hungary liberalized capital flows and widened its fluctuation band in 2001, the MNB reduced its reserve levels from 20 months of imports to just three.

In a currency board, by contrast, the amount of foreign reserves that the central bank holds has to back up the reserves and cash that it gives out. This means that foreign reserve levels determine the domestic money base. Technically, there is some variation between individual currency boards because the central bank can choose narrower or broader monetary aggregates that it wants to back. Thus Eesti Pank backed a narrower aggregate – 100% of the monetary base – whereas Lithuania’s currency board used a broader one and included liquid central bank liabilities (Baliño, Enoch, Ize, Santiprabhob, & Stella, 1997). In practice both currency boards targeted reserves in excess of the backing rule, which provided them some scope for discretionary intervention. Foreign reserve management in Latvia, also exceeded the monetary base (International Monetary Fund, 2005b), if only slightly. In line with the requirements for their exchange rate regime, hence, the Baltic countries chose to keep a slight buffer.

Backing Ratios in Baltic countries end-2003¹⁰

	Estonia	Latvia	Lithuania
Foreign Assets/ (Currency in circulation			
+MFI deposits)	124,2	105,6	151,5

Sources: Eesti Pank, Bank of Latvia, Bank of
Lithuania

Approaching the targeted official level of foreign reserves became easier as financial markets became more integrated and liquid. During the 1990’s foreign reserves still had to be funded from official sources. In the Baltic countries, initial foreign reserves were the result of restitution of monetary gold that was still in the vaults of the Bank of England and had belonged to the Baltic Republics before World War II (Wolf, Ghosh, Berger, & Gulde, 2013), but Estonia even pledged part of its natural forests

¹⁰ For Latvia, data only from mid-2003 available, hence no time series

to back up its currency until 1997 (Boughton, 2012). In 2000, the Baltic countries turned to the IMF in order to be able to replenish their foreign reserves on short notice. Estonia had a precautionary IMF stand-by agreement until 2001, Latvia until 2002 and Lithuania even until 2003. None of these credit lines was eventually activated, but their availability reassured both investors and policymakers that a loss of access to financing could be buffered.

In Hungary and Poland, fiscal policy had been a major source of foreign reserves in the 1990's (Boughton, 2012) and about a third of government debt stocks was denominated in foreign currency. In some countries, such as Latvia or Hungary, there was coordination between the Treasury and the central bank on the currency composition of government debt. Only in Hungary and Lithuania were the central banks not legally able to issue their own foreign-denominated liabilities (Bank for International Settlements, 2005; S. T. Gray, 2006).¹¹ After 2001, when capital controls were removed in all countries, central banks managed reserves via spot sales and swaps on currency markets and new government debt was almost exclusively raised in domestic currency (Arvai, 2005).

The composition of reserves was more and more oriented towards the euro as countries changed their reserve anchor. The re-orientation of domestic reserves towards the euro happened in response to increased demand for the pairing of domestic currency and euro, as more and more trade transactions were invoiced in that currency. Lithuania's repegging from the dollar to the euro entailed the conversion of all its reserves, but was pre-announced and went smoothly (Alonso-Garno, Fabrizio, Krarnarenko, & Wang, 2002). However, even for Latvia, which maintained its mixed basket of five currencies that made up the IMF Special Drawing Rights, liquid domestic money markets meant that ready cash would be available to manage the currency (International Monetary Fund, 2005a).

The prospective entry into the EU meant that two new sources of official financing would be made available if a country were to get into Balance of Payments problems. The Medium-Term Financial Assistance Facility was revamped in 2002 - before enlargement - because there was a "perceived need

¹¹ Estonia's currency board also allowed deposits in foreign currency (Ho, 2002)

in light of future enlargements". The MFAF could provide foreign reserves in the form of euro-denominated loans to the Treasury. This facility would have to be requested before a member state could turn to other official sources of funding, such as the IMF. In order to be able to cover short-term reserve shortages, the central bank agreement on operating principles of the ERM II furthermore provided for the possibility of 'Very Short Term Financing'. Under this facility central banks could provide each other with loans with a maturity of up to three months, which would function like a currency swap and serve to temporarily increase reserves. For the purposes of intervention at the margin of the fluctuation band of ERM II participants, this support would 'in principle' be automatic and unlimited, whereas for intervention within the margins limits were specified. The activation of this mechanism was left at the discretion of the ECB, since the requesting central bank first had to make 'appropriate use' of its own reserves and the ECB could suspend the facility if it was in conflict with Euro Area price stability. There existed the possibility to roll over foreign reserve assistance from the VSTFF or convert it into a loan under the MFA.

Foreign reserve management practices in CEE were in line with international best practice and all central banks maintained higher foreign exchange reserve levels than the ECB. Foreign exchange markets were liquid, which mostly enabled central banks to reach their foreign reserve targets with ease. The experience with the IMF and the prospect of further BoP assistance facilities for EU members suggested that official sources to increase foreign reserves would be available should the need arise.

The role of foreign currencies

Foreign currencies were an integral part of the financial system in the Accession countries for more reasons than just their official role in international payments. They were common as a denomination for financial assets and liabilities and even in use as parallel currencies. Eastern Europe had already seen a degree of dollarization during the 1990s (Aslund, 2012), so this was not an entirely new development. During episodes of high and hyperinflation in several transition countries, foreign cash, especially US dollar and Deutschmark, came to play an important role as stable store of value. Its role

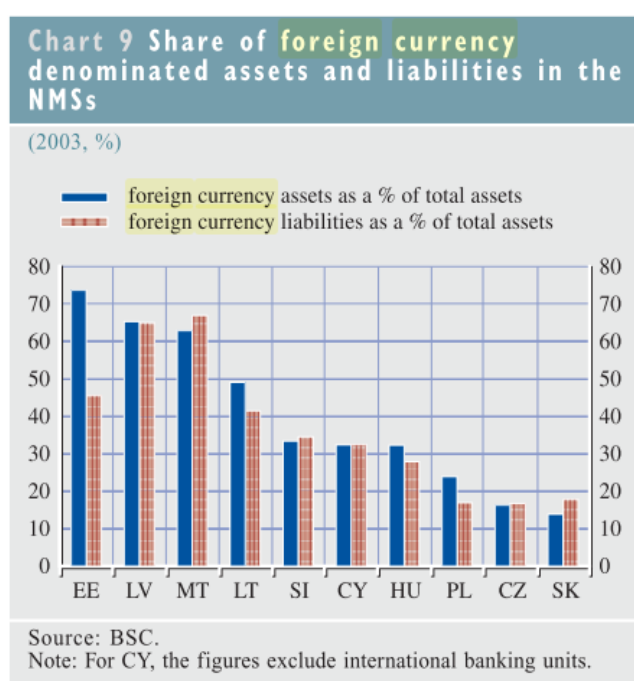
was boosted by Gresham's Law. After 2000, the stocks were not reduced, but the perception of foreign currencies was a different one. Rather than using foreign cash because of the anticipated loss of value of domestic currency, now the expected stability or even appreciation of domestic currency made foreign currencies a valid substitute. People in the Baltic countries took out loans in euros because they were used to it and it 'made no difference' (Enoch & Ötcker-Robe, 2007a). The circulation of foreign currencies not just meant that the money supply was bigger than the official figure (Calvo & Végh, 1992)¹², but also domestic monetary policymakers had less control over developments in the money supply because they could not influence the interest rate in foreign currencies.

Gauging the amount of foreign cash that circulated in CEE is difficult. Payments in cash are not recorded because no country officially euroised or dollarized and much of the foreign cash primarily featured on the black market. Yet there are some helpful indications regarding the amount of foreign cash in circulation in CEE. According to the OeNB, up to half of all households in Central European countries held foreign cash around 2000, especially Deutschmark and Austrian Schilling, while the dollar played a marginal role (Stix, 2004). Holdings of legacy currencies decreased before the introduction of euro banknotes in 2002 (Sinn & Westermann, 2001); it resumed after that. The ECB itself provides numbers for its official shipments of euro notes to CEE that say that by end-2002, 7% of all brand-new euro cash officially had been transferred to Eastern Europe, not even counting internal cash transfers of international banks (Padoa-Schioppa, 2002). After the introduction of the euro, West European banks' subsidiaries were also willing to open euro-denominated deposits for clients that presented euro legacy currencies in cash. In terms of foreign cash, the euro already enjoyed a strong presence in CEE before accession.

