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Krarup, Troels

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Between competition and centralization: The new infrastructures of European finance

Troels Krarup*

* **Corresponding Author:** Troels Krarup. **Address:** Department of Sociology, Copenhagen University, Øster Farimagsgade 5, 1353 Copenhagen K, Copenhagen, Denmark. **Telephone:** +45 35 33 63 38. **ORCID:** 0000-0002-7239-2221. **Web**: https://troelskrarup.wordpress.com/ **Correspondence**: tr.krarup@gmail.com

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Affiliation when the work presented was conducted: MaxPo (Max Planck Sciences Po Center on Coping with Instability in Market Societies), Sciences Po, 28 rue des Saints-Pères, 75007 Paris, France.

Biographical note. Troels Krarup is a Post-Doctoral Fellow at the Department of Sociology at the University of Copenhagen, Denmark. He holds a PhD in Sociology from Sciences Po, Paris. He has worked on European financial market integration and more broadly on political and economic thought and discourse in the European Union. See https://troelskrarup.wordpress.com/

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Abstract

Ongoing European financial market integration relies on the creation of harmonized and centralized market infrastructures: the little-known institutions and systems that settle financial transactions across borders. Since the constitutional conception of market integration within the EU entails creating ‘a level playing field’ for competition, a fundamental problem emerges of how to provide that centralization and harmonization without violating the core principles of an open market economy either through private monopolization or public privatization. The paper presents a socio-technological study of a recent major infrastructure initiative by the European Central Bank, called Target2 Securities (T2S). Embedding the analysis of the struggles and debates around the birth and development of T2S in an analysis of the structural problem of competition and centralization in European financial market integration, the paper suggests an alternative perspective to that of performativity dominating the research field.

Keywords: finance; social studies of finance; competition; market infrastructures; European Central Bank (ECB); Target2 Securities (T2S).

1. Introduction

One of the challenges facing economic sociology today is to grasp the ongoing processes of financial market internationalization in its institutional, political and technological dimensions simultaneously and to avoid overemphasizing one of these at the expense of the others. Economic players ranging from major financial institutions, such as international banks (Eastburn and Boland 2015), to local fishing industries (Dobeson 2016) today rely on global networks of highly advanced information and communications technology (ICT) to provide their core services. Inspired by actor network theory, social studies of finance have made a substantial contribution towards shedding light on the role of these technologies in financial market infrastructures. Market infrastructures are the technologies, regulations and social organizations that enable economic transactions to take place. Most of the existing social studies of finance literature have focused on private market infrastructures, such as stock exchanges and other market platforms (Castelle et al. 2016; Pinzur 2016; Preda 2006), clearing houses and back-office functions (Millo et al. 2005; Muniesa et al. 2011; Panourgias 2015; Duffie 2015) or the algorithms and materiality of high-frequency trading (Coombs 2016; MacKenzie et al. 2012). Studies on the role of government initiatives in the field have tended to focus on regulation (Castelle et al. 2016; Coombs 2016; Duffie 2015). However, governmental institutions also play a more active role in the creation of new financial market infrastructures. Notably, in the EU, ongoing efforts to integrate financial markets have resulted in a number of large infrastructure projects. Some of these are mainly of a legal and regulatory character, while others – one of which is the focus of this paper – are full-blown new market infrastructure technologies for European financial markets. The European Central Bank (ECB)[1] has played the leading role in the latter cases. Previous efforts to understand the role of the ECB in European economies have focused on its governance technologies as a regulator of financial markets (Violle 2017) and on its strategic use of language and economic theory in order to perform monetary policy (Braun 2015; Holmes 2012). A less noticed but major line of ECB activity is precisely its engagement in initiating, negotiating, developing and implementing financial market infrastructure technologies on a European scale. Studying these activities is also an occasion for meeting recently raised concerns that the analysis of the market-performative powers of technology needs to be coupled more closely with that of institutional and political dynamics in order to escape the apolitical tendencies of science and technology studies. In these concerns, 'political' is not so much to be taken in a normative sense, but as a (lack of) focus on the political and institutional dimensions of 'making markets' (Güney and Cresswell 2012; Cardwell 2015; Christophers 2017).

The Target2 Securities (T2S) project, I argue, from its conception around 2006 to its full implementation in 2017, has profoundly reworked the foundations for financial markets in Europe and constitutes a substantial component in the ongoing process of European financial market integration. While the T2S project is certainly complex, and while its success was by no means guaranteed at the outset, it does not comply with the web-like image of modern ICTs as breaking with more traditional forms of functional simplification and closure (Kallinikos 2005). Rather, T2S *is* a simplifying as well as unifying – in a word, harmonizing – new technology for European financial markets, producing functional closure. It also is a technology that would not have materialized if not for the determination, political influence and successful strategy of the ECB.

