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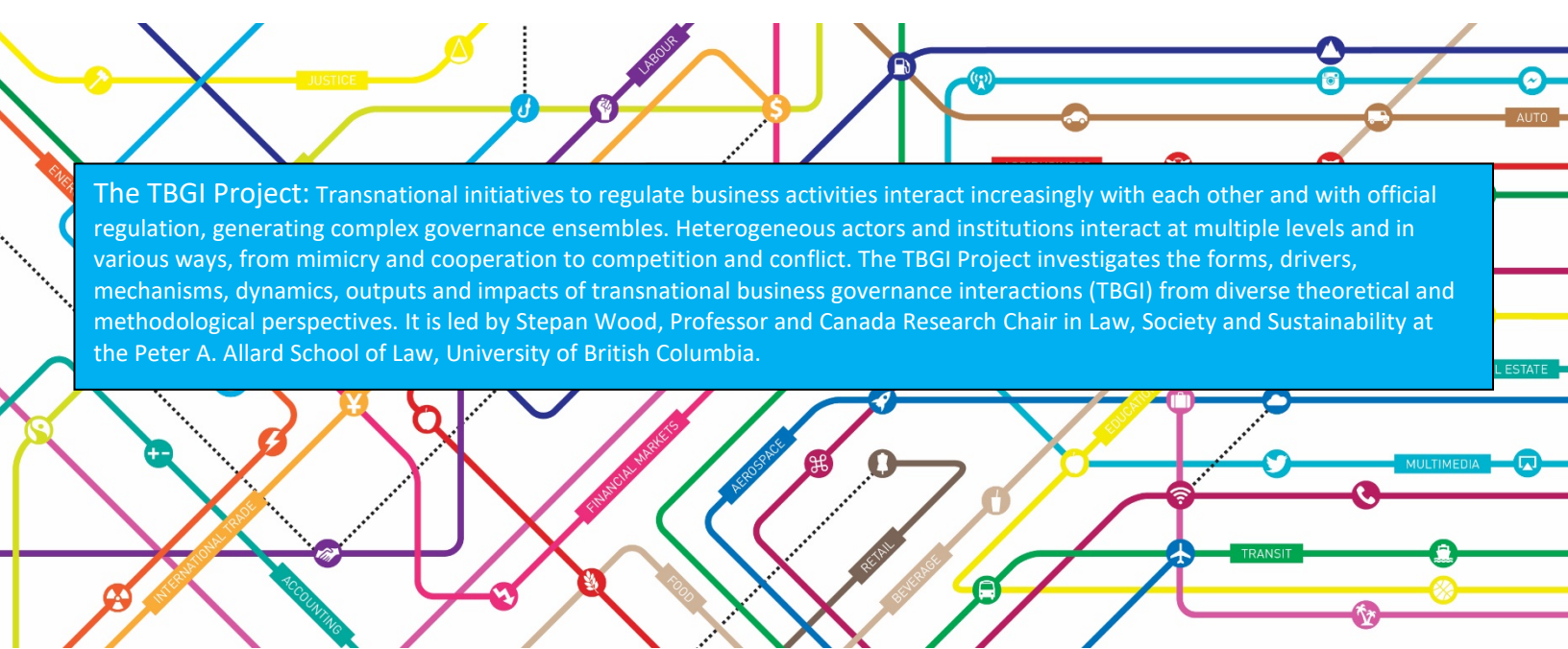
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Transnational Governance of Innovation in Payment Services: A Case Study of the Single European Payment Area

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Transnational Governance of Innovation in Payment Services: A Case Study of the Single European Payment Area

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Abstract

This chapter examines the Single Euro Payment Area (SEPA) as a case study of the role transnational business governance interactions (TBGIs) might play at the frontier of innovation in financial services. In 1999, when the EU asked European banks to eliminate barriers to cross-border electronic fund transfers in euros in time for the official launch of the euro in 2001, neither regulators nor banks could have imagined that SEPA would not be completed until 2016. While EU regulators blamed the delay on industry recalcitrance, this chapter explains it as a failure to mobilize TBGIs. EU regulators failed to recognize the public good characteristics of proprietary payment systems, while regulators and banks alike systematically underestimated the difficulty and cost of modernizing banks' legacy computer systems and re-engineering their business processes. As a result, the emergence of a productive co-regulatory relationship in which the EU would catalyze market-driven technical and regulatory innovation was frustrated. The EU became increasingly heavy-handed, rejecting the banks' cost-recovery proposals, countermanding industry consensus and ultimately stripping the self-regulatory European Payments Council (EPC) of policy-making authority. Without a cost recovery mechanism to incentivize participation, the EPC made glacial progress and could not convince many banks to join SEPA even after it was in place. The chapter suggests that constructive TBGIs can be achieved by treating proprietary market infrastructures as partial public goods and establishing consensus-based co-regulatory processes, but warns that future EU-bank interactions may suffer from the same downward spiral of frustration due to regulators' unwillingness or inability to factor commercial realities into their policy calculus.

Keywords

Single European Payments Area, banking, electronic fund transfers, FinTech, financial regulation, Eurozone, partial public goods, transnational business governance interactions

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1. Introduction

Payment systems are an essential element of the infrastructure of modern markets. Until very recently, they have also generally been operated almost exclusively by banks. Even though the tempo of payment system innovation is accelerating, most modern payment systems still depend almost entirely on the legacy computer systems known as ‘core banking systems’ that make it possible for banks to comply with regulatory requirements for operational risk. Banks that were at the cutting edge of technological innovation only a generation ago now find themselves encumbered with aging computer systems they cannot easily replace at the same time that they must confront increasing pressure from both regulators and disruptive payment service innovators to become more nimble.