For the denomination of financial assets and liabilities the euro gradually absolved the dollar from its dominant position after 2000. The level of foreign currencies in the financial system had been high already in the 1990s, but its composition changed in most countries. An IMF report classified Latvia as

¹² In 2003, more than a quarter of the money supply in Latvia was in foreign currency (Latvijas Bank, 2003)

highly dollarized all other later Accession countries except Slovenia as moderately dollarized (Balino, Bennett, & Borensztein, 1999). Foreign currencies played a more important role on the asset than on the liability side of banks, already in 1997, more than half of all loans in Latvia and Estonia were denominated in foreign currencies, while less than a third of deposits were in foreign currencies (Rosenberg & Tirpák, 2009). Banks were thus already exposed to significant currency mismatches. If any trend is discernible, it is that the share of FX loans was decreasing slightly before 2004.

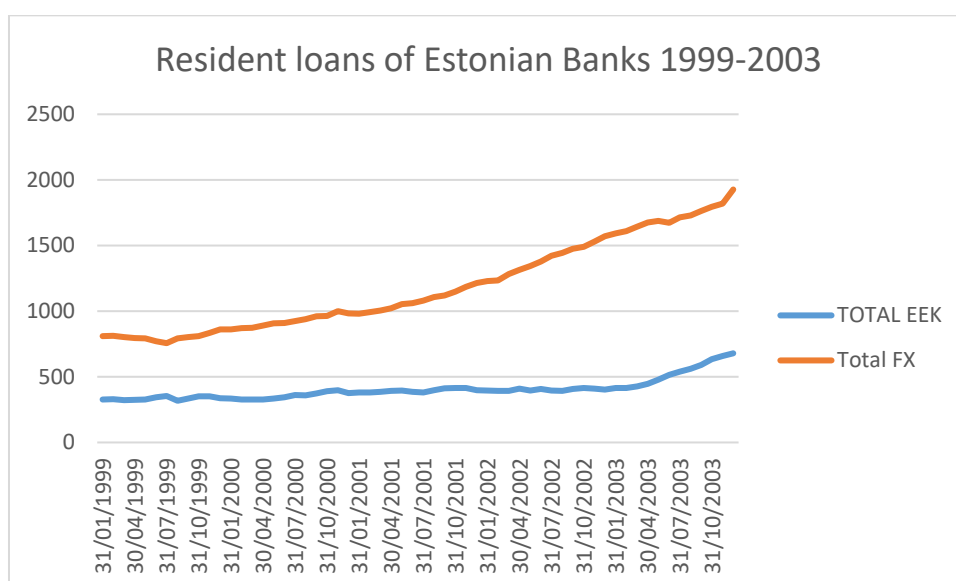
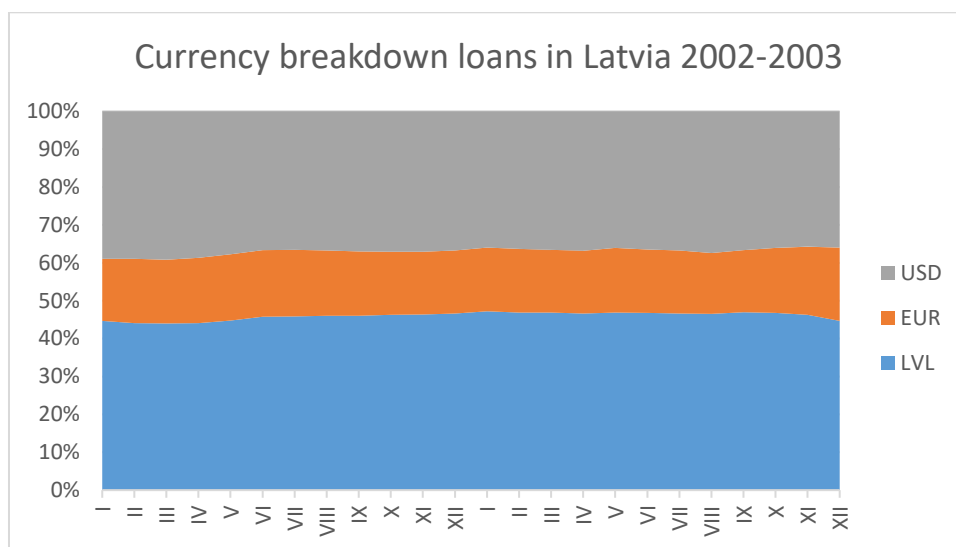


(European Central Bank, 2005)

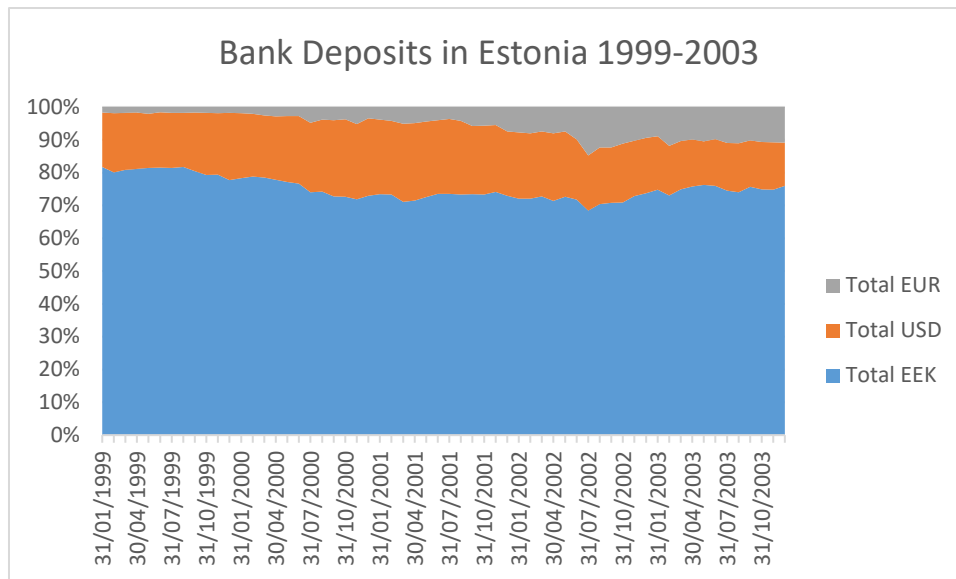
The differences in effective euroisation/dollarization warrant some discussion. The Baltics had the highest levels of FX denominated loans, while in Central Europe, these levels were still significant, but lower. In addition to that, the dollar remained an important currency besides the euro in loan denomination, at least in Lithuania and Latvia, but only in Latvia was it still more important than the euro.¹³ In Central Europe, the euro was almost uncontested and only small shares of loans were

¹³ Remaining dollar positions would largely be converted into euros when Latvia joined the ERM II in 2005 and removed introduced the euro as sole anchor currency

denominated in Swiss Francs, but Poland's level of 6.1% was the highest of all Accession countries (Brown, Peter, & Wehrmüller, 2009).