In the spirit of social studies of finance, T2S could be seen as a case of the 'performativity' (Callon 1998; MacKenzie, Muniesa and Siu 2007) of new financial technology introduced by the ECB in creating and shaping a market. By contrast, I argue that in order to account adequately for T2S as a strong contemporary case of financial internationalization, we would need to seize and distinguish: (i) the 'structural' conditions of existence, understood as the fundamental problem to which T2S responds; and that consequently framed (ii) the 'contingent' techno-politics that gradually shaped T2S over the course of its development period, understood as the ongoing struggles among different interests, technological models and ideologies, emerging from which T2S is a compound of compromises and victories/defeats. The problem with the concept of performativity in itself, at least in accounting for the birth and development of T2S, is that it does not clearly emphasize these conditions of existence but relies primarily on a concept of action (human or non-human). This means that the important story to tell is always local in the sense that even if the network of international finance today is a 'Leviathan' (cf. Callon and Latour 1981), the ethos of performativity studies would still be to unravel the long chains of human and non-human actions that brought about this network (Krarup and Blok 2011). By contrast, in this paper I insist on the legitimacy and importance of 'structural' analysis – not understood as the analysis of *pre*determination, but rather as the analysis of what I call general problems at the level of mutual determinations and conditions of existence. Certainly, T2S was by no means a predetermined historical necessity and, as the analysis will show, the struggles around it could very conceivably have led to its premature termination. Nevertheless, the analysis will show, too, that T2S not only results from contingent struggles, but also is a response to a more general problem related to the internationalization and integration of financial markets – of which T2S itself represents a strong contemporary case. One can understand 'necessity', I argue, not as predetermination or causation, but in terms of a general problem of the contemporary internationalization of finance, forming the conditions of existence for T2S and framing the struggles around its specific design or mere survival. By 'general problem', I mean an inbuilt discrepancy or tension, that is, a determined contradiction in contemporary international financial market integration, at least in Europe.

More precisely, the general problem of market internationalization and integration, to which I argue that T2S is a response, has to do with what 'market integration' signifies specifically in the case of financial market internationalization, or at least in the case of European financial market integration. As stated in European Commission documents related to T2S and European financial market integration more broadly, financial market integration in the EU is essentially about creating ‘a level playing field’ for market competition (ECB 2015: 25). The problem arising from this ambition is that international financial market infrastructures have traditionally been provided by market players – large international banks and other financial institutions with comparatively little underpinning at the international level from national government bodies and central banks. Being competitive and unsupported by a firm and coherent political lead, however, meant that private market integration was merely piecemeal and had come at the expense of heavy centralization and hierarchization (i.e., quasi-monopolization) of the market for international settlement infrastructure services. In other words, internationally, private market integration ironically collided with the ideal of a ‘level playing field’ for competition. Recognition of this gradually emerged in relation to T2S with the ECB and the European Commission in the early 2000s. Analytically, I argue that the specific technological, political and institutional issues facing EU bodies at the time reflect the general problem of financial internationalization and that, consequently, this problem also came to frame the ensuing struggles over the contingent specificities of T2S in the period between the initiation (2006–2008) and implementation (2015–2017) of the project.

Analytically speaking, the general problem is the following: an integrated market (in the sense of a ‘level playing field’ for competition) ideally requires what economists call ‘frictionless transactions’ (i.e., that exchanges, payments and deliveries can be made without costs, temporal delays or risks). Now, transactions are precisely the business of financial infrastructures. In finance today, quasi-frictionless transactions are provided nationally by the highly efficient and safe settlement services within the harmonized legal environments of close-knit networks of central banks, banks and financial infrastructure companies. Internationally, however, where there is no central bank, such networks are more piecemeal, and legal harmonization is effectively non-existent. In that situation, only major private financial institutions have the resources necessary to build integrated and efficient settlement systems that can transmit between heterogeneous national environments. But this layered integration can only take place at the expense of competition in the international market for financial settlement services because the more the infrastructure of one major institution gains in scope and clout – that is, the more *it* integrates international finance – the less room is left for its competitors. This is what economists call network effects and economies of scale. In other words, the more general problem facing the ECB in the case of an integrated European market for financial services was whether: (i) to accept and support further private 'monopolization'; (ii) to accept the fragmentation of competition; or (iii) to take on the task of centralization itself. The ECB initially hoped for (i) and eventually opted for (iii) but ideologically emphasized (ii) throughout.

According to proponents of T2S, the ECB's decision to firmly pursue (iii) paved the way for a major advance in European financial market integration. By contrast, in the eyes of its critics it resulted in the de facto nationalization of private business and a violation of the fundamental principles of the EU. Rather than umpiring or taking sides in this debate, I argue that the contingent struggles between 2006 and 2017 that shaped the specifics of T2S themselves were also structured by this more fundamental problem of international financial market integration. Certainly, there was an important and complex interplay of technological, institutional and political issues and contestations during this period. Yet, it is only through this analytical lens, I argue, that the interplay of technology, institutions and politics around the T2S project can be properly understood.