Many years before the current wave of disruptive innovation in payment services erupted around the world, European Union regulators launched a project that later became known as the Single Euro Payment Area (SEPA), which requires the integration of many complex, incompatible legacy national payment systems into a single transnational payment system. This chapter analyzes the SEPA project as a case study of how the challenges facing banks, regulators and innovators hoping to transform modern cross-border payment systems may be amplified if regulators disregard the importance of transnational business governance interactions (TBGIs). When EU regulators mandated the removal of barriers to cross-border electronic fund transfers (EFTs) in euros in 1999, they anticipated that the project that would soon be known as SEPA could be completed within a couple of years. When work began on SEPA, neither banks nor regulators could have imagined that it would actually require nearly two decades to accomplish the task.

Viewed from one angle, modern payment systems are made up of private property in the form of bank computer systems and the digital artifacts representing money that move through them. Viewed from another angle, however, payment systems constitute an essential element of the infrastructure of modern markets and thus also display some properties of public goods. While ownership rights over private property are exclusive and private goods are exhausted once consumed, pure public goods can simultaneously be enjoyed by all citizens equally and cannot be exhausted by use. Fireworks displays, ideas outside the scope of intellectual property rights, and national defence are classic examples of public goods (Cowen 2007). Payment systems have public goods characteristics because they increase the liquidity of markets generally by making it easier to share information about the value of goods and services being exchanged, that is, prices. Financial stability can also be thought of as a public good (Holthausen and Rochet 2005; Evans and Schmalensee 2008). To ensure the stability of both financial markets and markets for other goods and services, regulators establish prudential standards to safeguard the safety and soundness of payment systems generally. As a quid pro quo for the privilege of engaging in the banking business, banks are required to bear the costs of prudential regulation.

Controversy surrounding the banks’ collective management of conventional payment systems is growing as a result of rapid changes in payment technologies and conditions in markets for payment services. The idea of unbundling payment services from the business of banking is gaining traction because it is now technologically feasible for non-bank financial service providers to compete directly with banks. In addition, public skepticism is growing about the value of regulatory regimes that suppress competition, such as the one that sheltered banks from competition from non-bank payment services for most of the twentieth century. Although the basic business of banking—taking deposits and making loans—might once have overshadowed payment services in its strategic significance for banks, that is no longer true today. Payment services have become a major profit center for many banks, and hence of great strategic interest to them (see for example, Long 2016). But at the same time that bank regulators have realized that ‘[r]etail payments are the backbone of the real economy’ (European Central Bank 2013, n.p.), they have also become more open to the idea of allowing disruptive FinTech (financial technology) innovators

to offer new payment services in direct competition with banks, thus undermining the profitability of the payment services provided by banks.

This chapter examines one example of the growing political controversy surrounding the banks' management of conventional payment systems: the demand by EU regulators that European banks overhaul their systems for processing cross-border fund transfers as part of the process of building the internal market. European regulators' initial goal in launching the SEPA project was clear and simple: they wanted the difference between domestic and cross-border euro transfers to be eliminated for citizens within the Eurozone. When this policy was established in the late 1990s, sending EFTs within each European country was already quick and easy in most countries while sending cross-border EFTs between the countries that planned to join the Eurozone was notoriously slow and expensive. SEPA was the name given to the project designed to erase the differences between domestic and cross-border euro transfers from the bank customers' perspective.

While the end user performance criteria were easy to specify, the business process reengineering challenges to get there turned out to be immense, and were systematically underestimated by both regulators and industry in the early years of SEPA. To meet risk management standards set by regulators at the same time as providing competitive services, most banks rely on 'core banking systems'. A core banking system is the 'underlying system of record for credits and debits that maintains transactions, histories and balances' (Geurden 2016). Most banks began to use mainframe computers to run their core banking systems in the 1970s and 1980s. In later decades, new technologies were grafted onto aging legacy core banking systems to extend their functionality, resulting in systems that were ever more complex to maintain. Just as refurbishing a transportation hub such as an airport while it remains in use is vastly more difficult than building a new one from scratch, the process of gradually migrating away from an aging legacy computer system to a new one is complex, expensive, slow and risky. In 2014, the UK Co-operative Bank wrote off the £300 million it had invested in its attempt to migrate to a new computer system when it was forced to admit that the effort had failed and it went back to using its old legacy system (Peppard and Thorp 2014). Yet trying to keep the old legacy system running may not work much better: In 2013, when UK bank RBS experienced a catastrophic failure of its aging legacy banking system following a botched software upgrade, its customers were denied access to their bank accounts for days or weeks and the cost to RBS topped £1 billion (Wilson 2013). Bank examiners charged with oversight of banks' operational risk management tend to be even more risk-averse than bankers, further complicating the process of decommissioning legacy core banking systems and replacing them with new systems (Crosman 2015).

During the 1970s and 1980s, different countries in Europe established national EFT systems that were integrated into the mainframe core banking systems of each country's banks. Each national EFT system was compatible with all the core banking systems in that country but none of the national EFT systems was interoperable with the others. Cross-border fund transfers were slow and expensive because they had to be processed by hand, and merely changing the currency to euros on both sides of the transaction could not solve that problem. Banks were thus required to retrofit their legacy core banking systems to create the equivalent of a new pan-European network based on SEPA technology and business process standards.

No cost-benefit study was undertaken before the SEPA project was launched, and it appears that both regulators and banks grossly underestimated its costs. The problem of unexpectedly difficult and expensive technological problems was compounded by EU regulators' rejection of the notion that a pan-European EFT network constituted a public good. This denial made it easy for them to reject any obligation to ensure there was any way for the banks to defray the cost of creating this network. The cost of modifying their legacy systems and business practices to accommodate the SEPA system thus fell squarely on the banks.

In recent years, EU regulators have unleashed on European banks a torrent of law reforms to pick up the pace of innovation in European payment services. These include the E-Money Directive II,¹ the Payment Account Directive,² the Payment Services Directive 2,³ the Interchange Fee Regulation,⁴ and the Fourth Anti-Money Laundering Directive⁵ as well as all the regulatory technical standards issued by the European Banking Authority (EBA) in connection with these directives and regulations (see generally Winn 2017). While the years of effort invested in the SEPA project may have contributed something to the growth of TBGIs in the domain of payment services in Europe, it seems much clearer that it hardened regulators' resolve to resort to mandatory regulation to achieve their policy goals when they believe they detect recalcitrance on the part of industry. Although it is not yet clear whether the recent spate of EU law reforms designed to promote innovation and competition in European payment systems will enjoy any more success than SEPA did, it has already become clear that TBGIs—regulatory governance interactions in which banks themselves exercise authority in the performance of one or more components of a regulatory governance process across national borders (Eberlein et al 2014)—are unlikely to play a major role in EU policy in the field of payment law reform in the future.