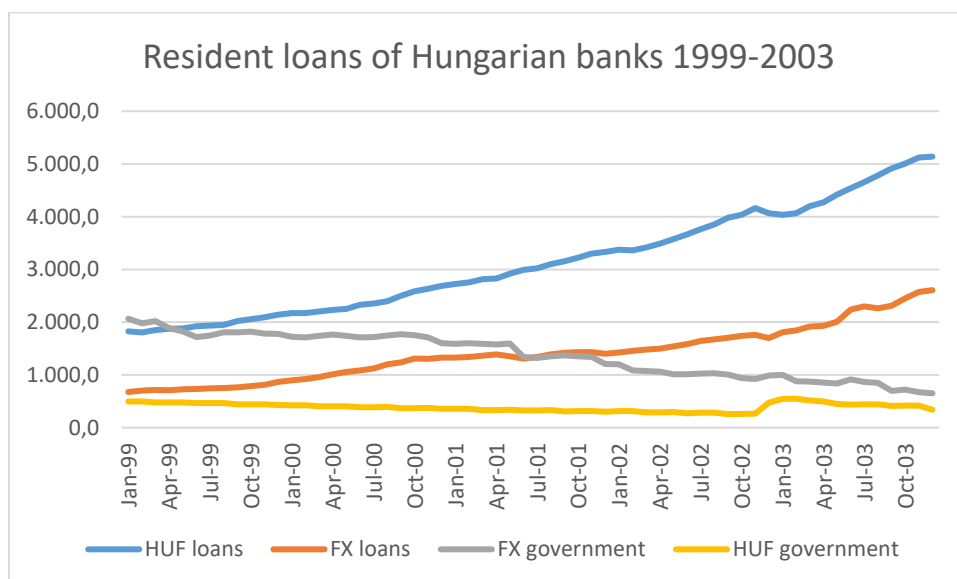
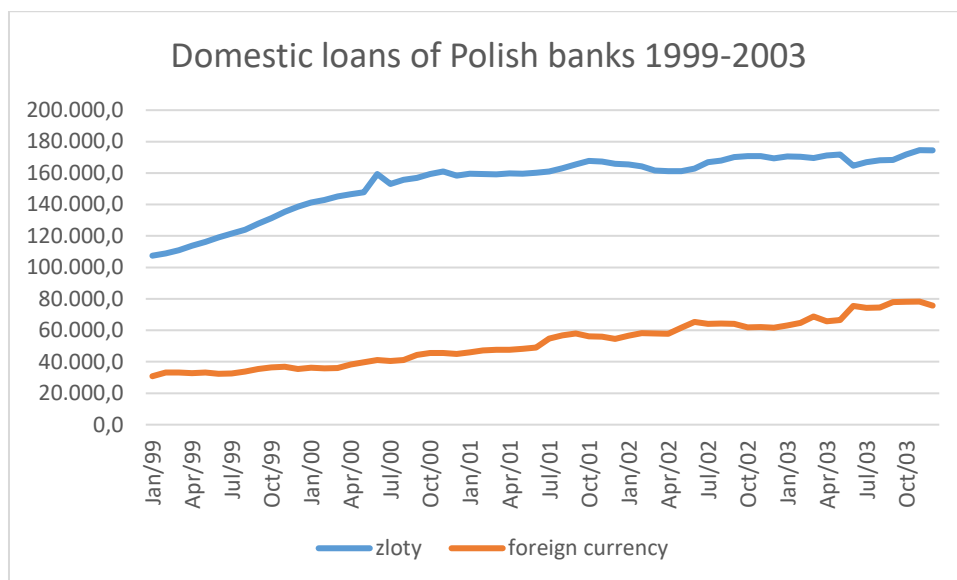
FX until 2002 DEM and EUR, after that only EUR

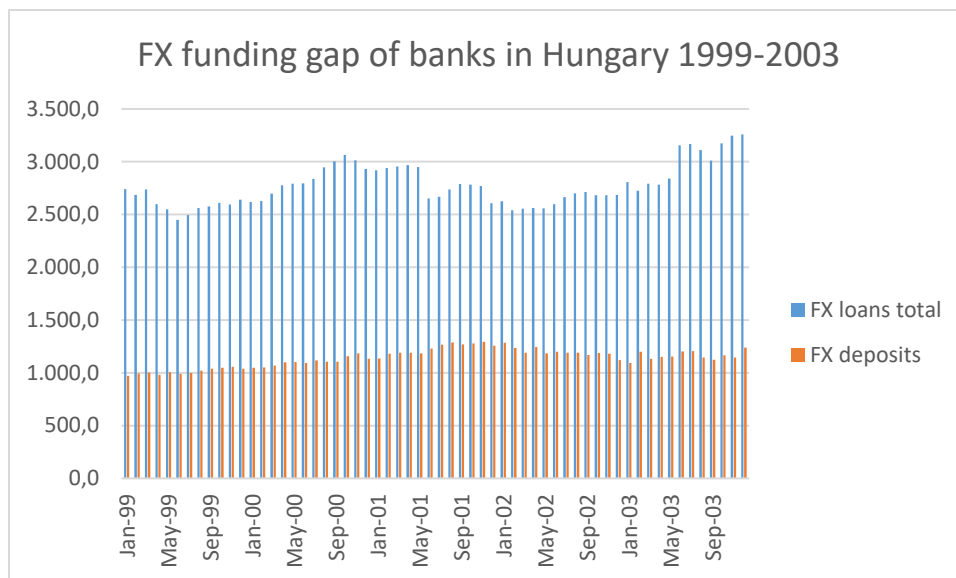


A number of explanations can be found to explain the different degrees of foreign currency use in the financial system. The countries with wider fluctuation bands or inflation targeting had lower levels than the Baltic countries. This can be attributed to both the relative volatility of the exchange rate, which made FX loans riskier for borrowers, and the more stable inflation expectations for the domestic currency because the central banks targeted inflation. However, higher interest rates in domestic currency increased the relative attractiveness of foreign currency loans, especially in Hungary. In the Baltic countries, the hard currency pegs reduced the perceived exchange rate risk of loans and borrowers were more willing to take on unhedged currency risks, but bank accounts that were denominated in foreign currencies were not uncommon either. Simply put, the credibility of their exchange rate regimes made FX loans appear safe. Out of all countries, only Poland took regulatory measures to contain FX credit growth, when it imposed higher capital requirements on FX exposure in 2001 (Enoch & Ötcher-Robe, 2007a).

The role of foreign banks in driving credit growth in foreign currencies has been widely discussed. Yet, before Accession, their role in driving foreign loans is not that clear. One study suggests that foreign banks were not pushing FX loans onto unsuspecting households any more than domestic banks between 2001 and 2004 (Brown & De Haas, 2012). Still, given the massive presence of foreign banks and their proactive allocation of credit, as well as their faster overall growth, foreign banks were to a

great extent responsible for the increases. Commonly, banks had significant open currency positions, as they funded long term loans in foreign currency even as deposits were largely in domestic currency. It was however anticipated that refinancing would not be a problem for foreign bank subsidiaries thanks to access to parent banks, something that was not available to domestic banks that relied on wholesale and swap markets to close their FX funding gaps (e.g. IMF Article IV on Latvia 2003).





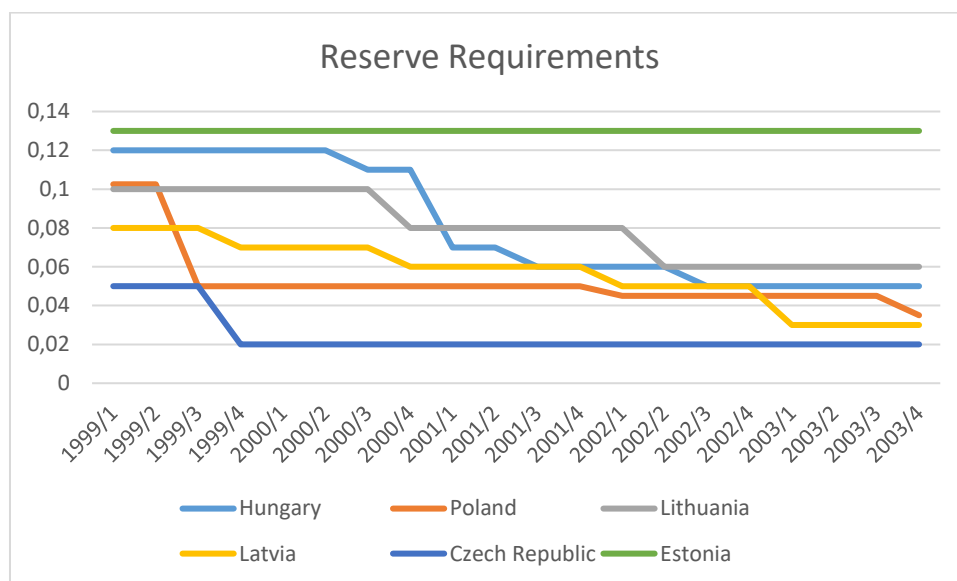
Based on MNB data

The dominant role of foreign currencies, it follows, was already a common feature of the financial system in CEE before these countries joined the EU. The euro was commonly used for denominating loans and, to a lesser extent, deposits, displacing the dollar as main international currency in the region which meant that the ECB effectively determined the interest rates. The control over domestic interest rates in CEE, insofar as the central banks even had it, did not affect a significant part of banks' access to liquidity. Foreign banks could fund their euro positions almost exclusively via their parent banks – which could relay lower funding costs – but domestic banks were no more reluctant to take currency risks given the liquidity of foreign exchange markets and wholesale funding. The scope for central bank interventions to affect liquidity conditions in foreign exchange was constrained by their own holdings of foreign reserves; the support from parent banks would be crucial should problems occur in the foreign exchange market.

