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Resilience or Relocation?

Expectations and Reality in the City of London since the Brexit Referendum

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Abstract

The fate of British finance following the Brexit referendum revolves around the "resilience or relocation" debate: will the City of London continue to thrive as the world's leading financial centre, or will the bulk of its activity move to rival hubs after departure from EU trading arrangements? Despite extensive commentary, there remains no systematic analysis of this question since the Leave vote. This paper addresses that lacuna by evaluating the empirical evidence concerning jobs, investments, and share of key trading markets (between June 2016 and May 2020). Contrary to widely held expectations, the evidence suggests that the City has been remarkably resilient. Brexit has had no significant impact on jobs and London has consolidated its position as the chief location for financial FDI, FinTech funding, and attracting new firms. Most unexpectedly, the City has increased its dominance in major infrastructure markets such as (euro-denominated) clearing, derivatives, and foreign exchange – although it has lost out in the handling of European repurchase agreements. Based upon this evidence, the paper argues that the UK's negotiating position is stronger than typically recognised, and outlines the competitive ramifications for both the UK and EU financial sector.

Keywords: Brexit, City of London, European Union, financial services, resilience or relocation, United Kingdom

Zusammenfassung

„Resilience" oder „relocation"? Das Schicksal des britischen Finanzsektors nach dem Brexit-Referendum ist Gegenstand lebhafter Debatten: Wird die City of London ihre Bedeutung als einer der weltweit führenden Finanzplätze wahren oder wird ein Großteil ihrer Tätigkeiten nach dem Austritt aus den EU-Handelsverträgen an konkurrierende Standorte verlagert? Trotz zahlreicher Meinungsäußerungen liegt seit der Ausstiegsentscheidung Großbritanniens keine systematische Analyse dieser Frage vor. Um diese Lücke zu füllen, wertet das vorliegende Papier die empirische Evidenz in Bezug auf Arbeitsplätze, Investitionen und Anteile an den wichtigsten Handelsmärkten (zwischen Juni 2016 und Mai 2020) aus. Entgegen weitläufigen Annahmen deuten die Auswertungsergebnisse darauf hin, dass sich die City als bemerkenswert resilient erweist. Der Brexit hatte bis heute keine signifikanten Auswirkungen auf den Arbeitsmarkt, London konnte weiterhin neue Unternehmen anwerben und seine Position als wichtigster Standort für ausländische Direktinvestitionen und die Finanzierung von FinTech festigen. Am meisten jedoch dürfte überraschen, dass die City ihre Dominanz auf wichtigen Infrastrukturmärkten, wie denen für das (Euro-)Clearing, für Derivate und Devisen, ausbauen konnte – wenngleich sie bei der Abwicklung europäischer Rückkaufvereinbarungen Einbußen zu verzeichnen hat. Auf Basis dieser Erkenntnisse argumentiert das Papier, dass die britische Verhandlungsposition stärker ist als gemeinhin angenommen, und umreißt die Folgen dieses Umstands für die Durchsetzungschancen sowohl des britischen als auch des EU-Finanzsektors.

Schlagwörter: Brexit, City of London, Europäische Union, Finanzdienstleistungen, Großbritannien, Resilienz, Standortverlagerung

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Resilience or Relocation? Expectations and Reality in the City of London since the Brexit Referendum

1 Introduction

Resilience or relocation is the dominant frame of discussion concerning the potential impact of Brexit on the City of London.[1] The argument for relocation is straightforward: as the City loses passporting rights to EU member states (henceforth, EU27), it will not only lose lucrative business but also be diminished in its relative competitiveness and standing as the world's premier financial hub. Indeed, for a majority of analysts, the die is already cast, as firms and investors have been preparing since the Leave vote for "day one" of the UK's Single Market exit. Journalistic commentary in this vein is abundant and is supported by a growing range of policymaking and academic analyses, while dissenting voices are scarce.