Following a short description of the qualitative materials, which are analysed in Section 2, Section 3 gives an overview of financial market infrastructures in Europe. Section 4 then provides a brief historical overview of international financial market infrastructure integration and more specifically the situation and events leading up to the birth of the T2S project, elaborating the general problem of competition and centralization. Section 5 subsequently accounts for the changing response to that problem by the ECB around 2006, when it took steps to launch the T2S project. Section 6 thus analyses the technological, institutional and political struggles around the year-long process of specifying T2S between 2008 and 2015. Section 7 concludes the paper.

2. Materials and research project

The analysis presented in this paper is part of a broader research project on T2S. Other aspects of the project concern more specialized analyses of discourse, monetary creation and the consequences for collateral of T2S that will be dealt with in discrete publications. A total of 59 qualitative interviews were conducted with 72 people between late 2013 and mid-2016 (the majority between mid-2014 and early 2015). Interviews were carried out in four countries: Germany, France, Belgium and Denmark. Germany and France are the two main countries (along with Italy and Spain) responsible for the T2S project, but they are also the dominant countries of the euro area. Belgium is a smaller eurozone country and serves, too, as a hub for major international players in the financial infrastructures sector, as well as the European Commission. Denmark is the only non-euro country to join T2S. These countries were selected in order to include as much as possible the variation in national perspectives around the T2S project. For similar reasons, interviews were gathered from a variety of institutions involved in the T2S project: national central banks and the ECB, national and international infrastructure providers, large and small banks, and the European Commission.[2] Moreover, relevant reports from the institutions involved have been included, notably documents mentioned by interviewees.

3. Towards a single market for financial services

The aim of the Target2 Securities, or T2S project, initiated in 2006 and implemented between 2015 and 2017, was to integrate financial market infrastructures in the EU (ECB 2006, 2007b, 2008a). The ECB, which initiated, developed and implemented T2S, had the explicit ambition of creating an integrated and efficient market for financial services by providing Europe with a financial market infrastructure technology that allowed for the frictionless settlement of financial transactions across borders (see also Porter 2014; for analyses of related projects, see Drummond 1999; Panourgias 2015). As ordinary citizens, we are not used to thinking about how and when our monetary and financial transactions settle. When we make a bank transfer or buy stocks via personal banking, we assume that everything is in order. However, the transaction only assumes legal finality when it is 'settled' in the underlying web of ICTs and accounts linking the end buyer with the seller through their respective banks, the central bank, a central securities depository (CSD) and yet other institutions. It was this underlying web or 'settlement infrastructure' that T2S sought to centralize and harmonize as part of the overall effort to create a frictionless 'level playing field' for financial markets in Europe (ECB 2015: 25). One way of putting it is that T2S provides a new and more powerful ICT for the European financial markets to bring transactions of money and other financial assets to a close (Millo et al. 2005). From this perspective T2S is part of the story of the euro, as a rare contemporary case of creating a new monetary organization for a new transnational community in Europe. It is worthwhile, therefore, to situate the T2S project in a brief historical overview of monetary and financial market integration in Europe.

Financial market integration only became a serious political topic at the EU level with the globalization of finance from the 1980s onwards (Grossman 2012). Despite the long process of European market integration since the *Treaty of Rome* (1958), the single currency (1999) and the harmonization and liberalization of stock exchanges (2004 MiFID regulation), efforts to create a single integrated financial market in Europe are ongoing – most recently with projects such as the Banking Union and the Capital Markets Union – and they appear still to have quite some way to go. Subject to less public and academic interest, the integration of core financial market *infrastructures* was still in progress more than 15 years after the implementation of the euro (see also Lee 2011; Panourgias 2015; Porter 2014; Quaglia 2010).

The companies and government institutions behind these infrastructures are rarely publicly known. One type of system administers the money transactions of ordinary commerce – mostly credit card payments and personal bank transfers, usually through a so-called clearing house on a deferred basis (e.g., once a day) (Millo et al. 2005). Another type handles the comparatively huge transactions between banks and other financial institutions in real time (Bech 2008). A third type settles the transactions of money for securities, that is, stocks and bonds in financial markets (Panourgias 2015). The ECB's T2S project belongs to the third category. T2S was conceived as a pan-European system that would allow transactions of money for securities to be settled with the same speed, safety and cost-efficiency across borders in Europe as within national environments where these systems are generally highly integrated. This was no small ambition: up until 2006, most of the national systems were closely interwoven with the national stock exchange and central bank, whereas cross-border transactions were taken care of by a looser network of international banks that had specialized in transactions across different national legal and technical systems. According to one important commissioned report, this extra layer and the legal and technical differences among countries meant that cross-border financial transactions were more expensive, less efficient and more risky (Giovannini Group 2001).

A provisional pan-European payment system exclusively for money transfers, called Target, was set up among the central banks of the euro countries in 1999 in order to enable the new currency to float freely within the monetary union (see Riles 2004, for an analysis of a similar system in Japan). A second and more permanent version, called Target2, was implemented only in 2007. Target2 Securities (T2S) was initiated as a third, bigger and more complex project for the harmonized and integrated settlement of securities transactions (i.e., money for stocks or bonds) in 2006 and fully implemented only by 2017. The differences among the three projects are summed up in Table 1.