Internal liquidity

Maintaining internal liquidity stable in the face of capital inflows was a challenge for central banks in CEE. To a large degree, internal liquidity was unconstrained by the availability of virtually unlimited international financing. Parent banks would often fund their subsidiaries in bulks, rather than on short notice, which meant that in most countries, there was an excess of liquidity in the financial system. A

central bank that targets an interest rate needs to sterilize financial inflows, which means to mop up excess liquidity, so that market rates remain unaffected (Bindseil, 2014; S. T. Gray, 2006). Depending on their exchange rate regimes, the central banks in the accession countries did, however, use different instruments to accomplish that goal. Attempts to approach the liquidity management practices of the ECB weakened the policy tools that central banks in CE had available.



Sterilising short-term capital inflows and controlling liquidity conditions was tricky in the Baltic countries, which did not use their interest rates to control short term capital flows after 2000. Eesti Pank, which matched the ECB's interest rate after 1999, could only use the reserve requirement to regulate liquidity, which was set at no less than 13% in 1997, against a broad calculation base.¹⁴ Banks operating in Estonia would have to hold about 10% of their total assets in cash as a consequence (Ross in Kolev & Zwart, 2013). In order to encourage banks to access euro funding markets, Eesti Pank allowed banks in 2001 to meet half the reserve requirements via high quality foreign securities (Eesti Pank, 2014). Estonian policymakers noted that through this 'the 13% reserve requirement in the

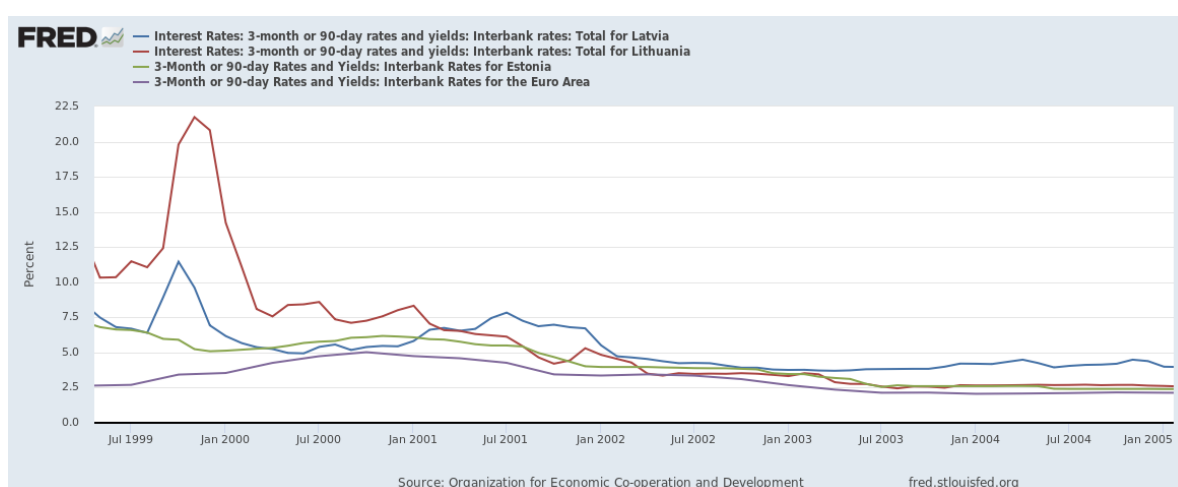
¹⁴ Reserve requirements are a share of a banks' assets that they are mandated to keep in the form of central bank reserves or sometimes in vault cash. Changes in the level of reserve requirements affect liquidity conditions temporarily as raising RR obliges banks to hold on to higher stocks and thereby reduces the amount of central bank reserves that can circulate, while lowering RR frees up liquidity. In a modern monetary system, there is no operational need for RRs (Sweden and Canada do not have any), but if the central bank is constrained in its capacity to provide liquidity because it operates as a currency board, RR are the only tool of monetary policy available (Bindseil, 2014; S. Gray, 2011).

central bank deposit became an effective 6.5% requirement in terms of sterilising capital inflows' (Eesti Pank, 2014, pp. 118–119). Swedish parent banks had no problem meeting these requirements, which was good for the liquidity of their Estonian subsidiaries, but meant that the policy accomplished nothing in terms of controlling aggregate liquidity levels.

Latvia and Lithuania chose a different course of action, given that they had more monetary policy instruments available. Both central banks reduced their reserve requirements in the run-up to Accession and maintained significantly lower reserve requirements. Latvijas Bank reduced its RR to 5% in 2002 and down to 3% a year later (Latvijas Bank, 2003) and the Bank of Lithuania lowered it from 10% to 8% in 2000 and down to 6% in 2002, even though it pursued a more targeted approach and required banks to hold reserves in euros or US dollars to match foreign currency liabilities (Lithuania, 2003). Both the central banks of Latvia and Lithuania noted explicitly that their changes were described as steps to converge to the ECB's policy practice and be more easily able join EMU. Two technical changes that the ECB implemented in 2003, and which were copied by the Baltic central banks, furthermore reduced the level of required reserves. The updated ECB guidelines made it possible to hold reserves with an intermediary (such as a parent bank) and allowed groups to submit consolidated liquidity statements and hold all reserves in one account. For the Baltics, converging with ECB practice hence meant that they would reduce domestic liquidity buffers and give more control to the supervisors of the parent banks. Indeed, the Bank of Lithuania noted that without these technical changes, the level of required reserves in 2003 would have been 25% higher than it was (Lithuania, 2003).

Loss of control over domestic liquidity levels was seen as a possible source of problems in the Baltics. The central banks would be unable to provide new central bank reserves and act as lender of last resort in case of funding difficulties for their banks. During the financial crises in the 1990's Eesti Pank had refused to abandon its peg to save domestic banks and the Bank of Lithuania had lent out some excess reserves, but eventually tightened liquidity provision as well (Wolf et al., 2013). Estonia's and

Lithuania's inclusion of foreign currency reserves in the calculation basis can be interpreted not just as a protection against currency mismatches, but also providing access to deeper funding markets. While in Lithuania and Estonia there was a liquidity surplus in the system, Latvijas Bank provided lats liquidity through repos and overnight loans in the years before Accession, which meant that liquidity there was tighter.¹⁵ Similarly, interest rate spreads against the euro before accession all but vanished in the countries with currency boards, while rates in Latvia remained somewhat higher as the central bank maintained a higher policy rate than the ECB.



In many respects, Hungary's experience with external capital flows and domestic liquidity conditions was similar to that of the Baltics despite its looser peg. The MNB's two-week deposit facility, its main policy instrument for sterilizing excess liquidity, moved closely together with the international reserves, which suggests that foreign exchange inflows were immediately sterilized. The whole affair was, however, complicated by government debt management and the necessity for the MNB to balance both an inflation and an exchange rate target. MNB policymakers attribute the liquidity surplus in Hungary to both the government's proceeds from privatization in the 1990's and its foreign exchange debt to the IMF (Varga, 2010). Yet, while the stock of government debt was considerable,

