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BOOK REVIEW

An archaeology of European financial market integration

Troels Krarup, *The Knowledge Problems of European Financial Market Integration: Paradoxes of the Market*, Routledge, 2023.
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Financial infrastructures are crucial, but often neglected, technical systems that are intended to facilitate the transactions of money and financial assets and accelerate spatial integration. In light of the growing digitalisation of financial transactions and the increasing politicisation of payment systems such as Swift in the context of geopolitical struggles, financial infrastructures have received increased attention in social science research (Bernards and Campbell-Verduyn, 2019; Brandl et al., 2024; de Goede and Westermeier, 2022; Petry, 2021).

The present book by Krarup contributes to this ongoing discussion. However, Krarup is less interested in the question of the increasing politicisation of financial infrastructures than in developing a sociology of the controversies surrounding the construction and integration of these technical systems. To achieve this, the book draws on a variety of disciplinary perspectives to study markets and market integration processes. Krarup highlights the contributions of economic sociologists to an understanding of markets as being institutionally embedded and political economists' emphasis on the ideational politics of market integration (p. 8). Furthermore, Krarup discusses a wide variety of approaches in Science and Technology Studies (STS) that have untangled the relationship between economic knowledge and market technologies such as stock exchanges (p. 13). Although the author praises these literatures for opening up a variety of trajectories for studying market integration and financial infrastructures, Krarup's own conceptual approach comes out of a critique of this scholarship.

Recent scholarship on market integration has overtly focused on explaining and tracing how market integration processes have unfolded, often framed as a question of power politics (p. 3). Krarup posits that there exists a more fundamental problem that market integration faces and that scholarly work has to excavate: the undetermined and vaguely specified character of markets and market integration. Krarup posits that there is a lack of understanding of the origins and practical implications of this indeterminacy for market integration processes. The primary thesis of the book is that the development of and the controversies surrounding practical projects of market integration are shaped by the underlying problem of delineating the content and meaning of market integration (p. 20). Market integration is conceived of as an epistemic problem that actors face in their attempt to integrate financial markets, which in turn shapes their particular responses. Thus, the book can be understood and read as an archaeological journey into this underlying problem and the paradoxical manifestations that structure processes and projects of financial market integration.

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The book guides readers through this archaeological journey by studying the controversies surrounding a specific financial market integration project in Europe: the securities settlement system T2-Securities (T2S), which was implemented in 2017. T2S was developed by the European Central Bank with the objective of achieving the harmonized integration of securities settlement across Europe through a single public financial infrastructure (p. 2). Prior to the implementation of T2S, securities settlement in Europe was conducted through a multitude of competing market-based financial infrastructures. However, European policymakers saw the need for a publicly provided single and harmonized system, given their loss of confidence in the private sector to develop such an integrated infrastructure (p. 72). Krarup's choice of T2S as the empirical site for the excavation of the problem and paradoxes of market integration is an intriguing one, given that financial infrastructures have so far been largely neglected as critical projects of market integration. However, as he shows compellingly, they uniquely illustrate the paradoxes of market integration and are of interest to scholars working on European financial market integration, as well as to readers curious about the peculiar relationship of money/finance and technology.

The book follows the controversies surrounding the development of T2S through a discussion of four different paradoxes that form the specific problem structure of European financial market integration. At certain points in the book, the terminological differentiation between problems and paradoxes is not entirely accurate, as the terms appear to be used interchangeably. Consequently, in this review, I follow a specific reading of the book, namely that paradoxes are practical manifestations of a single but recurring problem, i.e., the indeterminacy of market integration (p. 14).

The first paradox of market integration in Europe is revealed through an examination of two key European treaties, the Treaties of Rome (1957) and Lisbon (2007). Here, Krarup develops the key guiding thesis of the book, namely, that market integration is inherently indeterminate. With only marginal changes from Rome to Lisbon, EU treaty law essentially defines the market negatively in terms of the absence of distortions and frictions to competition (p. 54). Krarup argues that this mere negative legal conceptualisation of market integration in the Treaties produces a paradox for practitioners of market integration as it leaves open quite a wide space for interpretation regarding the sources of integration and the potential limits to the competitive order of the market (p. 62f.). On initial reading, the chapter appears to be somewhat disconnected from the rest of the book, which deals with the specific controversies surrounding T2S. However, it intriguingly sets the stage for the subsequent chapters by locating the paradoxes of integration through T2S in the "structural instability" (p. 62) of the legal specification of market integration.