This chapter proceeds as follows. Part 2 describes how the rapid pace in recent decades of technological innovation in financial services has fueled the rise of new types of transnational business governance schemes in payment systems around the world as well as contributing to the transformation of some traditional self-regulatory schemes such as clearinghouses. Part 3 reviews the history of the troubled relationship between EU regulators and banks throughout the SEPA migration process as a case study of how difficult it may be to sustain productive TBGIs in the face of unexpected obstacles to technological change. Part 4 assesses the likely legacy of SEPA in the field of EU payment law reform by comparing progress being made in building a pan-European real-time payment system with the controversy surrounding implementation of the 'open banking' mandate contained in the Payment Services Directive 2. Part 5 concludes by suggesting that EU regulators' ambivalence toward TBGIs in the domain of payment services may shed some light on the EU's failure to achieve its Lisbon Agenda goals of increasing the global competitiveness of European businesses.

2. Transnational Business Governance Interactions and Payment Systems

This chapter considers the impact of law reform efforts intended to accelerate the transformation of financial services within the TBGI analytical framework (Eberlein *et al* 2014). Transnational business governance in this context refers to 'systematic efforts to regulate business that involve a significant degree of non-state authority in the performance of regulatory functions across national borders', while 'interactions' refer to 'the myriad ways in which governance actors and institutions engage with and react to one another' (Eberlein *et al* 2014, p. 2). The TBGI framework helps to capture the complex interplay among global regulatory governance institutions, national regulators, private law regimes and private self-regulatory schemes.

A payment is the transfer of an abstract claim to value denominated in money (Proctor 2009, p. 9). Payment systems are networks through which economic agents transfer value together with information about those value transfers. As networks, payment systems may be characterized by strong network effects or positive externalities because the value of a payment system for each user increases as a function of the total number of users of that network (see generally Shapiro & Varian 1999). Most payment systems are heavily regulated by governments, usually through the oversight of a country's central bank, because they are an essential part of the infrastructure of markets. As such, their efficiency and stability can affect the productivity of a national economy as a whole. The strong network effects mentioned above tend to encourage concentration of payment systems into a single network, which in turn may raise competition law issues (Weinberg 1996, p. 1). The anti-competitive impact of network

effects on payment systems can be exacerbated if they operate as ‘two sided markets’ in which a platform operator (such as a card network) brings two different groups (such as retail merchants and consumers) together by charging one a relatively high price for access while subsidizing participation by the other (Rochet and Tirole 2008).

Long before political controversy erupted recently over the appropriate relationship between banks’ payment systems and those operated by non-bank FinTech innovators, TBGIs have been common in global financial markets. Two important global governance institutions that influence national payment system regulations through ‘soft law’ guidance are the Committee for Market and Payment Infrastructures (CMPI), based in Basel, and the Financial Action Task Force (FATF), established to increase coordination among national regulators in the fight against money laundering. Payment system risks have always been a central focus of the Basel Committee on Banking Supervision (Basel Committee), founded in 1974 following an international banking crisis triggered by the failure that year of the Bank Herstatt to settle its cross-border payment obligations (Bank for International Settlements 2018). The CMPI, the Basel Committee’s sister body, is the most important transnational regulatory governance body focused on payment systems issues. Its roots date back to 1980 (Bank for International Settlements 2016). Operators of global payment networks such as the Society for Worldwide Interbank Financial Telecommunications (SWIFT) business-to-business EFT network and payment card networks maintained by Visa, MasterCard and UnionPay serve as important global self-regulatory schemes with regard to the transactions executed over their systems.

These emerging global payment regulatory schemes generally take effect by influencing the national regulatory frameworks applied by national financial system regulators. The regulatory oversight of payment systems is normally one element of a larger process of assuring the safety and soundness of national banking systems. The intensity of the regulatory oversight imposed on payment systems may be one reason that global technology giants such as Google have not yet tried to launch a ‘digitally native’ bank to compete head on with traditional banks. Zac Townsend, founder of a successful FinTech startup, explained the problem in these terms:

The problems are primarily regulatory. It is very hard to buy a bank. It is very hard to capitalize it. Banks are very restricted in their operations. Regulators are very scared of innovation. They are very scared of a bank that does not make money in the way that other banks make money. The reason they’re uncomfortable is the reason we all should be uncomfortable: banks aren’t really meant to make money. They’re meant to serve as a rock-solid repository for other people’s money...The question is, ‘Could you actually operate a bank like a technology company?’ The answer is probably no. And I’ll give you the simplest reason, which is what every regulator has told me: they are uncomfortable with a bank that grows more than 20 percent year over year. The number one historical indicator of a bank that is about to go belly-up is one that has a lot of growth. But a good Silicon Valley start-up grows 20 percent month over month (Ross 2016, p. 169).

While new payment services offered by innovative FinTech startup companies garner a great deal of media attention, the day-to-day operations of the modern electronic payment systems that are part of the economic foundation of most modern economies still depend largely on banks’ aging legacy core banking systems. Like a duck that appears to float serenely on the surface of the water while its feet paddle madly just below the surface, the massive scale of the computing functions performed by core banking systems may appear effortless to a casual observer such as a bank customer making an automated teller machine (ATM) withdrawal. But enormous computing resources may be required to achieve that appearance of effortlessness: while Google’s vast data centers organized as server farms are capable of processing 60 000 searches per second, mainframe computers in banks can be capable of handling more than 1 million transactions per second (Smith 2014). Legacy bank computer systems tend to be rigid, complex, and increasingly difficult to maintain or modify while the information technology

systems used by the banks' disruptive competitors tend to be flexible, modular and relatively easy to modify in response to changing requirements (Quintero *et al* 2015).