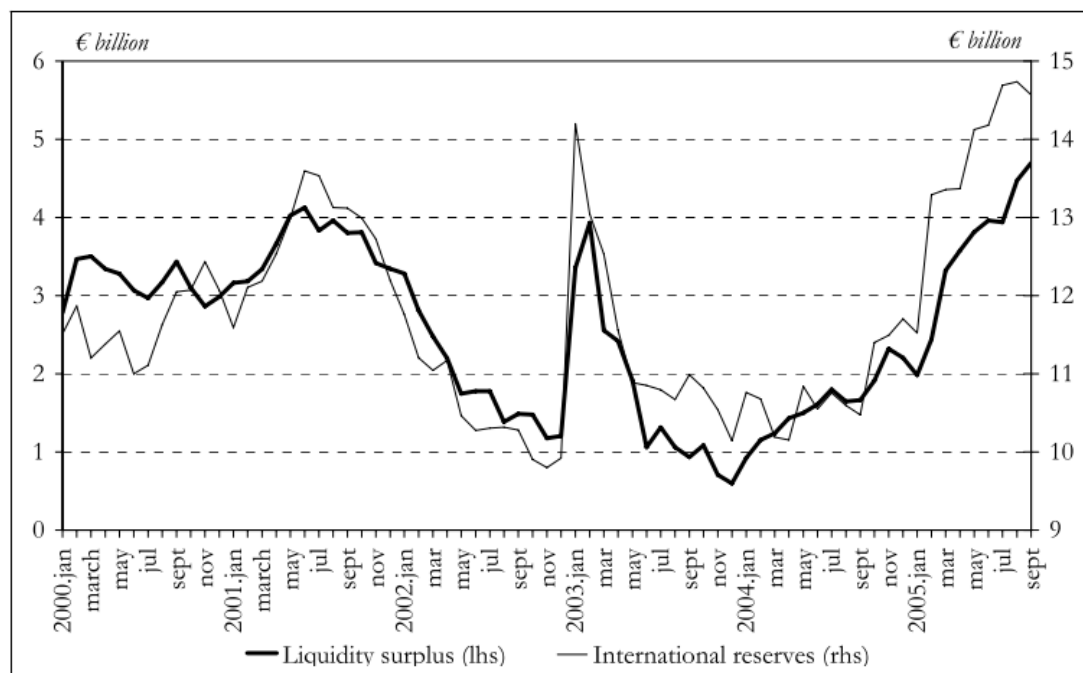
¹⁵ Lithuania's central bank had, untypically for a currency board, some liquidity-providing instruments at its disposal but did not need to use them because of available liquidity; Latvia, despite its narrow fluctuation band, after 2000, operated the same range of monetary policy instruments as the ECB

the government's policy had no noticeable net effect on liquidity conditions before 2004, as most new borrowing was denominated in forint and sterilized by bond sales (S. T. Gray, 2006)¹⁶.

Instead, in several respects, the liquidity surplus in Hungary can also be attributed to changes in monetary policy after 2000. A first factor is that the opening of capital accounts and foreign currency transactions in 2001 opened up the possibility to export foreign currency holdings that had previously been trapped inside the country. At the same time, the MNB decided that it would not require a high level of foreign reserves under a more flexible fluctuation band and, thus, reduced its own foreign assets and the liquidity surplus. Similarly, the monetary base absorbed a good part of what used to be the liquidity surplus. Yet, again approximating ECB practice, the MNB made several choices that increased liquidity levels. Between 2000 and 2002 it lowered the reserve requirement from 12% to 5%, narrowed the calculation base for RR, and started paying interest on reserves. According to a 2009 report "the purpose of these changes has been to achieve the closest possible harmonisation with international practice and the instruments used by the ECB" (Balogh, 2009).

¹⁶ But importantly for our story, that changed once EU transfers came to play a role and private sector borrowing took off

Chart 4: Liquidity surplus and international reserves



(Liquidity surplus and foreign reserves in Hungary: S. T. Gray, 2006)

The Polish NBP conducted similar measures in 2003, when under conditions of surplus liquidity, it reduced reserve requirements. It reduced the reserve ratio, the calculation base and abolished previously existing exceptions from RR. However, the NBP has not officially acknowledged any ECB input in those decisions. Poland and Hungary both experienced the dilemma that continued capital inflows pose and credit growth: raising the interest rate to tighten interbank credit would just attract even more capital inflows. Hungary's exchange rate volatility in 2003 illustrated most clearly the role of interest rates in steering the exchange rate. The MNB lowered the base rate to 6.5% during the speculative attack in January and raised it back to 12.5% when the currency was trading low in November. The NBP, by contrast lowered the interest rate that it paid on required and deposited reserves from 5% at the end of 2002 to 3.5% a year later for RR and 3.75% for its deposit facility. While deterring more capital inflows, these low interest rates made funding in zloty cheaper.

Two important points become clear from this overview of domestic liquidity. First, it is important to note how profoundly financial integration affected monetary policy as the level of domestic liquidity

was primarily determined by foreign liquidity. Foreign reserves and liquidity surpluses moved together, by default in the Baltic countries and by necessity in Hungary and Poland. Central banks conducted their monetary policy largely on the liability side of their balance sheets with the objective of sterilizing capital inflows. Arguably, however, this was not successful in deterring capital inflows or blunting their impact on domestic money markets. Subsidiaries could rely on financing from their parent banks and often operated with their own liquidity buffers at the same time as interbank rates converged with the Euro Area's. The ready availability of short-term capital could be taken for granted in all cases except the Russian crisis in the Baltics and Hungary in late 2003, and foreign banks' presence increased confidence in its availability. Mostly, however, central banks had to try and make their countries less attractive for short term capital flows.

Second, attempts to assimilate domestic monetary policy operations to ECB practices undermined efforts to drain liquidity. Even in situations of surplus liquidity in domestic money markets, the central banks of Latvia, Lithuania, Hungary and Poland lowered their reserve requirements. Although their levels were still above the ECB's 2% RR - the Swedish Riksbank had abolished required reserves altogether in 1994 - this was a puzzling decision from a monetary policy perspective. In addition to that, the adoption of technical standards by the ECB invariably ended up freeing liquidity and lowering available buffers in CEE. This meant that one of the few remaining instruments to control liquidity conditions in the market was weakened for the sake of speedy EMU accession. A notable exception proved Eesti Pank, which raised its reserve requirement to very high levels and kept sizeable buffers intact, because it had no other monetary policy instruments.

This voluntary approximation of ECB practices was no coincidence. Central bankers in CEE received comprehensive training and other technical assistance in the years after Accession (Johnson, 2016) and convergence with the ECB's policy practice was encouraged for countries that wanted to join the euro. As the ECB itself noted:

"As regards operational issues in support of monetary policy – including monetary policy instruments and the operational framework – co-operation activities have intensified markedly in the recent past. Some accession countries have already adopted monetary policy instruments and procedures similar to those of the Eurosystem,

and the harmonisation of open market operations, standing facilities and minimum reserve systems in line with Eurosystem practices is taking place in many countries.” (European Central Bank, 2002)

Coordination with the ECB consequently had material implications for the conduct of monetary policy in the Accession countries, already before they joined the EU. This was done by choice, not by necessity.

Analysis

The empirical section has pointed out three puzzling developments in monetary and financial policy in CEE between 1998 and 2003. First, the rules for banking supervision and liquidity allocation were largely unsuitable for the actual structure of financial markets. High foreign ownership and incorporation of CEE operations as subsidiaries meant that host authorities would be in charge of liquidity, even though the crucial allocation decisions would be taken by the parent banks. Second, even as levels of foreign currency loans were high and banks had currency mismatches on their balance sheets, central banks relied on foreign exchange markets and did little to accumulate buffers. Third, even though markets were awash with liquidity thanks to foreign funding, CEE central banks almost invariably reduced reserve requirements and thereby gave up one of their last domestic policy tools to control liquidity even though there was no technical need. In short, foreign banks flooded CEE with money but central banks squandered the opportunity to build up buffers for a rainy day.

Yet, the notion that CEE policymakers were irresponsible has to be strongly qualified. Instead, it has to be argued that they followed a deliberate strategy for financial stability when they encouraged foreign bank entry. After all, foreign banks made contributions to financial stability and could access funding in foreign currencies that central banks in CEE would be unable to provide. The expectation that parent banks could be relied upon as potential private lenders of last resort was confirmed in the Baltics in 1998 and in Hungary in 2003 and banks subsequently committed to their operations in CEE. This long term commitment of parent banks was also seen as a stamp of approval for the CEE governments and improved their international credit-ratings (Grittersová, 2017). Even if foreign bank entry had the consequence of weakening domestic monetary policy, this had been the whole idea behind it.