Chapter 4 addresses the fundamental problem of European financial market integration and illustrates how it manifests in the controversies surrounding T2S. This chapter elucidates the paradoxical position of financial infrastructures in market integration. Financial infrastructures are competitive systems that enable financial transactions, yet they also serve as preconditions for frictionless transactions in an integrated market (p. 19). The provision of a financial infrastructure is particularly susceptible to becoming the market itself, as it monopolizes securities settlement in the hands of a single actor. The more a single infrastructure successfully integrates a market, the less space there is for competition between providers of financial infrastructures (p. 67). Thus, Krarup demonstrates how market integration through infrastructures presents a paradox for actors seeking to integrate financial practices. The tendency of infrastructures to become monopolized undermines the competitive conception of the market that has been laid out in the legal foundations of market integration in Europe (p. 71).

In Krarup's reading, T2S constitutes a particular response on the part of the ECB to this paradox of market integration, with the aim of centralising the infrastructure in its hands.

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The ECB posits that a centralized and public approach would mitigate the risk of fragmentation in the securities settlement market, which could arise from competing market-based infrastructures and the monopolization of private financial infrastructure. However, as Krarup's approach demonstrates, T2S faces the paradox that it would achieve market integration only to the detriment of competition between providers of securities settlement (p. 72), thereby highlighting how the controversies over T2S are manifestations of the deeper problem of the indeterminacy of market integration (p. 75f.).

Remarkably, the mere competitive conception of the market in the EU also gives rise to a paradox in the technical functioning of money in the T2S settlement system. Here, Krarup unfolds a fascinating story about how "engineering and economic theory meet, as the machine to finalise transactions becomes inseparable from the definition of what money 'does'" (p. 81). As Krarup demonstrates, neoclassical monetary debates shift between two distinct perspectives: One perspective regards money as a commodity, thereby locating its function in facilitating exchange. On this view money is the product of competitive development. The other perspective regards money as infrastructure, offering liquidity to the market from an external source. These monetary debates revolve around the same fundamental problem of determining what should motivate market integration in a competitive conception of the market (p. 86). Krarup then traces this paradoxical condition of monetary integration through the controversies over T2S. T2S provides intraday settlement credit in the securities settlement process, with the objective of reducing liquidity risks for participating actors (p. 90). Krarup shows how this technical aspect of the monetary infrastructure of T2S provokes controversies surrounding the paradoxical role of money in the settlement process of T2S. The controversy primarily concerns the question of whether intraday settlement credit is "just" money as an enabler of frictionless transactions in T2S or whether it constitutes a credit extension by the ECB, whereby operations in T2S would transgress the mere "neutral" processing of transactions. The fundamental problem of the indeterminacy of market integration re-emerges here, as monetary integration is faced with the same ambiguity as to whether it should originate from competition or be reached through the development of a centralized infrastructure that ensures the (potential) infinite processing of monetary transactions (p. 94f.).

Chapter 6 extends the archaeological analysis even further, with Krarup tracing collateralisation practices inside and outside T2S and their manifestation in repo lending, which have recently received increased attention in political economy scholarship (Braun, 2018; Gabor, 2016). Krarup shows how the problem of indeterminacy in market integration conditions the paradoxical nature of liquidity provision through collateralised lending (p. 101). Liquid money markets depend on infinite and readily available liquidity, while collateralised lending relies on risk assessments of the underlying security, making it fundamentally scarce (p. 101). Liquid markets thus paradoxically require the permanent exchangeability of scarce and market-priced assets (collateral) for readily available funds (p. 101). In response to this paradoxical nature of liquidity, government actors, mostly central banks, and private actors, such as global custodian banks, provide liquidity guarantees to the market (p. 102). T2S has contributed to the increased fungibility of collateral through the centralisation of infrastructure, thereby making collateral more liquid (p. 108). By elaborating on the paradoxical nature of liquidity, Krarup once again develops on the overarching aim of the book, which is to archeologically uncover the underlying problem and its manifestations in practical paradoxes that drive and structure European financial market integration.

One strength of the book is the technical sophistication of the analysis of T2S, which enables the originality of the study. However, the role of technology in Krarup's story remains somewhat unclear. Are technological propositions and materialisations conceived merely as responses to the fundamental problem of the indeterminacy of market integration, or does technology have agency in its own right in economic integration?

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Recent scholarship on infrastructure has emphasized the importance of the latter and has discussed existing technological infrastructures as a structuring condition for political discourse over and the transformation of technology (Bernards and Campbell-Verduyn, 2019; de Goede, 2021; Star, 1999). Krarup's study would have benefited from a more explicit integration of this perspective in order to further elaborate on the complex relationship between technology and political discourse in integration processes.

The Knowledge Problems of European Financial Market Integration is essential reading for scholars interested in economic integration and the intersections of finance and technology. Krarup provides a highly original perspective on these debates as he prompts us to examine the fundamental origins of controversies around market integration and the development of financial technologies.

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