While it may be obvious to everyone in the banking industry that legacy core banking systems will have to be overhauled before the revolutionary potential of disruptive FinTech innovation can be fully realized, there is no sign that either politicians or regulators, constrained by lingering popular hostility to banks left over from the Global Financial Crisis, have figured that out. Banking industry experts have come up with a variety of colourful metaphors to describe how difficult it is for a bank to replace its legacy core banking system with something fit for purpose for financial markets today:

- Trying to changing engines on an airliner at 30 000 feet (Kelly 2014 ¶ 7.10 p. 55);
- Trying to build a Tesla from a Model T foundation (Belmaker 2016);
- Trying to perform multiple heart transplants simultaneously on the same patient (Planet Compliance 2016); and
- Undergoing open heart surgery with your eyes open and no anesthesia (Crosman 2013).

Although legacy bank computer systems may not be able to provide bank customers the same kind of end user experience that their disruptive competitors can offer, they do provide a definitive system of record that maintains absolute data consistency throughout all of the bank's computer systems at all times. Consistent with CPMI standards on the management of risk in payment systems and Basel Committee operational risk standards, banking supervisors in advanced economies will not permit banks to use the same kind of flexible, loosely coupled information technology systems that their more nimble competitors use if the result would be any deterioration in the capacity, speed, accuracy, security and availability of their core system of record processes. In the absence of a safe, obvious transition path away from their aging legacy system and under constant pressure to reduce costs and solve urgent problems quickly, many bank managers may feel they have no choice but to keep piling more temporary fixes on top of systems already buckling under the strain (Louwe Kooijmans *et al* 2012, p. 1; Matthan 2016).

In some respects, the problem of legacy system modernization now facing many banks resembles the Year 2000 (Y2K) software glitch that received considerable attention at the end of the twentieth century. Earlier generations of programmers truncated the year to two digits instead of four to save precious resources at a time when processing capacity was limited. So there was concern that when the year 2000 arrived, software programs containing two-digit years might crash if they interpreted the beginning of the new century as 1900 rather than 2000. The problem was the same across all computer systems and while Y2K remediation might have been expensive, there was a clear consensus on what needed to be done: change the dates in the old programs to four digits. The problem of aging core banking systems is also related to the limitations of outdated information system design principles, but is immensely more complex and varied than Y2K problems because each bank's core banking system was unique when it was built, and has only become more unique as it has been extended and updated over many years. Furthermore, no clear consensus has emerged among banks, technology vendors and regulators about the best design for the next generation of powerful bank computer systems. This lack of agreement compounds the challenges facing bank executives and directors trying to navigate a way out of this maze.

3. The Single Euro Payment Area

As the project to create a single European currency was taking shape in the 1990s, EU regulators decided that individuals in the Eurozone should be able to transfer euros across borders within the Eurozone as quickly and easily as they transfer them within their own country. From a policy perspective,

this goal was a 'natural consequence' of the broader policy goal of uniting the Single Market under a common currency (European Central Bank 2006, p. 4). The clarity of this general sense of purpose was not matched with equal decisiveness in its execution, however. Because EU regulators did not view the new market infrastructure they required as a public good, they did not see any reason to allocate any public resources to pay for its construction. In an early work in the nascent field of law and economics, then law professor, later judge Richard Posner described the practice of 'taxation by regulation' as arising when governments chose not to pay directly for public services out of its own tax revenues, but to require a regulated industry to use profits earned from other activities to subsidize the provision of those public services (Posner 1971, p. 22.). Because constructing the new pan-European payment system generated no new revenues for the banks to offset the cost to them of constructing it, EU regulators were in effect requiring European banks to use cross-subsidies to cover those costs.

Before the 1992 Treaty on the European Union (the Maastricht Treaty) established the creation of a common currency as the next step toward a European Monetary Union, ensuring the technical interoperability of national payment systems had not been a concern of European policy makers. Cross-border wholesale electronic payments were handled efficiently within the SWIFT network, and the volume of cross-border retail electronic payments was small (Committee of Governors of the Central Banks of the Member States of the European Economic Community 1992, p. 285). Starting as early as the 1960s in some countries and finishing as late as the 1980s in others, the banking industry of each EU member state in collaboration with its national central bank had set up a national automated clearing and settlement system for domestic payment transactions. By the time the goal of a single currency was established in 1992, each member state had its own automated clearing house (ACH) with its own national policies, procedures, technical specifications and governance mechanisms. None of the national systems had been designed to interoperate with any other national systems.

Creating a pan-European infrastructure for fund transfers in euros gradually became a high priority for EU regulators over the course of the 1990s (European Monetary Institute 1996). While most domestic fund transfer systems in Europe were fully automated by the 1990s, cross-border transfers were still processed manually through a system of correspondent banks, resulting in high costs and slow processing times (European Central Bank 1999, p. 5). In studies conducted the early 1990s, the Commission discovered that the average cost of a cross border transfer was the equivalent of € 24 for a transfer of € 100 at a time when the corresponding cost of most domestic fund transfers in Europe was measured in pennies. In 1999, the European Central Bank (ECB) found that fees had not come down much: they ranged from € 3.50 to € 26 for smaller amounts and from € 31 to € 400 for larger amounts. In addition, while the processing times for domestic payment transactions were 1-3 days, cross-border transactions averaged 4.8 days, with 15 per cent taking more than a week. Furthermore, banks in some countries charged additional fees for balance of payments reporting, currency conversion, postage and other communication charges.

In 1999, European regulators informed European banks that they were expected to find a way to eliminate the difference in cost and processing times for domestic and cross-border euro transfers as quickly as possible—preferably in time for the launch of the new euro notes and coins on January 1, 2002 (European Central Bank 1999, p. 12). The banks were reluctant to undertake the difficult, expensive process of reengineering their domestic EFT networks to support a common European standard when only about one per cent of all the EFTs they processed involved cross-border transactions. While EU regulators did not deny that current transaction volumes were low, they believed that once the vicious cycle of low transaction volumes and high fees suppressing consumer demand was broken, latent demand would surface (European Central Bank 1999, p. 12).