The puzzling monetary governance framework was the result, not of a decentralised process of foreign bank entry, but of the transfer of rules and the convergence with policy practices that had been developed in another context. Both the task distribution for home/host supervision and the liquidity management practices were imported from the world's leading central banks, which were in a much stronger position towards their financial sectors. The Basle principles had been devised by countries where foreign bank subsidiaries played only a minor role and central banks that could issue internationally accepted currencies had no operational need for high reserve requirements or foreign exchange reserves. In CEE, where foreign banks were the rule and central banks were weakened by their exchange rate regimes and foreign currency circulation, this framework made, however, little sense. The regulatory and policy side of financial integration produced a profound mismatch between market structures and governance practices.

Returning to the question of regime theory, it can therefore be shown how this mismatch came about. Market structures evolved spontaneously, driven by CEE policymakers and foreign banks' expansion plans and enabled by privatisation needs and financial crises that required a sectoral re-organisation. The structural change on the market side, even though it led to a fairly uniform result was hence brought about by a complex, decentralised process. By contrast, financial supervision rules and liquidity management practices had their origin with the political integration process with the EU. Policy transfer was to some degree imposed outright on the countries that wanted to join the EU and had to implement its financial supervision framework. Similarly, the prospect of euro adoption served as a lever to encourage countries to approach the ECB's RR level. Policy practices were however also transmitted through another mechanism, policy learning. In more than 1000 seminars and trainings, the ECB convinced central bankers in CEE to adopt the main tenets of the international consensus. The decisions to lower liquidity buffers, while technically voluntary¹⁷, can therefore also be traced back to the process of European integration.

¹⁷ As illustrated by the high RR maintained in Estonia

The contradictory monetary governance regime in CEE around 2004 can hence be seen as the outcome of two conflicting processes. A bottom-up process to establish foreign bank subsidiaries as the leading business model in CEE happened in parallel with the imposition of a regulatory framework that was not suited to this unique situation. The reconfiguration of financial markets and monetary policy in CEE was almost completed before these countries joined the EU. The credit boom that started in 2003 and led to the financial crisis, therefore, happened within this framework and has to be understood against the motives of banks and policymakers from the EU and CEE around the year 2000.

Discussion and Outlook

The changes in the regional financial system in CEE range before 2004 had far-reaching implications not just for the developments in the region during the following decade, but also for the study of international financial systems more generally. To sketch out the implications of the current paper, I will put it into the context of the remaining anticipated chapters of my dissertation. After that I will present preliminary conclusions based both on this chapter and my work more generally.

The development of financial markets was only a part of the developments that transformed the degree of interdependence between central banks the regional financial system. In the first chapter of my thesis I show that developments regarding exchange rate cooperation between the ECB and the candidate countries looked similar. Even though the eight CEE countries represented all thinkable exchange rate regimes from free float in Poland to prototypical currency board in Estonia, the EU's demands were the same towards all of them. Almost all CEE countries experienced Balance of Payments stress before 2004, yet the EU ruled out access to its institutionalised framework for assistance between central banks before Enlargement, because it did not want to adapt its framework to the needs of the new member states.

With this in mind, many developments that followed are easier to understand. The financial crisis was triggered when foreign banks tightened their lending to CEE, but when the provision of emergency liquidity to the parent banks was secured from their home authorities, the parent banks forwarded

liquidity whenever needed. Indeed, foreign banks readily assured their commitment, long before the Vienna Initiative. The central banks from Hungary and Poland requested liquidity assistance from the ECB in order to help domestic banks finance carry trade positions, but their requests were rejected (Piroska, 2017). In Latvia, the central bank quickly exhausted its capacity to act as LOLR for the only bank in the country that had to be wound down, which was domestically owned. After a request for a swap line from the ECB was watered down, Latvia was eventually kept afloat by a swap where the Swedish and Danish central banks lent out their euro reserves in order to prevent a cataclysmic currency crisis in the Baltics from spilling over into their home markets (Allen, 2013).

Finally, and returning to the three puzzling developments regarding foreign banks, foreign currency and domestic liquidity sketched out in this paper, post-crisis developments suggest how the contradictions could be unwound. By 2015, all Baltic countries had joined the Euro Area and concluded several multilateral agreements with the Nordic countries that regulate cooperation during future financial crises, including assigning responsibility for liquidity provision primarily to the home authorities in the case of subsidiaries (Banincova, 2012; Spendzharova & Emre Bayram, 2016). By contrast, Hungary and, recently, Poland have moved the opposite way and tackled foreign currency exposures and foreign banks through financial nationalism and by asserting monetary sovereignty (Johnson & Barnes, 2015; M  r   & Piroska, 2016). West European banks have not retreated, but significantly reduced their cross-border exposure as their subsidiaries have come to rely more on domestic funding.

Which lessons does Eastern Europe hold for the study of international financial systems? As a case study it suggests new pathways of resolving the usual problems of capital movements, exchange rate setting and access to international liquidity (Obstfeld & Taylor, 2017). It provides counterexamples to the ideas that financial integration prevents efficient crisis resolution (Schoenmaker, 2013) and that central banks cooperate out of strategic interest (Allen, 2013; McDowell, 2017; Sahasrabuddhe, 2019). Instead, I would so far conclude that market structures deserve to be considered in their own right.

Foreign banks entry was encouraged as part of the financial stability architecture of CEE around 2000 and played a central role in resolving liquidity-related problems during the crisis. Whereas cooperation between central banks was far from a success story in CEE, private banks thereby resolved a problem that many central banks of Eastern Europe could not have resolved on their own.

- Allen, W. A. (2013). *International liquidity and the financial crisis*. Cambridge University Press.
<https://doi.org/10.1017/CBO9781139342841>
- Alonso-Garno, P., Fabrizio, S., Krarnarenko, V., & Wang, Q. (2002). *Lithuania: History and Future of the Currency Board Arrangement* (IMF Working Paper No. WP/02/127). Washington D.C.
<https://doi.org/10.1017/CBO9781107415324.004>
- Altmann, T. C. (2006). *Cross-Border Banking in Central and Eastern Europe - Issues and Implications for Supervisory and Regulatory Organization on the European Level*.
- Árvai, Z. (2005). *Capital Account Liberalization, Capital Flow Patterns, and Policy Responses in the EU's New Member States* (IMF Working Paper No. WP/05/213). Washington D.C.
- Árvai, Z., & Vincze, J. (2000). *Financial Crises in Transition Countries: Models and Facts* (NBH Working Paper No. 2000/6). Budapest.
- Åslund, A. (2012). *From Hyperinflation to Financial Stability. How Capitalism Was Built*.
<https://doi.org/10.1017/cbo9781139207850.006>
- Åslund, A., & Dombrovskis, V. (2011). *How Latvia Came Through the Financial Crisis*. Washington D.C.: Peterson Institute for International Economics.
- Avdjiev, S., McCauley, R. N., & Shin, H. S. (2016). Breaking free of the triple coincidence in international finance. *Economic Policy*, 31(87), 409–451. <https://doi.org/10.1093/epolic/eiw009>
- Bakker, B. B., & Klingen, C. (Eds.). (2012). *How Emerging Europe Came Through the 2008 / 09 Crisis An Account by the Staff of the IMF 's European Department*. Washington D.C.: International Monetary Fund.
- Balino, T. J. T., Bennett, A., & Borensztein, E. (1999). *Monetary Policy in Dollarized Economies* (IMF Occasional Paper No. 171). Washington D.C.
- Baliño, T. J. T., Dhawan, J., & Sundararajan, V. (1994). *The Payments Systems Reforms and Monetary Policy in Emerging Market Economies in Central and Eastern Europe* (IMF Working Paper No. WP/94/13). Washington D.C.
- Baliño, T. J. T., Enoch, C., Ize, A., Santiprabhob, V., & Stella, P. (1997). *Currency board arrangements issues and experiences*. *IMF Occasional Papers* (Vol. 1997).
- Balogh, C. (2009). Monetary policy instruments of the Magyar Nemzeti Bank. Budapest: Magyar Nemzeti Bank.
- Banincova, E. (2012). Developments in Banking Sectors of Central and Eastern Europe and Three Baltic States after the Global Financial Crisis and European Debt Crisis. *Kobe University Economic Review*, 58, 39–59.
- Bank for International Settlements. (2005). Foreign exchange market intervention in emerging markets : motives , techniques and implications. *BIS Papers*, (24).
- Barisitz, S. (2005). Banking in Central and Eastern Europe since the Turn of the Millennium — An Overview of Structural Modernization in Ten Countries. *Focus on European Economic Integration*, (2), 58–82.
- Baudino, P., Caviglia, G., Dorrucci, E., & Pineau, G. (2004). *Financial Fdi To the Eu Accession Countries* (BIS CGFS Publications No. 22). Basel.
- Bindseil, U. (2014). *Monetary Policy Operation in the Financial System*. Oxford University Press. Oxford: Oxford University Press. <https://doi.org/10.1017/CBO9781107415324.004>