Table 1: Three ECB financial infrastructures

Target (1999)	**Target2 (2007)**	**Target2 Securities**
First pan-European integrated system for the settlement of cash transactions	Second version of Target – only cash settlement	A new system settling transactions involving *both* cash and securities

It is interesting that the T2S project was invented, developed and implemented by the ECB because this goes against the general trend of national central banks selling off CSDs and other financial infrastructures in the name of privatization during the late 1990s and early 2000s (just as so many other infrastructures were privatized in most Western countries: telecoms, electricity, rail and so on). It is even more surprising, as the EU is generally considered a proponent of privatization and marketization. In order to grasp adequately this shift in approach, we thus need to situate the initiation of the T2S project and the more specific struggles around it in the broader structure of financial market internationalization and integration.

4. International financial market integration: The problem of centralized competition

Modern financial infrastructures have existed at least since the nineteenth century, when London bankers organized the multilateral clearing of cheques (Millo et al. 2005). A market without a centralized and harmonized financial infrastructure is risky, inefficient and costly, as for example in the years of ‘free banking’ in the United States, when each bank issued its own dollar notes and citizens would have to keep updated on the soundness of all these banks and negotiate the relative value and acceptability of different notes in the transactions of everyday life (Haveman 2015). Indeed, one aspect of money is to act as an infrastructure for market exchange or, as the economists put it, to serve as a ‘medium of exchange’. Ideally, the ‘perfect’ medium of exchange in the purely economic sense is harmonized, uniform and imposes no frictions, risks or costs on transactions. Somewhat paradoxically, this means that while a competitive market is fragmented by definition in the sense of being constituted by buyers and sellers of competing services and products, the market infrastructure must ideally be uniform – fully centralized and harmonized in order to eliminate costs, risks and frictions from transactions. In a purely economic sense, this is the very definition of ‘market integration’. Under these determinations, the problem becomes where to draw the line between the market and market infrastructure.

In the fully integrated *national* markets, securities (stocks and bonds) have generally been both ‘immaterialized’, meaning that no exchange of paper securities takes place, and ‘demobilized’, meaning that accounting operations are centralized in a single institution: the national central securities depository, or CSD. Instead, all transactions are carried out as simple bookkeeping operations. *Cross-border* transactions are a different case. The modern history of international financial market infrastructures is a history of a recurring ‘paperwork crisis’, that is, infrastructure overload in moving and managing paper securities with constantly increasing volumes of international financial trade (Norman 2007). ‘You have to remember,’ one Eurobond trader explains, ‘that in those days [around 1968], systems were manual, with armies of low paid, incompetent and seemingly non-English speaking clerks in New York, shuffling huge mountains of paper around’ (quoted in Norman 2007: 21). The continuous rise in cross-border financial activity, therefore, also provoked important developments in ‘global custody’. Major banks in the United States like Chase Manhattan, State Street and Bank of New York pioneered this business by offering their clients ‘a single access point to national CSDs through a network of intermediaries’ (Norman 2007: 86). The immaterialization of securities with increasingly sophisticated ICTs did not reduce the complexity and the risk of overburdening custodians. On the contrary, the increasing volumes and speed of international finance goes hand in hand with exponentially increasing computational power and, consequently, bigger, more complex and more expensive private ICTs.

In Europe, two so-called ‘international central securities depositories’, or ICSDs, were set up: Euroclear, established in Belgium by JP Morgan (later sold to its users, notably the European custodian banks); and Clearstream, set up in Luxembourg by a consortium of European banks. Despite the rivalry, a ‘bridge’ was eventually set up between the accounting systems of Euroclear and Clearstream (originally, paper securities were in fact exchanged across a bridge between their respective headquarters in Luxembourg). In this way, big international banks with an account in either Euroclear or Clearstream could transact more easily, whereas smaller banks would have indirect access via an account in a bigger custodian bank.