The discussion revolves around a cluster of core questions: how many jobs have moved since the June 2016 referendum, and how many more will follow? What firms are expanding EU27 operations, and how has the vote impacted financial Foreign Direct Investment (FDI)? In particular, what are the calculations of major (especially, US) investment banks that use London as their primary base of activity? Furthermore, what will be the fate of London's celebrated infrastructure markets involving euro-denominated clearing, derivatives, and currencies? How much of this business will be lured to, for example, Euronext Paris or Deutsche Börse/Eurex in Frankfurt?

A major deficiency in these discussions, however, is that they often occur at the level of anecdote. This is particularly the case throughout the business press as reports highlight isolated instances of transfer and relate this back to (unsubstantiated) claims that relocation is inevitable. Even when sophisticated analyses appear, they overwhelmingly focus on one direction of travel, from the City to the continent, rather than transfers going the opposite way. The same applies to the multiple professional impact assessments (discussed below) that made stark claims concerning the amount of jobs and investment that would immediately flee following a vote to Leave. In short, what is lacking is a more systematic analysis of the empirical evidence for relocation that has (or has not) occurred in the four years since the referendum. That is the primary task of this paper.

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1 I follow convention by using the term City of London to refer the UK financial sector more broadly.

Through a detailed analysis of recent market trends across jobs, investment, and share of key trading markets – from June 2016 to May 2020 – this study serves to recalibrate the "relocation vs. resilience" debate, challenging some core assumptions and expectations. Specifically, the paper demonstrates that the widespread claim of London being significantly damaged in the years following the referendum is false. Rather, in jobs, there has been no noticeable effect; in investments, the City remains exceptionally robust in FDI, Fintech funding, and in attracting financial firms; and in the share of key trading markets, there is simply no doubt that the City has dramatically increased its dominance across most markets.

These findings indicate that the EU economy remains disproportionally dependent on London's financial services – a situation that gives the UK government a significant source of negotiating leverage. While this view on the negotiating balance of power is largely overlooked by analysts, it coheres well with the actions of both sides during the negotiations: for instance, the belligerent stance of successive UK governments, and the EU's willingness to preserve financial trading relations in the face of a no-deal outcome in early 2019.

Moreover, the findings suggest that investors retain a high degree of confidence in London's ability to remain competitive outside of the Single Market, for reasons which will be elaborated upon through a variety of theoretical frames. As for the EU, policymakers must navigate the complex task of reducing their acute dependence on London while simultaneously advancing the regional process of financial integration.

In conducting this analysis, the paper acknowledges that, as the Brexit process is not finalised, the City has not yet, in substance, moved to new trading arrangements. In this respect, the analysis offers no *prediction* as to what kind of damage will or will not happen to the City (or EU27 centres) going forward. Indeed, Brexit is an inherently unpredictable process and much remains to be resolved in ongoing negotiations – in particular, equivalence[2] determinations. Nevertheless, as both future scholarship and policy choices are unavoidably premised upon prior investigation, this paper does serve to temper some of the more pessimistic expectations regarding the future prospects of London.

The paper proceeds in six parts. The first section gives an overview of the resilience vs. relocation debate, followed by three sections that assess the empirical evidence sequentially across jobs, investments, and trading markets. The fifth section elaborates on the implications of this evidence for the wider literature, specifically as it relates to ongoing Brexit negotiations and the competitive prospects of both (UK and EU) financial systems. It also surveys a selection of theoretical frameworks within which London's resilience can be understood. The conclusion indicates several directions for future research.

2 Equivalence is a regime whereby third-country financial institutions may provide services to EU27 countries if the regulatory standards and rules in their home country are found to be in close alignment/compliance with the EU's regulatory framework.

2 The prospects of relocation

The central theme concerning Brexit and finance is the prospect of a relocation of services from the City to mainland European hubs. The conventional wisdom is that, in the aftermath of the 2016 vote, not only are firms preparing to relocate in order to continue servicing EU27 clients (Schelkle 2018, 125–27; Pesendorfer 2020, 193–245) but national and regional authorities are making proactive efforts to help their respective centres in luring business from London (Howarth and Quaglia 2018; Cassis and Wójcik 2018). In a typical rendition of this argument, Lavery, McDaniel, and Schmid (2018, 1516) conclude that European financial centres are "set to benefit" from the impending separation of UK and EU markets, despite the likelihood that overall transaction costs will increase for businesses, states, and households.