The ECB also decided not to assume direct responsibility for operating a new European-level ACH for small value euro payments, but instead to assume the role of a 'catalyst for change' by engaging in a dialogue with banks about how best to achieve the goal of creating a new 'domestic' fund transfer system

for the Eurozone (European Central Bank 1999, p. 15). By contrast, the ECB took the lead in developing TARGET (Trans-European Automated Real-time Gross Settlement Express Transfer System), a new pan-European large value payment fund transfer system launched in 1999, because it was responsible for the safety and soundness of European banks and large-value fund transfer systems pose systemic risks to a banking system that small-value fund transfer systems do not (European Central Bank 1999, p. 8). Furthermore, because the Euro Banking Association had already created the EURO1 network and many national ACHs had already set up bilateral relationships with other national ACHs, there was no evidence that a new small-value payment network operated by the ECB was needed. Although neither EURO1 nor the bilateral arrangements had yet achieved significant transaction volumes, this was attributed to the continued dependence on manual rather than automated processes (European Central Bank 1999, pp. 9-10).

In its new role as the catalyst for change in Eurozone payments, the ECB informed the banks in 1999 that it expected whatever kind of new cross-border service they devised to be capable of providing the equivalent of domestic 'straight-through processing' services by 2002 (European Central Bank 1999, p. 7). The ECB held up the highly centralized and automated Visa and MasterCard networks in Europe as an example of what should be possible for cross-border EFTs (European Central Bank 1999, pp. 8-9). The ECB noted that the European Committee for Banking Standards had already developed the International Bank Account Number (IBAN), International Payment Instruction (IPI) and Bank Identifier Code (BIC) standards (Janczuk-Gorywoda 2015; European Central Bank 1999, p. 10). There is no evidence that EU regulators were aware that making changes in the format of account numbers could be a complex and difficult undertaking for banks with aging legacy core banking systems. Before changing the format of the text of an EFT instruction to achieve interoperability across different software applications, a bank must analyze its existing system of internal controls to make sure that the bank's exposure to operational risks is not increased by any of the technical changes being made and it remains in compliance with all its regulatory obligations. In addition, dozens, hundreds or even thousands of separate software applications would have to be modified.

As the 2002 target date for the launch of euro notes and coins approached, EU regulators realized little progress was being made in establishing the pan-European EFT system they believed was necessary to the success of the euro. EU regulators then shifted to a new channel of communication to ensure that their message would be received and interpreted correctly by the banks. Late in 2001, the Commission issued a regulation setting the price of cross-border euro transfers equal to the price of domestic euro transfers,⁶ which abruptly transformed cross-border euro transfer activities from a profitable line of business into one that hemorrhaged money. Representatives of the European banking industry met in May 2002 to come up with a strategy for mitigating the losses they were now suffering as a result of the EU's taxation-by-regulation strategy. After the meeting, they issued a strategy paper, *Euroland: Our Single Euro Payments Area* (European Payments Council 2002), describing the strategy they had devised. In June 2002, the bankers established the European Payments Council (EPC), composed of representatives of 65 banks representing all categories of European banks (such as commercial banks and saving banks), several banking industry trade associations and the Euro Banking Association. The EPC immediately began work developing standards, rulebooks and frameworks that would be the foundation of a pan-European interoperable fund transfer system.

In 2001, when the banks realized that the Commission was preparing to mandate lower prices for cross-border euro payments, they proposed a Multilateral Interchange Fee Convention permitting an interchange fee of € 3 to be charged to help defray the costs of building the SEPA system. Such an interchange fee would have created a financial incentive similar to those provided by the international Visa and MasterCard card networks to drive adoption of the new SEPA network. The Commission was already embroiled in a long-running battle with the card networks over the level of interchange fees they charged, however, and so was unwilling to agree to such an incentive system for SEPA.⁷ After the

Commission rejected the interchange fee proposal, the banks were left with no viable mechanism for recovering the costs of reengineering their national ACH systems to conform to SEPA standards. Yet EU regulators continued to expect prompt compliance notwithstanding the lack any viable cost recovery mechanism, repeatedly expressing their frustration with the slow pace of progress:

Despite efforts on the part of the European public institutions, the banking sector has failed to address in a serious manner the issue of cross-border retail payments in euro and the situation remains highly unsatisfactory (European Central Bank 2001, p. 6.)

EU regulators felt entitled to exercise a veto over any part of the SEPA migration process that was not to their liking, and at the same time, without any sense of irony, they also insisted that it was really a market driven process through which the banks should respond to market demand (see for example, European Central Bank 2010, p. 9):

...the EPC has so far made very little visible progress in meeting the expectations of euro area citizens, who want all credit transfers in the euro area to be domestic, implying that national schemes, standards and business practices must be replaced by pan-European ones (European Central Bank 2004, p. 12).

When European regulators denied the banks' request to create incentives for participating in the SEPA migration process with interchange fees, they overlooked the fact that to the extent that payment systems provide equal access to liquidity and stability to all market participants, they operate as a form of public good. Producers of public goods have difficulty recouping their production costs because they cannot exclude anyone from enjoying their output, and the result is often market failure in the form of underproduction of those public goods. Had EU regulators recognized that payment systems embody the characteristics of both public and private goods, they could have anticipated that not allowing interchange fees would undermine the SEPA migration process.

In 2002, the EPC issued the Convention on a Basic Standard for Euro Retail Cross Border Credit Transfers in the Countries of the EU (the Credeuro Convention) and in 2003, the Interbank Charging Principles Convention (Wandhofer 2011). The implementation of these early efforts at creating the equivalent of a domestic Euro scheme for the Single Market was based largely on the efforts of the major banks that had previously operated the correspondent banking system and in effect, permitted other banks to outsource the processing of cross-border euro transactions to those banks rather than come into compliance themselves. In 2006, the Commission made it clear that any solution that was not based on the full participation of all participants in the system would not be acceptable:

[SEPA] will be deemed a success when the full potential of economies of scale and scope and competition are realised with the euro-zone. This means savings for users and lower costs for providers. This vision does not allow for developments that will only take us half the way. A mini-SEPA that only delivers solutions for cross-border payments in Europe is not acceptable (European Commission 2006, p. __).