- Bindseil, U., & Winkler, A. (2012). *Dual Liquidity Crises Under Alternative Monetary Frameworks a Financial Accounts Perspective* (ECB Working Paper Series No. 1478). Frankfurt a.M.
- Bonin, B. J. P., & Ábel, I. (2000). Retail Banking in Hungary : A Foreign Affair ? Retail Banking in Hungary : A Foreign Affair. *World*, (356).
- Borio, C., Galati, G., & Heath, A. (2008). FX reserve management: trends and challenges. *BIS Papers*, (40). Retrieved from <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:FX+reserve+management:+trends+and+challenges#0>
- Boughton, J. M. (2012). *Tearing down walls - The International Monetary Fund 1990-1999* (Vol. 53). Washington D.C.: International Monetary Fund. <https://doi.org/10.1017/CBO9781107415324.004>
- Brown, M., & De Haas, R. (2012). Foreign banking in Emerging Europe. *Economic Policy*, (January), 59–98.
- Brown, M., Peter, M., & Wehrmüller, S. (2009). Swiss Franc Lending in Europe. *Aussenwirtschaft*, 64(2), 167–181.
- Broz, J. L. (2014). *The Politics of Rescuing the World's Financial System: The Federal Reserve as a Global Lender of Last Resort*. *Ssrn*. <https://doi.org/10.2139/ssrn.2531108>
- Calvo, G., & Végh, C. A. (1992). *Currency Substitution in Developing Countries: An Introduction* (IMF Working Papers No. WP/92/40). Washington D.C. <https://doi.org/10.5089/9781451845884.001>
- Caviglia, Krause, & Thimann. (2002). *Financial sectors in EU Accession countries. Financial Sectors in EU Accession*. Retrieved from <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Financial+Sectors+in+EU+Accession+Countries#1>
- Commission of the European Communities. (1999). Financial Services: Implementing the framework for financial markets: Action Plan. Brussels: European Commission. Retrieved from http://ec.europa.eu/internal_market/finances/docs/actionplan/index/action_en.pdf
- D'Hulster, K. (2012). Cross-border banking supervision: Incentive conflicts in supervisory information sharing between home and host supervisors. *Journal of Banking Regulation*, 13(4), 300–319. <https://doi.org/10.1057/jbr.2012.10>
- Darvas, Z., & Pisani-Ferry, J. (2008). *Avoiding a new European Divide* (Bruegel policy brief No. 2008/10). Brussels.
- De Haas, R., Korniyenko, Y., Pivovarsky, A., & Loukoianova, E. (2012). *Foreign Banks and the Vienna Initiative: Turning Sinners Into Saints? IMF Working Papers*. <https://doi.org/10.5089/9781475503463.001>
- De Haas, R., & Naaborg, I. (2006). Foreign banks in transition countries: To whom do they lend and how are they financed? *Financial Markets, Institutions and Instruments*, 15(4), 159–199. <https://doi.org/10.1111/j.1468-0416.2006.00116.x>
- de Haas, R. T. A., & van Lelyveld, I. (2004). Foreign Bank Penetration and Private Sector Credit in Central and Eastern Europe. *Journal of Emerging Market Finance*, 3(2), 125–151. <https://doi.org/10.1177/097265270400300203>
- de Haas, R., & van Lelyveld, I. (2006). Foreign banks and credit stability in Central and Eastern Europe. A panel data analysis. *Journal of Banking and Finance*. <https://doi.org/10.1016/j.jbankfin.2005.07.007>

- Eesti Pank. (2014). *A long transition: The Estonian Currency Board arrangement 1992-2010*.
- Enoch, C., & Ötker-Robe, I. (Eds.). (2007a). *Rapid Credit Growth in Central and Eastern Europe - endless Boom or Early Warning?* Houndmills, Basingstoke, Hampshire: Palgrave.
- Enoch, C., & Ötker-Robe, I. (Eds.). (2007b). *Rapid Credit Growth in Central and Eastern Europe - Endless Boom or Early Warning?* Houndmills, Basingstoke, Hampshire and New York: Palgrave Macmillan.
- Epstein, R. A. (2014). When do foreign banks 'cut and run'? Evidence from west European bailouts and east European markets. *Review of International Political Economy*, 21(4), 847–877. <https://doi.org/10.1080/09692290.2013.824913>
- Epstein, R. A. (2017). *Banking on markets : the transformation of bank-state ties in Europe and beyond*. Oxford: Oxford University Press.
- European Central Bank. (1999). *Annual Report*. Frankfurt/Main.
- European Central Bank. (2002). The Eurosystem's dialogue with EU accession countries. *ECB Monthly Bulletin*, (July), 51–63.
- European Central Bank. (2005). Banking Structures in the New EU Member States.
- European Central Bank. (2006). The EU arrangements for financial crisis management. *ECB Financial Stability Review*, (February), 165–174.
- European Commission. (1999). *Regular Report from the Commission on Estonia's Progress Towards Accession*. Brussels.
- Fullwiler, S. T. (2017). Modern central-bank operations: the general principles. In *Advances in Endogenous Money Analysis* (pp. 50–87). Edward Elgar Publishing. <https://doi.org/10.4337/9781783472246.00011>
- Gallarotti, G. M. (1995). *The Anatomy of an International Monetary Regime: The Classical Gold Standard 1880-1914*. Oxford: Oxford University Press.
- Gray, S. (2011). Central Bank Balances and Reserve Requirements. *IMF Working Papers*, 11(36), 1. <https://doi.org/10.5089/9781455217908.001>
- Gray, S. T. (2006). Central bank management of surplus liquidity. In *Handbooks in Central Banking Lecture Series*. London: Bank of England Centre for Central Banking Studies.
- Grittersová, J. (2017). *Borrowing Credibility Global Banks and Monetary Regimes*. Ann Arbor, MI: University of Michigan Press.
- Grossman, E., & Leblond, P. (2011). European Financial Integration: Finally the Great Leap Forward?*, 49(2), 413–435. <https://doi.org/10.1111/j.1468-5965.2010.02145.x>
- Haggard, S., & Simmons, B. A. (1987). Theories of international regimes. *International Organization*, 41(03), 491. <https://doi.org/10.1017/S0020818300027569>
- Havrylchuk, O., & Jurzyk, E. (2006). *Profitability of foreign banks in Central and Eastern Europe Does the entry mode matter ? Institute for Economies in Transition*.
- Henning, C. R. (2011). Coordinating Regional and Multilateral Financial Institutions. *Ssrn*, (March). <https://doi.org/10.2139/ssrn.1793242>
- Henning, C. R. (2015). The Global Liquidity Safety Net Institutional Cooperation on Precautionary Facilities and Central Bank Swaps. *Centre for International Governance Innovation Working*

Paper Series, (5).