This perspective is supported by most policymaking commentary. In the ominously titled "When the banks leave", financial markets specialist Nicolas Verón (2017) declares that "harm is now unavoidable" for the City which will "suffer relative both to its competitors and to how it would have performed without Brexit and probably in absolute terms as well". While London may succeed in retaining domestic business, the author predicts at best a "permanent loss of most of the City's EU27-related business" and at worst a loss of its international activities also. Further pessimistic assessments are abundant across expert commentary, with one report after another expecting significant damage to London's standing (Wright, Benson, and Hamre 2019; Schoenmaker 2017; PricewaterhouseCoopers 2016). This narrative is also ubiquitous within journalistic reporting, as a plethora of articles anticipate and track the transfer of jobs and investment from London to rival centres (e.g. Jenkins and Morris 2018).

Another factor considered damaging to the City's interests is the UK's particularly weak negotiating position. Unlike the EU's purported consistency in financial aims, the conflicted (and heavily constrained) preferences of Britain's main players – the government, regulators, and private finance – are perceived as undermining the UK's bargaining influence. As a result, James and Quaglia argue that "the costs of no agreement remain significantly higher for the UK than for the EU, and have increased steadily over the course of the Brexit negotiations" (2018, 566).

In light of these claims, observers often present Brexit in terms of national self-sabotage (Toporowski 2017) and infer that the *political* influence of the financial sector has waned. It is claimed, for instance, that several policymaking contingencies – e.g. party management, institutional reorganisation, sectoral factionalism – have overwhelmed the structural power of British finance, and led to the pursuit of a harder Brexit than the City hoped (James and Quaglia 2019a). Others see Brexit as a critical juncture that, in combination with the reputational damage from the 2007/08 crash, marks a fundamental decline in the policymaking influence of City-based elites (Thompson 2017; Rosamond 2019).

Finally, taking stock of these perspectives, several leading authors have contemplated more broadly the potential decline or restructuring of the distinctive UK growth model, based as it is so prominently on the existence of a thriving financial services sector (Hay and Bailey 2019).

Despite this general consensus, a handful of authors question these claims. Ringe argues that while Brexit appears damaging, experience of EU law-making suggests that it will turn out to be an "irrelevance" due to the mutual interest of both British and EU policymakers in preserving open financial relations. As such, "creative solutions" that formally satisfy the withdrawal procedure will, in substance, keep London closely connected to EU markets (2018, 22). Offering empirical support for this proposition, Kalaitzake (2020) documents how a wide range of financial contingency arrangements were designed by UK and EU policymakers when threatened with the prospect of a disorderly no-deal Brexit in early 2019. Leveraging a concept of "structural interdependence", Kalaitzake argues that the prospect of mutual economic harm persuades policymakers to avoid severing deep-rooted ties between London and EU corporates.

More broadly, Talani (2019) maintains that the combination of London's unique competitive strengths with a particularly favourable set of government interventions and support will allow the City to prosper globally through a strategy of "pragmatic adaptation". In addition, Lysandrou, Nesvetailova, and Palan outline the huge advantage of scale in liquidity that London holds over its EU27 competitors, rendering it "unlikely that…relocation [from London] will occur any time soon" (2017, 173). This view is supported by a minority of policy commentators who show that equivalence can substantially mitigate the most serious damage to the City's commercial interests (Scarpetta and Booth 2016), and, indeed, might be a better strategic goal for the UK government, rather than becoming a straight "rule taker" of future EU regulations (Armour 2017).

Largely missing from these discussions, however, is a systematic *empirical* analysis of how the City of London is actually faring since the referendum. That is, to ask how much "relocation" has actually occurred thus far, and how is London holding up compared to continental rivals? Of course, there is an unspecified time-lag in any movement of business across jurisdictions, especially as the future partnership agreement will only be fully enacted in January 2021. Nevertheless, the four years since the UK's decision to leave offers a substantial period of time to identify prominent trends within financial sub-sectors and track relocation across several domains of market activity.