At a 2006 OECD Policy Roundtable focused on competition policy for payment card networks, Weibe Ruttenberg of the ECB affirmed the fundamentally political nature of the SEPA project when he said, 'For banks, SEPA is not an option. It will be implemented. Should banks fail to deliver, a structure will be put in place'.⁸

So the EPC went back to the drawing board to develop more comprehensive schemes. In 2008, the SEPA Credit Transfer scheme was officially launched, followed by the SEPA Direct Debit scheme in 2009 (see European Payments Council 2019a, b for current information). That same year, the EU repealed its 2001 Regulation on cross-border euro payments,⁹ replacing it with a Regulation that expanded the scope of pricing parity between domestic and cross-border euro transfers to cover more types of payments and pushed for greater use of the new IBAN standard in cross-border euro payments.¹⁰ To facilitate the implementation of the SEPA direct debit scheme, the new Regulation authorized banks to collect an interchange fee of € 0.088 from 2009 to 2012; a subsequent Regulation in 2012 authorized

banks to collect an interchange fee in connection with direct debit transactions that were reversed.¹¹ What the banks had been hoping for would have generated significantly more fee income than these two limited exceptions to regulators' no interchange fee policy.

By 2010, however, it had become clear that simply removing barriers to migration to the new SEPA schemes would never be enough to bring the SEPA migration process to a conclusion in the absence of any significant incentives to participate. The banks lobbied EU regulators for help concluding the SEPA project (European Payments Council 2010). In 2012, the EU Parliament and Council complied by issuing the SEPA End Date Regulation, which made the use of the EPC schemes mandatory even for purely domestic euro transfers within a single Eurozone country. The regulation set February 1, 2014 as the end date for the use of non-SEPA compliant fund transfer schemes for euro countries and October 31, 2016 for non-euro countries.¹²

There is no evidence that at the time EU regulators issued the original mandate to Eurozone banks to construct what later became known as SEPA that either the regulators or the banks conducted any form of cost-benefit analysis. In the 1990s, when EU regulators developed their basic vision of what later became known as SEPA, they were under no legal obligation to develop realistic estimates of what it would cost the banks to build the pan-European EFT network they envisaged. While the notion of cost-benefit analysis for EU action was established in 1992 with the Maastricht Treaty,¹³ it was not until 2002 that the EU adopted the policy of requiring a regulatory impact assessment to be completed for all major projects and legislation.¹⁴ In the absence of a formal framework for estimating costs and benefits, the magnitude of costs of getting every commercial bank, savings bank, cooperative bank, corporate biller and small and medium-sized enterprise that sent or received payments by electronic fund transfer all enrolled in a new pan-European system were not apparent to either EU regulators or European bankers. Had leaders of the EU banking industry realized in the 1990s what a burden the SEPA migration process would later become, it is easy in retrospect to guess that they might have pushed back harder. Once EU regulators had control over the SEPA migration policy agenda, however, the banks were never able to retake the initiative.

4. Mandating the Transformation of Payment Systems

The conventional wisdom about the delays associated with the SEPA migration process places the blame squarely at the banks' feet:

The introduction of a new intra-bank payments system which is supposed to speed up financial transactions across the European Union has been delayed as a result of 'lazy banks...dragging their heels', a leading business group has claimed (Pope 2014, unpaginated; see also Kleiss 2011). A more careful examination suggests, however, that the relative paucity of TBGIs among regulators and industry during the SEPA migration process might have made it difficult for the industry to educate regulators about the challenges they faced such as the legacy system modernization challenge. In a classic work on public administration published in 1936, John Gaus noted,

Much of the effort of public administration today is rightly expended upon establishing procedures and agencies whereby the general policy enacted in the law and application with the active collaboration of groups of citizens most affected...[O]nly this process of conference, adjustment, statement and restatement of facts and opinions will bring any widespread conviction to a substantial group of citizens that the resulting policy is their policy and that the administrators of it are their officials (Gaus 1936, quoted in Lynn 2001, p. ___).

While such collaborative dialogue may exist between regulators and the banking industry within each individual member state, the long, slow, difficult process of completing the SEPA project suggests how difficult it may be to reproduce that type of collaborative dialogue at the EU level.

Although bankers may generally be perceived as quite effective in lobbying to advance their interests in political and regulatory arenas, in the years following the Global Financial Crisis widespread popular hostility toward banks generally may have limited the effectiveness of such efforts (Nelson 2009; Leopold 2010; Masters 2010). Furthermore, the banks themselves appear to have miscalculated the importance and difficulty of what EU regulators were demanding in the late 1990s, perhaps because operational issues are routinely accorded less weight by managers in their strategic thinking than revenue generating activities. European banks appear not to have taken very seriously regulators' early entreaties to reduce the high costs of cross-border fund transfers within the single market, only snapping to attention when it became clear that the regulators had found a way to shift those costs away from bank customers and onto the banks with the 2001 cross-border euro payments Regulation.¹⁵ The banks are hardly alone in making such miscalculations: ignoring complex, difficult business process reengineering problems or underestimating their cost are common management responses to the need for large, complex business process reengineering projects (Clemons *et al* 1995).

The banks' miscalculations appear to have been exacerbated by unwarranted optimism among European regulators that the goals of the Lisbon Strategy would soon be realized. Launched in 2000, the Lisbon Strategy's aim was to make Europe 'the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion' (European Parliament 2000, para 5). By any objective measure, the Lisbon Strategy did not succeed, although the causes of its failure remain a subject of considerable debate (Wyplosz 2010). Unwarranted optimism about the feasibility of Lisbon Strategy goals in connection with the SEPA project manifested themselves in the form of pronouncements that a 'market-driven' policy could generate essential infrastructure for the single market without recourse to outsourcing, interchange fees or distorting cross-subsidies. If EU regulators had been more familiar with the scale and severity of the banks' legacy computer system problems and the concerns of bank examiners about the risks of trying to migrate from those legacy systems to newer systems, they might have been less impatient with the slow progress in completing the SEPA project. But as the president of Estonia, the most digital nation in Europe, noted: 'We don't have, in Europe at least, people at the policymaking level who understand what IT is about' (quoted in Ross 2016, p. 246).