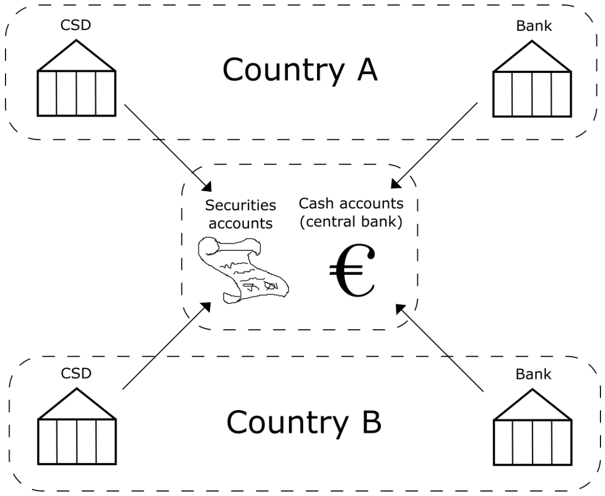
Yet, while the key institutions internationally may be few and interrelated, they remain competitors, and hence at a constant distance from full integration and centralization. The fragmented pre-T2S situation thus illustrates a general problem for the internationalization of finance today. For financial transactions, it is inefficient, if not risky, to rely on a horizontal network of competing providers. A strong degree of centralization and harmonization is a prerequisite for settling transactions efficiently *across* a network of heterogeneous competitors without too many frictions and risks. Indeed, the market in international financial infrastructure services is highly centralized. By 2006 the 15 biggest global custodian banks in the world held a staggering \$78 tn in financial assets under custody, while the next biggest 35 banks together held only about one-eighth of that, \$10 tn (ECB 2007c: 14). JP Morgan alone held almost \$13 tn and Bank of New York Mellon \$12 tn, while BNP Paribas, the biggest European custodian on the list, held less than \$5 tn under custody. In 2015, the two major ICSDs, Euroclear and Clearstream, held €26 tn and €12 tn under custody, respectively (Clearstream 2015; Euroclear Bank 2015). At the national level, the necessary centralization has been achieved through national regulation, deep central bank involvement (often by the central bank creating the original single infrastructure only to later privatize it). By contrast, the problem internationally is that no such centralized infrastructure exists; only a quasi-monopolistic market does.

Before T2S, if a bank in France, for example, wanted to offer trading in Spanish securities to its clients, it could do one of three things. First, it could open a branch in Spain to create an account in the Spanish CSD, in which it could hold the securities. But this would amount to a very costly and complicated affair, legally, technically and linguistically. A simpler and cheaper solution would be for the French bank to pay a local Spanish bank – which already had an account with the local CSD and the necessary technical systems and legal expertise – to function as a 'local custodian' for it, creating a string of accounting relationships between the French client and the Spanish CSD. As one CSD member of staff explains, the Spanish bank would then 'send them messages in English which they can pass on to their clients' whenever there is a dividend payment, tax collection, splitting, or some other legal action, right or responsibility that regards the securities. However, whereas this might be a good solution for a larger French bank with substantial activity in Spain, it would still limit the number of countries where the bank could profitably offer trading to its clients. Few banks can afford to maintain such bilateral relations with local custodians in 28 countries in the EU, let alone in more than a hundred countries across the world. Therefore, many banks – especially small- and medium-sized banks – use a third option: hiring one of the biggest international custodian banks that manage a regional or quasi-global settlement network of sub-custodians and CSDs.

The ECB and the European Commission eventually lost confidence that this layered network of market infrastructures, especially Euroclear and Clearstream, would produce a harmonized and centralized financial market infrastructure for the entire eurozone within the foreseeable future. Indeed, the core of the existing financial infrastructures – France, Germany, Belgium, the Netherlands and Luxembourg – was arguably highly integrated, but the rest of Europe less so. Moreover, there was a desire to make financial transactions in Europe settle in central bank money, just as in national settings, to avoid the risk of the private credit provider (bank) failing or bankrupting in the middle of transactions. While this may seem very unlikely, it is a topic of serious concern for central banks as a case of 'systemic risk' in financial market infrastructures. Therefore, it was important not only to centralize and harmonize financial settlement, but also to link it up with the ECB's T2 system for cash transactions in central bank money. As Frits Bolkestein, Internal Market Commissioner from 1999 to 2004, put it: 'Making cross-border clearing and settlement as efficient, safe and cost-effective as at national level is crucial to a real single securities market in the EU' (quoted in European Commission 2004).

In 2006, the ECB announced that it was 'evaluating opportunities to provide settlement services for securities transactions' (ECB 2006). Following a feasibility study (ECB 2007a) and a public consultation (ECB 2007b), the T2S project was launched by the Governing Council of the ECB on 17 July 2008 (ECB 2008a). In the press release, the ECB stated that 'T2S constitutes a major step forward in the delivery of a single integrated securities market for financial services … T2S will provide a single, borderless pool of pan-European securities, as well as a core, neutral, state-of-the-art settlement process' (ECB 2008a). Figure 1 illustrates how both the cash accounts of financial institutions in the national central bank and their securities accounts in the national CSD migrate onto the pan-European T2S settlement platform (see also ECB 2015).

Figure 1: T2S – a pan-European settlement platform



But T2S was not simply the single possible or correct solution to a transparent challenge. Rather, it was a response to a more fundamental problem of market integration. The difference was this: as a response to the general problem of integration of financial market infrastructures at the international level, T2S itself would inevitably be caught between competition and centralization. Consequently, as we shall see, this problem continued to mark the long development process of the T2S project between 2008 and the beginning of its implementation in 2015. The problem structured the struggles and debates – technical, political and ideological in character – over the legitimacy of the T2S project, as well as over the specific shape it was to take throughout this period. It hence constituted the condition of existence, not only for the T2S project as such, but also for the contingent compromises and victories/defeats that those struggles and debates entailed.