Crucially, analysts warned that the transfer of services would begin immediately after the referendum and continue throughout the negotiation process. This is because companies must plan *in advance* for day one of business with the City outside of the EU27 bloc. Such urgency is exacerbated by policymakers encouraging firms to develop their contingency preparations as soon as possible. Moreover, many commentators have contended that the uncertainty arising from drawn-out negotiations is presently hurting the City's financial standing (Hamre and Wright 2019).

In short, if the thesis of relocation is correct, one would expect the data to illustrate that, at a minimum, there has been a distinctive movement (if not a full-blown flight) of financial activity from London to the EU mainland as businesses implement their post-settlement preparations. In evaluating this expectation, then, the following section examines the rationale and evidence for relocation across three areas: jobs, investment, and trading market share. Each area is a key discussion point of those warning of relocation and the damaging impact of Brexit on the future of London.

Jobs

Within commentary on relocation, jobs are the most commonly used proxy for analysing the future fate of the City. Table 1 lists several prominent reports that have projected the amount of financial sector job losses that will result from Brexit, displaying a general trend downwards in expected losses as time passes.

The most widely circulated estimate of job losses came from a PricewaterhouseCoopers (PwC) report published in April 2016 and is consistently cited in both academic and non-academic literature (PricewaterhouseCoopers 2016). The report estimated that, under a Leave scenario, 70,000 to 100,000 financial jobs would be lost by the year 2020. Crucially, this figure was presented as a *near-term* prediction, with long-term labour market adjustments mitigating that loss by 10,000 to 30,000 by the year 2030.[3]

Soon after the referendum, an Oliver Wyman (2016) assessment estimated that, with a retention of full passporting rights,[4] the UK could limit job losses to a negligible 3,500. However, under a scenario more aligned to how negotiations have actually developed – whereby the UK becomes a third country but (potentially) gains EU27 access through equivalence, delegation,[5] and/or bilateral agreements – the report projects employment losses of 31,000 to 35,000.[6] By the end of 2016, an Ernst & Young (EY) report – circulated widely among government officials – envisaged losses closer to the PwC tally. Focusing on the prized euro-denominated clearing market, the report speculated that within eight years 30,000 jobs would flow from the UK to alternative "core intermediary" positions

3 The lower figure assumes a loss of passporting rights after an UK-EU agreement, while the higher figure envisages a return to WTO terms in the event of a no-deal Brexit.
4 This would involve not only full equivalence approval across all Single Market directives but also agreement on new access arrangements where equivalence provisions are not currently available.
5 Delegation is a practice whereby funds officially domiciled within EU27 countries "delegate" their business to portfolio managers based in the UK in order to access the City's huge pools of liquidity and lower trading costs. Approximately 90 percent of assets under management within the EU utilise the delegation model, the majority of which diverts trading back to London (Mooney and Thompson 2017).
6 Under a more damaging scenario in which no equivalence is given and other restrictions arise, job loss estimates rise to 70,000.

Table 1 Estimated job losses in prominent impact assessments

Conducted by	Release date	Commissioned by	Estimated losses
PwC	April 2016	TheCityUK	70–100,000
Oliver Wyman	October 2016	TheCityUK	3,500; 33,500; 70,000[a]
Ernst & Young	November 2016	LSE Group	83,000
Bruegel	February 2017	–	30,000
Ernst & Young	December 2017	(EY Tracker series)	10,000
City of London Corp.	July 2018	–	5,000–13,000
Ernst & Young	September 2019	(EY Tracker series)	7,000

a This variation is based upon three distinct scenarios with figures indicating the mid-point of expected job losses.
Source: All assessments cited in main text.

abroad. In addition, losses of 15,000 in wealth management and similar numbers in both related professional and technology roles would bring the total to 83,000. In a driving sector of the UK economy, these job losses are expected to produce a domino effect, ultimately costing 232,000 jobs across the entire UK economy by 2024 (Stafford 2016).