- Ho, C. (2002). A Survey of the Institutional and Operational Aspects of Modern-day Currency Boards. *SSRN Electronic Journal*, (110). <https://doi.org/10.2139/ssrn.846325>
- Iaydjiev, I. (2016). *Host's dilemma in international political economy: The regulation of cross-border banking in emerging Europe, 2004-2010* (GEG Working Paper No. 114). Oxford. Retrieved from <http://hdl.handle.net/10419/196374>
- International Monetary Fund. (2005a). *Foreign Exchange Reserve Management - Part II Country Case Studies. Structure*.
- International Monetary Fund. (2005b). *Foreign Exchange Reserve Management - Part II Summary of Country Practices*.
- Iwanicz-Drozdowska, M., Bongini, P., Smaga, P., & Witkowski, B. (2018). *Foreign-Owned Banks*. Cham: Springer International Publishing. <https://doi.org/10.1007/978-3-030-01111-6>
- Johnson, J. (2016). *Priests of prosperity : how central bankers transformed the postcommunist world*. Ithaca and London: Columbia University Press.
- Johnson, J., & Barnes, A. (2015). Financial nationalism and its international enablers: The Hungarian experience. *Review of International Political Economy*, 22(3), 535–569. <https://doi.org/10.1080/09692290.2014.919336>
- Khoury, S. J., & Wihlborg, C. (2006). Outsourcing Central Banking: Lessons from Estonia. *The Journal of Policy Reform*, 9(2), 125–144. <https://doi.org/10.1080/13841280600772051>
- Kolev, A., & Zwart, S. (Eds.). (2013). *Banking in Central and Eastern Europe and Turkey Challenges and Opportunities*. Luxembourg: European Investment Bank.
- Komáromi, A. (2007). The effect of the monetary base on money supply—Does the quantity of central bank money carry any information? *MNB Bulletin*, (June), 31–37. Retrieved from <http://ideas.repec.org/a/mnb/bullet/v2y2007i1p31-37.html>
- Kraft, V. (2003). Factors Influencing the Financial System Stability Oriented Policies of a Small Country Soon To Become an EU Member - Estonian Experience, (June), 9–16.
- Krasner, S. D. (1982). Structural Causes and Regime Consequences : Regimes as Intervening Variables. *International Organization*, 36(2), 185–205.
- Krugman, P. (2008, October 31). Eastern Europe 2008 = Southeast Asia 1997. *New York Times*. Retrieved from <https://krugman.blogs.nytimes.com/2008/10/31/eastern-europe-2008-southeast-asia-1997/>
- Kudrna, Z., & Gabor, D. (2013). The Return of Political Risk: Foreign-Owned Banks in Emerging Europe. *Europe - Asia Studies*. <https://doi.org/10.1080/09668136.2013.779458>
- Latvijas Bank. (2003). *Annual Report 2003*. Riga.
- Lithuania, B. of. (2003). *Annual Report* (Vol. 1). Vilnius.
- Mabbett, D., & Schelkle, W. (2015). What difference does Euro membership make to stabilization? The political economy of international monetary systems revisited. *Review of International Political Economy*, 22(3), 508–534. <https://doi.org/10.1080/09692290.2014.916625>
- McDowell, D. (2012). The US as “Sovereign International Last-Resort Lender”: The Fed’s Currency Swap Programme during the Great Panic of 2007-09. *New Political Economy*, 17(2), 157–178. <https://doi.org/10.1080/13563467.2010.542235>

- McDowell, D. (2017). Emergent international liquidity agreements: central bank cooperation after the global financial crisis. *Journal of International Relations and Development*, 1–27. <https://doi.org/10.1057/s41268-017-0106-0>
- Mehrling, P. (2015). Elasticity and Discipline in the Global Swap Network. *International Journal of Political Economy*, 44(4), 311–324. <https://doi.org/10.1080/08911916.2015.1129848>
- Mérő, K., & Piroska, D. (2016). Banking Union and banking nationalism – Explaining opt-out choices of Hungary, Poland and the Czech Republic. *Policy and Society*, 35(3), 215–226. <https://doi.org/10.1016/j.polsoc.2016.10.001>
- Mügge, D. (2010). Widen the market, narrow the competition. ... *Interests and the Making of a European Capital Market*
- Naaborg, I. (2007). Foreign bank entry and performance with a focus on Central and Eastern Europe - Research database - University of Groningen, 10–38. Retrieved from [http://www.rug.nl/research/portal/publications/foreign-bank-entry-and-performance-with-a-focus-on-central-and-eastern-europe\(2e0bd200-8881-4c8d-8f9b-9e7c0fd4eb24\).html](http://www.rug.nl/research/portal/publications/foreign-bank-entry-and-performance-with-a-focus-on-central-and-eastern-europe(2e0bd200-8881-4c8d-8f9b-9e7c0fd4eb24).html)
- Obstfeld, M., & Taylor, A. M. (2017). International monetary relations: Taking finance seriously. *Journal of Economic Perspectives*, 31(3), 3–28. <https://doi.org/10.1257/jep.31.3.3>
- Padoa-Schioppa, T. (2002). The Euro Goes East. Dubrovnik: European Central Bank. Retrieved from <https://www.ecb.europa.eu/press/key/date/2002/html/sp020629.en.html>
- Persaud, A. (2010). The locus of financial regulation: Home versus host. *International Affairs*, 86(3), 637–646. <https://doi.org/10.1111/j.1468-2346.2010.00902.x>
- Piroska, D. (2017). Funding Hungary: competing crisis management priorities of troika institutions. *Third World Thematics: A TWQ Journal*, 2(6), 805–824. <https://doi.org/10.1080/23802014.2017.1435303>
- Pistor, K. (2010a). *Host's Dilemma: Rethinking EU Banking Regulation in Light of the Global Crisis*. *Ssrn*. <https://doi.org/10.2139/ssrn.1631940>
- Pistor, K. (2010b). *Into the Void Governing Finance in Central and Eastern Europe* (WIDER Working Paper No. 2010/65). Helsinki.
- Pistor, K. (2011). *Governing Interdependent Financial Systems : Lessons from the Vienna Initiative* (Columbia Law and Economics Working Paper No. 396). New Haven. <https://doi.org/10.1515/1948-1837.1191>
- Polanyi, K. (2001). *The Great Transformation - The Political and Economic Origins of our times* (2nd ed.). Boston, MA: Beacon Press.
- Rey, H. (2015). *Dilemma not Trilemma: The Global Financial Cycle and Monetary Policy Independence* (NBER Working Paper No. 21162).
- Rodrik, D. (2006). The social cost of foreign exchange reserves. *International Economic Journal*, 20(3), 253–266. <https://doi.org/10.1080/10168730600879331>
- Rosenberg, C., & Tírpák, M. (2009). Determinants of foreign currency borrowing in the new member states of the EU. *Finance a Uver - Czech Journal of Economics and Finance*, 59(3), 216–228. <https://doi.org/10.5089/9781451870312.001>
- Sahasrabuddhe, A. (2019). Drawing the line: the politics of federal currency swaps in the global financial crisis. *Review of International Political Economy*, 26(3), 461–489. <https://doi.org/10.1080/09692290.2019.1572639>

- Schoenmaker, D. (2013). *Governance of International Banking*. New York: Oxford University Press.
- Schüler, M. (2003). How Do Banking Supervisors Deal with Europe-wide Systemic Risk? *SSRN Electronic Journal*, (October). <https://doi.org/10.2139/ssrn.412460>
- Sinn, H.-W., & Westermann, F. (2001). The Deutschmark in Eastern Europe, Black Money and the Euro: On the Size of the Effect. *CESifo Forum*, 02(3), 35–40.
- Spendzharova, A. B., & Emre Bayram, I. (2016). Banking union through the back door? How European banking union affects Sweden and the Baltic States. *West European Politics*, 39(3), 565–584. <https://doi.org/10.1080/01402382.2016.1143245>
- Stix, H. (2004). Foreign Currency Demand since 2002 - Evidence from Five Central and Eastern European Countries. *CESifo Forum*, 05(4), 19–24.
- Tang, H., Zoli, E., & Klytchnikova, I. (2000). Banking Crises in Transition Countries: Fiscal Costs and Related Issues, 1–83. Retrieved from <http://go.worldbank.org/WQYQ5S2500>
- Underhill, G. R. D. (2000). State, market, and global political economy: genealogy of an (inter-?) discipline. *International Affairs*, 76(4), 803–824.
- Varga, L. (2010). Introducing optional reserve ratios in Hungary. *MNB Bulletin*, (OCTOBER), 57–66.
- Wolf, H. C., Ghosh, A. R., Berger, H., & Gulde, A.-M. (2013). *Currency Boards in Retrospect and Prospect*. *Currency Boards in Retrospect and Prospect*. <https://doi.org/10.7551/mitpress/9780262232654.001.0001>
- Young, O. R. (1983). Regime Dynamics : The Rise and Fall of International Regimes. *International Organization*, 36(2), 277–297.