5. Constant problem – changing response

Constitutionally, the EU builds on the strong and clear principles of an open market economy with free competition – principles that are also inscribed in the statute of the ECB. Accordingly, by 2006, the European Commission already had been calling for a decade or so for the financial markets to come up with a solution themselves (Lee 2011: 237). Around 2000, progress had seemed under way.

A major French financial infrastructure provider, Euroclear, was establishing a single platform for France, Belgium and the Netherlands. It had bought the equivalent system to the United Kingdom (2002) and was in negotiations in Sweden and Finland (2008) (see Panourgias 2015), but it was clear by about 2006 that it would take several years more just to move beyond the first three countries. Moreover, Euroclear's main competitor, the German company Clearstream, showed no signs of wanting to move beyond its bases in Frankfurt and Luxembourg.[3] And even if technical harmonization was possible by private initiative, there was no real political driver for the highly complex legal harmonization necessary to support it.

Reports commissioned in 1996 and published in the early 2000s indicated that cross-border securities transactions in Europe were far more costly, risky and time-consuming than settlement within national systems, impeding de facto integration of European financial investments (Giovannini Group 2001, 2003). These reports stated clearly that 'convergence' in the sector should be 'market-led' (Giovannini Group 2001: 1). The Lamfalussy Committee (2001: 16) stated essentially the same thing. Based on documents from 1998 to 1999, Norman (2007: 103) argues that the European Commission believed that 'financial integration was "within reach" and suggested that the post-trade sector could be left to market forces'. As late as 2006, Commissioner McCreevy stated that 'an industry-led solution is the best outcome for improving the efficiency of clearing and settlement in the EU' (McCreevy 2006: 4).

Around 2006 it was clear that Europe-wide market-driven integration was not something that could be hoped for in the foreseeable future. Both legal and technical difficulties played a role here. While monetary transactions across the eurozone had largely been integrated with the first version of Target in 1999 and were virtually fully integrated with the Target2 system in 2007, moving securities across borders is quite a different issue. Unlike cash, securities contain a number of legal and financial rights and actions that differ not only among products, but also among countries. In the early 2000s, when Euroclear and Clearstream initiatives had only made some piecemeal progress, this led to a heated confrontation between the French and German central banks over the seemingly negligible question of how to grant credit to smooth the flow of transaction settlements. While the French central bank had outsourced the creation of settlement credit in central bank money to the private CSD, thereby enabling transactions to settle in real time, the Germans insisted that central bank credit creation should remain with the central bank even if this was a little less efficient (this debate will be examined in detail in a future publication). While this seemed a merely technical issue, it was more fundamentally a debate over the problem of integration via centralization and how to distribute private and public initiative in that regard.

Impelled by this debate and the lack of progress in industry-driven integration, the ECB decided to counter the previous trend and began planning the development of a pan-European securities settlement system of its own. Armed with the arguments set out in the Giovannini reports, it soon came up with the idea of 'setting up a new service – which may be called TARGET2-Securities – for securities settlement in the euro area' (ECB 2006). It should be easy, the argument ran: all you needed to do was make the simple transaction of money and securities run smoothly across borders. At least, this seems to have been what the ECB thought at the time, according to several interviewees. It turned out to be not so easy after all. Moreover, the immediate reaction from the CSDs was that T2S would take business away from private companies.

The next section will show how these two challenges to the T2S project – technological development and integration-by-centralization – were structured by the same conditions of existence that had framed its initiation in the first place: the problem of squaring centralization and competition in international financial market integration.

6. General problem – contingent contestation

The early opposition to T2S from CSDs was considerable (see also Quaglia 2010: 121). Many CSDs saw it as an intrusion into their business domain, if not outright nationalization. For many CSDs, the main source of revenue is settlement fees, while the main costs are related to custody and systems maintenance. T2S envisioned the centralization of the former, leaving national CSDs stuck with the latter. Jean-Michel Godeffroy (2014: 1), the Chairman of the T2S Board at the ECB at that time, recounted in a 2014 speech: 'Like all major innovations, T2S initially raised some fears and scepticism. I remember a conference taking place here in London back in 2007, during which T2S was even accused of being like the Spanish Inquisition!' In particular, the ICSD Euroclear (with its massive investments in buying and integrating national CSDs) worked to stop the T2S project. One interviewee relates how, at a 2011 ECB conference, the Euroclear CEO, Tim Howell, presented a picture of a car marked 'Euroclear' being run over by a train labelled 'T2S'.

Obviously, this conflict was motivated by the contingent threat to the interests of a certain group of private companies. However, the character of that conflict and the reason why it came about in the course of European integration of financial infrastructures reflect the structural conditions of existence for T2S: it was precisely the fragmentation of competition between heterogeneous settlement institutions in Europe that constituted the problem of market integration, understood as the creation of a 'level playing field' for competition in financial markets.