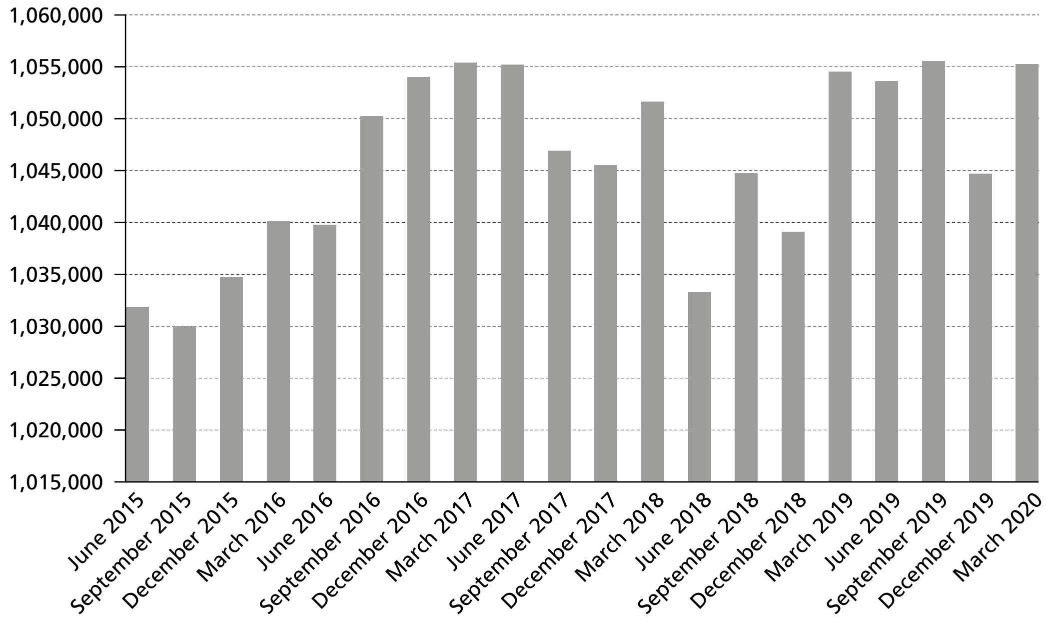
Throughout 2017, estimates began to moderate. In February, Bruegel declared that "30,000 people might relocate from London to the EU27", with 10,000 losses in wholesale banking and the remainder connected to supportive professional roles (law, auditing, technology) (Batsaikhan, Kalcik, and Schoenmaker 2017). Later in the year, EY's new Brexit "job tracker" predicted that 10,500 jobs would be lost on "day one" (Treanor 2017). Estimates continued to be pared back as it became clear that expected levels of relocation were not occurring, and officials such as Ian McCafferty, a senior Bank of England (BoE) economist, were publicly taken to task for groundless claims of an "exodus" of workers from the City to Europe.[7] In July 2018, the City of London Corporation lowered their expectations to between 5,000 and 13,000 positions migrating before the exit date of March 2019 (BBC 2018), while the BoE stated their revised view that approximately 5,000 jobs would relocate before the UK's departure (Jones 2018a).

As Figure 1 illustrates, the referendum aftermath has caused no significant harm to overall employment levels in the UK financial sector. In the four quarters directly after the Leave vote, job levels in financial services proper (i.e. exclusive of related professional services) increased considerably to reach an overall employment level of 1,055,000 – approximately 15,000 jobs *more* than at the time of the referendum in June 2016. While employment levels did take a noticeable drop in the summer of 2018, they quickly recovered to previous peak levels again in early 2019. As such, current levels of employment are substantially higher than they were before the referendum.

Confirmation of the stability in UK financial sector employment also comes indirectly from tax receipts generated by the sector. According to annual reports by the City of London Corporation, the overall tax contribution from finance to the UK government

7 Ian McCafferty, interview by Iain Dale, *Iain Dale*, LBC Radio, August 7, 2018, https://www.lbc.co.uk/radio/presenters/iain-dale/brexit-exodus-eu-bankers-underway-bank-of-england/

Figure 1 UK employee jobs in financial services and insurance (seasonally adjusted)



Source: NOMIS official labour market statistics.

has experienced a steady yearly increase since 2010 and hit a record of £75.5 billion in 2019. This compares with a tax intake of £66 billion during 2015, or rather, an increase of 14 percent since around the time of the Brexit referendum. Particularly revealing is the fact that the largest component of this intake comes from *employment taxes*, constituting £34.5 billion (or 46 percent) of total financial sector tax receipts. As UK financial employees represent only 3.2 percent of the total workforce, yet consistently make up approximately 11 percent of overall government receipts, the latest Corporation report declares the financial sector to be a "significant and stable contributor to the UK's tax take" (City of London Corporation 2019).