Had the EPC had been permitted by regulators to play a larger role in the SEPA migration process, TBGIs might also have played a greater role in the SEPA migration process. The TBGI framework identifies six components of regulatory governance: agenda-setting, norm formation, implementation, monitoring, enforcement and evaluation/review (Eberlein *et al* 2014, p. 6). EU regulators set the agenda for SEPA and in response industry established the EPC to coordinate their response and lower their cost of complying with the 2001 cross-border payments Regulation. In 2013, the ECB formally removed any vestigial agenda-setting authority the EPC might have accrued over the course of the SEPA migration process, and gave a newly created Euro Retail Payments Board (ERPBB) under its direct control full responsibility for setting retail payments policy in Europe. If the EPC had been granted sufficient autonomy to oversee the SEPA migration process generally rather than merely being responsible for developing the schemes governing technical aspects of implementation, then outsourcing, interchange fees or both might have played a role. The EPC struggled to achieve implementation of the SEPA Credit and Debit schemes because— notwithstanding EU regulators' confidence that latent demand for cross-border fund transfers would emerge once a pan-European framework were in place—no compelling economic incentive for compliance ever emerged. The fact that full compliance with the SEPA could not be achieved without a legislative mandate supports the argument that the payment network created by SEPA should be seen as public good paid for via 'taxation by regulation' imposed on the banking industry. Because SEPA schemes govern both technology and business processes, after the SEPA end date passed and older national EFT systems were decommissioned, any bank wishing to participate in SEPA had no choice but to comply. So

although the EPC has no enforcement duties per se, it continuously monitors how SEPA schemes are being used and works with industry to keep them updated.

In 2014, the ERPB noted with concern the rise of ‘instant payment’ schemes in Eurozone domestic markets, and invited the EPC to develop a plan for an EU level response (ERPB Secretariat 2015). Instant payment schemes are payment services that operate on a 24/7/365 basis providing real-time or near real-time settlement, unlike traditional EFT systems, which normally operate only Monday-Friday during banking hours and settle one or two days after a transaction originates. The ERPB approved the plan that the EPC presented in 2015 to launch the effort to develop a ‘SCT Inst’ (SEPA Credit Transfer-Instant) payment scheme in 2016. The new system went live in 2017, and a public consultation was planned for 2018 to provide the foundation for the first update of the SCT Inst scheme. While it is too soon to know whether the SCT Inst scheme will be a success, it is clear that the ERPB recognized the value the EPC could provide in terms of mobilizing bank support for a pan-European competitor to domestic euro instant payment schemes.

But the arrival of the 2018 deadline for banks’ compliance with the ‘open banking’ mandate in the 2015 Payment Services Directive 2 found EU regulators reluctant to engage in a collaborative dialogue with the industry most affected by the law reform. The open banking mandate brings new third party payment services under the oversight of national regulators and in return, requires banks to accept instructions from their customers granting those third party payment services direct access to their bank accounts. In order to safeguard the privacy and security of bank customers’ information, banks and third party payment services are required to use ‘strong customer authentication’. Both the mandate to accommodate customer requests to allow third party payment services to access their accounts and the mandate to use strong customer authentication place enormous regulatory compliance burdens on banks still struggling to modernize their legacy computer systems. Responsibility for developing regulatory technical standards that would make it possible both for the third party payment services to have easy access to their users’ bank accounts and for the banks to restrict access to their customers’ accounts to remain in compliance with operational risk standards fell to the European Banking Authority (EBA).

These strong authentication standards became a political football as conflict escalated in 2017 among the banking industry, new payment services, the EBA and the Commission over how the open banking mandate would be implemented (Srivastava et al. 2017). The EBA published a Discussion Paper in 2015 setting out its preliminary analysis of the issues. After the EBA analyzed the many responses it received to its Discussion Paper, it published a Consultation Paper in 2016 containing a draft regulatory technical standard for comment. In consultation with the ECB, the EBA analyzed the even larger number of responses it received to its Consultation Paper and in February 2017 issued its final proposal for a regulatory technical standard for strong customer authentication. The Commission found the EBA’s final proposal too accommodating of the banks’ concerns, however, and in May 2017, exercised its prerogative change the EBA’s final proposal. In June 2017, the EBA responded by objecting to the Commission’s changes. In November 2017, the Commission responded to that criticism by modifying some of the changes it had earlier made in the EBA’s text, but in December 2017, the EBA complained that it had not even been consulted before the latest round of changes were made. The Commission responded in February 2018 by assuring the EBA that the Commission had taken its concerns into account in the November revisions (Reid et al. 2018). The final regulatory technical standard became effective in March 2018.¹⁶

Under the 2010 European Banking Authority Regulation, the EBA has the authority to develop regulatory technical standards as part of the process of implementing EU-level banking law reforms, when requested to do so by the Commission.¹⁷ As part of its standard-setting mandate, the EBA works to facilitate a broad consensus amongst all interested stakeholder groups to support the regulatory technical standards it issues. While this is a very different process than the voluntary consensus process characteristic of standard setting in the United States (Office of Technology Assessment 1992; Winn 2009,

pp. 185-219), the standard setting processes managed by the EBA nevertheless appear to be open, transparent and as pragmatic as possible. The fact that the Commission felt so free to disregard the EBA's expert opinion reflecting the deliberative processes it facilitated as cavalierly as it disregarded the EPC's expert opinions reflecting the deliberative processes it had facilitated a decade earlier during the SEPA implementation process does not bode well for the future success of the EU's open banking mandate.