Facing accusations of nationalization and the risk of legal proceedings, the ECB decided to make participation in T2S optional for the CSDs. However, the optionality was far from credible to all. As one former CSD executive put it: 'The ECB did not want to enter into this debate [about nationalization] so they said: "No, no, it is optional"... I mean, let's get serious!' The problem was that for every national CSD that did not join T2S, Europe would be one step further removed from the desired financial market integration and harmonization. What would T2S be without the French or German CSD? Indeed, the prospect of just a single euro country opting out of T2S seems to have been considered a potentially devastating blow to the T2S project. As late as 2010, it was by no means a given that T2S would succeed. For this to happen, voluntary participation needed a little help. To this end, the ECB successfully mobilized pressure on the CSDs from a number of directions to accept T2S: from the EU, with its official goal of financial market infrastructure integration; from the national central banks as the regulators and sometimes co-owners of the national CSDs; and from the big custodian banks, first of all of BNP Paribas, but also Société Générale and others. The support of the custodian banks was important because they were both the main owners and the main clients of the Euroclear ICSD, perhaps the most vocal and influential institution in its critique of T2S. The custodian banks had an obvious interest in centralizing settlement in Europe on a single platform because this would facilitate and economize precisely the kind of services they provided to smaller banks and other clients. T2S would allow them to merge their pools of settlement liquidity in each country into one European pool, freeing up liquidity for investment purposes, and to instruct directly on the T2S platform, bypassing the CSDs and enabling them to provide more of the same services as CSDs did. Combined with the renewed commitment to legal harmonization in Europe, this would enable them to deliver Europe-wide custody services more efficiently and at a lower cost.

The way the proponents of T2S characterize in retrospect the struggles and compromises shaping the project between 2008 and 2015 differs substantially from the version offered by its opponents. While one central banker called it 'a great success', another called it 'illogical', since the CSDs will have to spend large sums adapting to T2S 'and at the end of the day maybe [they] are not going to survive'. Similarly, there were strongly diverging views on both the legality and juridical characterization of T2S. The ECB consistently professed that T2S is not a full-blown CSD, only 'a purely technical platform providing specific services to central securities depositories', dismissing all talk of ‘nationalization’ (ECB 2008b: 1). By contrast, from the perspective of the CSDs, a statist impulse permeated the whole project. One former industry expert complained:

> The law of gravity was abolished in the T2S project. … Why is it the 4CB [the French, German, Italian and Spanish central banks responsible for the development of T2S] that runs it? Why isn’t it outsourced? It could have been IBM or Tetra. That question was raised at a meeting, I mean, it’s obvious. Then the President said, ‘that’s how it is’. Then someone else said, ‘you can’t just do that’. So the President said, ‘well, we happen to have someone from the Commission with us today, so let’s ask him’. Then the guy stood up and said, ‘It’s OK’. [And that’s how] gravity was abolished [laughs]. It’s crazy!

The vigorous debates over technical specifications and the juridical legitimacy of T2S could simply be seen as struggles among different interests and the end result, as a contingent compromise between them. However, the specific character of those struggles, revolving around the ideological categories of ‘nationalization’ and ‘level playing field’, reflects the general problem of financial market integration and internationalization, namely, the need for centralization and harmonization to approach the ideal of a frictionless space for competition.

It is difficult to assess the extent to which the manoeuvres by the ECB to win the support of the big custodian banks were deliberate. Yet in all cases, the result was ideal for them, as they would remain indispensable intermediaries while further consolidation in Europe was facilitated with T2S. Moreover, T2S is clearly to the benefit of the already quasi-monopolistic custodian banks, putting smaller players under considerable pressure. The CSDs in particular suffered a major blow. The local custodians were not at the table when the Eurosystem, CSDs and big banks negotiated T2S. According to one central banker, this was because they were not ‘important enough to affect the discussions' of T2S. Most small- and medium-sized banks only heard about T2S for the first time quite late in the process – around 2010, or even later. Several interviewees suggest that medium-sized banks that have traditionally offered local custody services will lose that business to the regional and global custodians. Finally, despite much talk about T2S eventually benefiting consumers (see also European Commission 2015), consumers were not represented in the governance structure of the project. The reason, as one central banker explains, was that the 'end retail consumer would gain only a couple of euros' all in all, meaning that the central banks could not go to those lengths. While this decision may seem only 'natural' from a governance point of view, it casts an almost ironical light on the problem of squaring the ideal of 'a level playing field' for competition with the need for a centralized and harmonized infrastructure to support it.

This problem forms the conditions of existence not only for the T2S project as such, but also for the more or less salient political and technological debates and struggles around it. Consequently, T2S can equally well be considered from two perspectives, which together do not quite add up to a single coherent image. Considered as a mere market infrastructure, T2S contributes decisively to the harmonization and centralization necessary for a single European market in financial services to develop. However, considered as a market in itself, T2S fundamentally reorganizes financial settlement and custody in Europe in ways that, in the eyes of some, resemble nationalization and the victory of big finance, with increased centralization both around the ECB and around the big custodian banks.