Crucial to the resilience of UK financial sector employment is the fact that major financial firms – in particular, large City-based investment banks – substantially revised their initial plans to move jobs to the continent. As reported by Bloomberg in 2019, virtually all of the major investment banks dramatically scaled back their level of employees flagged for relocation. For instance, the three banks that indicated the largest level of Brexit transfers (JP Morgan, Deutsche Bank, and UBS) lowered their combined transfers from 9,500 employees to just 1,100 (Finch, Warren, and Hadfield 2019). Moreover, these reduced figures constitute *planned* relocations, meaning that many of them may well not materialise. Indeed, a persistent fear of EU regulators is that financial firms will end up establishing "empty shell" operations within their jurisdictions while keeping the bulk of their employees within the UK (Morris and Brunsden 2019).

Verification of the broad non-relocation of these jobs comes from the EY Brexit tracker, which showed that, by September 2019, a mere 1,000 positions had been transferred by the major UK-based investment banks – movements characterised as a "trickle" rather than the expected "exodus" (Brush 2019). In their Tracker report, EY again revised their predictions downwards to now indicate that only 7,000 jobs would relocate "in the near future" (Jones 2019). Moreover, this does not account for the considerable number of jobs that seem likely to migrate *into* London as a result of EU27 firms seeking assured access to the City after Brexit (Bovill consultants 2020).

In short, there is no compelling evidence to date that the Leave decision, or, for that matter, the persistent uncertainty surrounding Brexit negotiations, has had any significant impact on UK financial sector employment levels.

Investments

On investments, analysts stress that financial firms have flagged approximately £1 trillion of assets for relocation from London to the continent – albeit, again, mostly referring to planned rather than actualised transfers. Using these intentions as a baseline expectation, however, commentators have looked beyond jobs to assess the gradual transfer of firms' *operations and activities* which could serve as the "building blocks" to more permanent business on the continent (Brush 2019). Once more, the actions of large investment banks are a central focus and there has been a constant stream of reporting on banks expanding operations and buying office space in alternative EU centres, as well as speculation over which city is the main beneficiary of Brexit. For instance, Morgan Stanley's application for a German licence spurred the contention that Frankfurt would be the firm's new post-Brexit hub, as did the intention by Barclays, Lloyds, and Citigroup to increase operations there. Alternatively, the discussion turns to Paris due to its similar post-Brexit attraction of big names such as Bank of America, Goldman Sachs, and HSBC, and its status as a major world metropolis (unlike Frankfurt) that can attract global talent (Jenkins and Morris 2018).

More detailed industry reports, however, indicate that smaller European centres are coming out on top. According to a widely publicised *New Financial* assessment, Dublin is the "clear winner" based on a comprehensive analysis of the 332 UK-based firms that have either relocated a part of their business or flagged their intention to set up a new EU27 entity (Wright, Benson, and Hamre 2019; Hamre and Wright 2019). Between 2016 and 2019, Dublin had 115 firms choose it as their destination (constituting 28 percent of all actions), while Luxemburg came in second place with seventy-one firms. Paris and Frankfurt were third and fourth (sixty-nine and forty-five firms respectively), and Amsterdam fifth (forty firms). A key reason for the success of Dublin and Luxemburg is the fact that they attract asset management firms – entities that are relatively more mobile and have been the most active in making moves since the referendum.[8] By contrast, Frankfurt attracts the most banking-orientated firms, Amsterdam is a particular draw for exchanges and broking firms, while Paris attracts a mixture of firm types.