5. Conclusion

When EU regulators required European banks to reengineer their national payment systems in order to create a new pan-European electronic fund transfer system, they believed they were acting as the catalyst of a market-driven reform process. The challenges that surfaced during the SEPA migration process call to mind the challenges that surfaced in another epic construction project dogged by controversy and cost overruns: the Sydney Opera House. Started in 1957 with a budget of AUD \$7 million and an estimated completion date of 1963, the Sydney Opera House was not finished until 1973 at a cost of \$102 million, more than one thousand per cent over budget. Like the Danish architect Jørn Utzon, who blamed the Australian contractors for the cost overruns and delays, EU regulators attributed the slow pace of progress in achieving SEPA to industry recalcitrance. Such an explanation, however, overlooks the possibility that the project design itself was flawed.

After EU regulators required banks to set the price of cross-border at the same level as domestic euro transfers, the banks responded by creating the EPC to take the lead on developing technologies that could lower the banks' cost of compliance. The EPC's early promise as a self-regulatory organization intended to facilitate productive TBGIs that might have lowered the cost and reduced the time required to complete SEPA was never realized, however, because regulators incessantly overrode whatever industry consensus emerged within the EPC. EU regulators' interest in fostering TBGIs faded once it became clear that the EPC could not guarantee rapid implementation of SEPA and that that it was getting bogged down in controversy. Industry interest in using the EPC to foster TBGIs was undermined by the lack of any concrete, immediate economic payoff for participating in it. Neither regulators nor industry factored in the cost of legacy system modernization when SEPA was launched; as the enormous cost compliance with regulators' political vision of a single market later became clear to industry, impatient regulators were no longer in any mood to engage in evidence-based policy making.

The problems that emerged during the SEPA migration process can help shed some light on the EU's failure to achieve its Lisbon Strategy goals of increasing the global competitiveness of European businesses. While EU regulators felt comfortable attributing to themselves the role of catalyst, they were clearly not comfortable allowing the EPC to play such a role. As the EPC's autonomy to engage in agenda-setting or norm formation outside the realm of technical standards was curtailed, the possibility that TBGIs might develop and smooth the path toward SEPA implementation faded. As regulators became increasingly frustrated by what appeared to them to be inexplicable delays, they resorted to ever more heavy-handed measures to compel industry's compliance with their wishes, which in turn made it ever less likely that they would develop a clear understanding of the root causes of the delays that could inform their policy choices going forward. While the collaborative dialogue between the EPC and ECB with regard to developing a pan-European instant payment scheme shows great promise as an arena within which TBGIs might develop, implementation of the Payment Services Directive 2's open banking mandate appears likely to suffer from the same downward spiral of frustrated expectations on the part of regulators unwilling or unable to factor commercial realities into their policy calculus.

¹ Directive 2009/110/EC of the European Parliament and of the Council of 16 September 2009 on the taking up, pursuit and prudential supervision of the business of electronic money institutions amending Directives 2005/60/EC and 2006/48/EC and repealing Directive 2000/46/EC [2009] OJ L267/7 (E-Money Directive II).

- ² Directive 2014/92/EU of the European Parliament and of the Council of 23 July 2014 on the comparability of fees related to payment accounts, payment account switching and access to payment accounts with basic features [2014] OJ L 257/214 (Payment Account Directive).
- ³ Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC [2015] OJ L337/35 (Payment Services Directive 2).
- ⁴ Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions [2015] OJ L123/1 (Interchange Fee Regulation).
- ⁵ Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, amending Regulation (EU) No 648/2012 of the European Parliament and of the Council, and repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive 2006/70/EC [2015] OJ L141/73 (Fourth Anti-Money Laundering Directive).
- ⁶ Regulation (EC) 2560/2001 of the European Parliament and of the Council of 19 December 2001 on cross-border payments in euro [2001] OJ L344/13 (Cross-Border Euro Payments Regulation 1), repealed by Regulation (EC) 924/2009 of the European Parliament and of the Council of 16 September 2009 on cross-border payments in the Community and repealing Regulation (EC) No 2560/2001 [2009] OJ L266/11 (Cross-Border Euro Payments Regulation 2).
- ⁷ Opinion of the Economic and Social Committee on the 'Proposal for a Regulation of the European Parliament and of the Council on Cross-border Payments in Euro' (2002/C 48/29) [2002] OJ C48/141, para 2.12.
- ⁸ Organisation for Economic Co-Operation and Development, Directorate For Financial and Enterprise Affairs, Competition Committee, *Competition and Efficient Use of Payment Cards*, 4 October 2007, DAF/COMP (2006) 32, p. 355.
- ⁹ Cross-Border Euro Payments Regulation 1.
- ¹⁰ Cross-Border Euro Payments Regulation 2.
- ¹¹ Regulation (EU) 260/2012/EU of the European Parliament and of the Council of 14 March 2012 establishing technical and business requirements for credit transfers and direct debits in euro and amending Regulation (EC) No 924/2009 [2012] OJ L94/22.
- ¹² *Ibid.*, amended by Regulation (EU) 248/2014/EU of the European Parliament and of the Council of 26 February 2014 amending Regulation (EU) No 260/2012 as regards the migration to Union-wide credit transfers and direct debits [2014] OJ L84/1 (SEPA End Date Regulation).
- ¹³ Treaty on European Union, 7 February 1992 [1992] OJ C191/1, art 130R (now art 174(3)).
- ¹⁴ European Commission, 'Communication from the Commission on Impact Assessment' (Communication) COM (2002) 276 final. ¹⁵ Cross-Border Euro Payments Regulation 1.
- ¹⁶ Commission Delegated Regulation (EU) 2018/389 of 27 November 2017 supplementing Directive (EU) 2015/2366 of the European Parliament and of the Council with regard to regulatory technical standards for strong customer authentication and common and secure open standards of communication [2018] OJ L69/23.
- ¹⁷ Regulation (EU) 1093/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/78/EC [2010] OJ L331/12 (European Banking Authority Regulation), recitals 21-26 and arts 8(2) and 10-16.

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