7. Conclusion

The core services of many industries today depend upon global ICT networks. Economic sociology therein faces a major challenge in accounting for the creation and development of such networks in their technological, institutional and political aspects simultaneously. In the case of financial markets, social studies of finance have produced deep insights, particularly into the technological dimension of such networks. However, social studies of financial market infrastructures have hitherto focused mainly on the creation of stock exchanges and forms of trading, on the history of clearing houses and on the back-office functions of banks, as well as on the materiality and algorithms of high-frequency trading. Initiatives by governmental bodies on the other hand have generally received less attention. Moreover, with their emphasis on the notion of performativity, studies have tended to focus on the agency of technologies and economic theories within the relevant setting. By contrast, this paper has engaged with a major project for the integration of financial market infrastructures in the EU, initiated and led by the European Central Bank (ECB), namely, Target2 Securities (T2S). Based on the analysis of the birth and development of T2S, I suggest that infrastructure studies could gain – analytically speaking – from a distinction between the general conditions of existence and the contingent struggles and debates over technology, ideology and political and economic interests. Specifically, the paper acknowledges that the contingent struggles over the technological and political specifications of the project are certainly important in shaping T2S; yet at the same time the paper suggests that a general problem of centralization and harmonization in the international integration of financial market infrastructures (under the economistic ideal of a 'level playing field' for competition) structured both the emergence of the T2S project in 2006 and the formative debates and struggles around its development between 2008 and 2015. Emphatically, 'structure' means here the determining of the conditions of existence, not causally predetermining an outcome. While T2S is so far a success, and while many interviewees expressed admiration for the ECB's strategic ability to succeed, there were moments throughout when the entire project could have collapsed. It is worth mentioning here that CCBM2 (Correspondent Central Banking Model), a related, albeit smaller, parallel project undertaken by the Dutch and Belgian central banks, actually failed in 2012. In 1993, a similar major project to automate settlement at the London Stock Exchange also failed, a milestone that some interviewees still remember and that has been called ‘one of the major fiascos of business history’ (Drummond 1999: 11).

The emphasis on ‘structural’ analysis of general problems clarifies the kind of problem that the ECB (and the EU more broadly) has created for itself with its constitutional ambition of establishing an integrated financial market in the image of a ‘level playing field’ for competition, as well as illustrating how T2S developed as a techno-political response to this problem. Importantly, the distinction between general problems and contingent contestations is not synonymous with a distinction between ideal and reality, between theory and practice, or between rhetoric and real interests. It would be tautological to refer to the ECB’s change in strategy around 2006 or its later alliance with big finance merely as a universal pursuit of power in disguise of free competition discourse. Instead, the analysis of general problems adds a much-needed political grounding for the analysis of continent market infrastructure development. By providing a single shared settlement platform for financial transactions in Europe, T2S supplied the technological means for removing frictions – that is, for market centralization and harmonization that, somewhat paradoxically, the market could not provide for itself precisely because markets are competitive and fragmented. The general problem is also the basis for understanding why T2S and its impact on European financial markets can be considered from two opposing yet equally important perspectives. On the one hand, T2S creates or at least supports and substantiates an integrated competitive market for financial services in Europe. On the other hand, T2S manifests a process of further consolidation of the clout and weight of the existing big players: the ECB and the big custodian banks. In this regard, T2S further contributes to centralization and hierarchization, including by means of ‘nationalization’ of private business, rather than to ‘a level playing field’ for competition.

At any rate, the ECB’s gambit to propose T2S as a solution to the problem of disintegrated financial market infrastructures in Europe around 2006 posed a remarkable shift in strategy. First, it broke with the previously stated aim of favouring market-driven innovation. Second, it set in motion a process of considerable innovation, negotiation and legislation that reshaped the landscape of European financial infrastructures and hence laid the groundwork for renewed waves of financial market integration. Yet throughout these remarkable changes, the underlying problem of international integration of financial market infrastructures in view of a ‘level playing field’ for competition remained constant. Without grasping this constant element, the contingencies of T2S could not be adequately understood.

Notes

[1] I use ECB as synonymous with the European System of Central Banks (ESCB).

[2] It would have been analytically desirable to include the nationality, institutional affiliation and exact title of each interviewee for the quotations in this paper. However, European financial infrastructures comprise a small world in which everybody knows everybody else, and there is only one central bank and one CSD in every country, each typically with only one or two members of staff responsible for T2S. Consequently, for those familiar with the field, quoting 'a T2S expert from central bank X', for instance, would be tantamount to revealing the full name of that person. For this reason, many interviews in this research project were conducted on the conditions of very strict anonymity.

[3] Both Euroclear and Clearstream are in fact the collective names for two different types of company with quite different company constructions. Both are national securities settlement systems (Euroclear is French and Clearstream is German), and both are international securities settlement systems (Euroclear situated in Belgium and Clearstream in Luxembourg). Their differences, however, are not of importance to the present analysis.

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