Based on this activity, the report predicts that these locations will "gradually chip away at the UK's influence in the banking and finance industry not just in Europe but around the world" (Wright, Benson, and Hamre 2019, 3). However, the chief deficiency of such studies is that they significantly underestimate potential investments *coming into* the United Kingdom as a result of Brexit. This has been highlighted in stark fashion by a research investigation by the financial consultancy Bovill. Based upon a Freedom of Information request, the consultancy shows that the UK's Temporary Permissions Regime (TPR) – a transition scheme allowing firms to continue inbound passporting to the UK after Brexit, and until they receive full authorisation from British regulators – attracted an extraordinary 1,441 applications from financial firms. Crucially, more than one thousand (83 percent) of these firms currently use the EU passporting mechanism to offer services within the UK, meaning that these applications express the intention to set up some form of physical presence in the UK after the exit date. As noted by a partner at Bovill, "in practical terms…European firms will be buying office space, hiring staff and engaging legal and professional advisers in the UK" (Bovill consultants 2020).

This clamour to ensure future ties with the City should come as little surprise given the vast array of new business opportunities and services available there. Indeed, the largest category of firm types looking for access was "advisors and intermediaries" accounting for approximately 18 percent (254) of total applications. This includes a wide variety of EU27 investment funds and brokers looking to service UK-based clients and secure services/transactions at the lowest cost. Tellingly, even in asset management – the firm category documented as being the "most active" in relocations – the UK TPR received 141 firm applications, compared to ninety for EU27 hubs (Hamre and Wright 2019, 18).

Another counter to the investment relocation claim comes from EY's yearly attractiveness surveys, which offer an assessment of UK FDI performance *relative* to other countries in Europe (Ernst & Young 2019a; 2019b). According to their latest reports (comparing data from 2017 and 2018), while the UK economy as a whole lost significant ground in FDI attraction – declining 13 percent in FDI projects compared to a fall of just 4 percent in Europe – finance was a major outlier. Within financial services, UK FDI projects registered an exceptional 44 percent increase over the previous year by attracting 112 projects – the most ever recorded in the annual survey – and increasing the UK's pan-European share of financial sector FDI to 27 percent (Table 2). Noteworthy, however, is the fact that this occurred in the context of a *simultaneous rise in outward FDI by UK-based financial firms to continental Europe* – albeit at a considerably more

8 As per note 6, these firms are likely to secure post-Brexit access to London through the mechanism of portfolio delegation, hence requiring a base in EU27 locations for back office activities (Riding 2019).

Table 2 Total UK and EU27 FDI projects and percent change, 2017–2018

	FDI projects 2017	FDI projects 2018	Percent change 2017–2018
UK overall FDI	1,205	1,045	Down 13%
EU27 overall FDI	5,448	5,311	Down 3%
UK finance FDI	78	112	Up 44%
EU27 finance FDI	263	304	Up 16%
UK manufacturing FDI	215	140	Down 35%
EU27 manufacturing FDI	1,767	1,729	Down 2%

Source: Ernst & Young (2019a; 2019b).

modest rate of 16 percent. What this suggests is that, while financial firms are certainly expanding their EU27 operations, it is not necessarily at the expense of overall investment going to the City.

Furthermore, the UK report's concomitant survey of investors also exhibits positive sentiment for the City, with 22 percent of respondents believing that financial services will "drive the UK's growth in the coming years", compared to a score of just 13 percent for the digital economy and 12 percent for business services, coming in second and third place respectively (Ernst & Young 2019a, 36).

The resilience of investment into the UK financial sector involves a complex range of factors, two of which deserve special attention: first, the ongoing commitment of large multinational banks, and second, tech-related investment.

While there is an inordinate level of focus on large banks seeking to expand EU27 operations, significantly less attention is given to *actions that link their future to the City, irrespective of Brexit.* The most important of these come from the top US investment banks. In 2019, Goldman Sachs unveiled their new European HQ right in the centre of the City's square mile – a £1.2 billion, ten-storey state-of-the-art complex that now houses London's largest trading floor and brings 6,500 employees under one roof. Similarly, despite leasing extra space in Paris in 2017, in February 2018, Bank of America extended their London HQ lease for another ten years (until 2032). When queried on the firm's reasoning in the context of Brexit, CEO Brian Moynihan replied: "I think it [Brexit] is a negative, but I don't think it is a strong negative" (Sidders 2018). The same applies to JP Morgan, which recently purchased a new office in Paris to "continue to serve European-based clients seamlessly". Nevertheless, the bank's head of French operations stressed that "London will still be number one" – a statement verified by the fact that, while JP Morgan has 10,000 employees in London, it has just 260 employees in Paris, with room for only 450 more at the new location (Morris and Pooler 2020). These moves indicate that, while major banks are willing to use their substantial resources to expand EU27 operations and retain commercial flexibility, this should not be taken to mean that they also intend to sever ties with London.

Other large US and non-US firms have made comparable long-term, post-referendum investments in the City: Citigroup bought a forty-five-floor skyscraper at Canary Wharf for £1.2 billion, Wells Fargo purchased a new site to function as their main base for future EMEA operations, and Sumitomo (Japan's second largest bank) agreed a new twenty-year lease for their London HQ (Spink 2019; Burke 2018; Blackman 2018). Even the major banks in Germany and France (Deutsche Bank, BNP Paribas, Société Générale, Credit Agricole) have all confirmed that London will continue to be a central plank of their post-Brexit operations (Landauro 2018; Evans 2017).

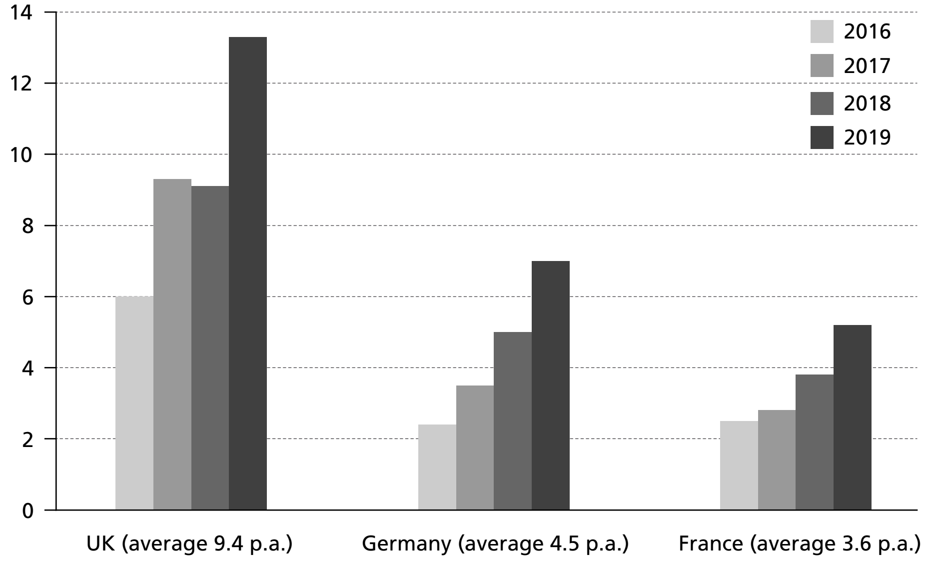
On tech-related investment, there is no question that, despite Brexit, London continues to thrive as the leading European hub for FinTech development – the main driver of financial innovation over coming decades. A 2019 EY census report (comparing 2019 with 2017 data) shows that UK FinTech companies increased their average investment by a third over those two years (Ernst & Young 2019c). Growth prospects were also found to be exceptionally strong, with over a fifth of companies projecting growth of 200 percent over the next year and a third of firms expecting an initial public offering over the next five years. Similarly, Brexit did not disrupt London's superior production of Fintech "unicorns" – start-up firms that achieve a valuation greater than $1 billion. Between 2016 and 2019, the UK witnessed the development of nine FinTech unicorns, including major online challenger banks such as Revolut and Monzo. By contrast, Germany produced three, while France produced none.[9]

FinTech is undoubtedly the spearhead of London's ability to attract investment into technology more generally. According to a comprehensive analysis of venture capital investment data over the last six years, the UK has consistently increased its lead over its core European rivals, driven primarily by longstanding links with the US investment community (Tech Nation 2019, 5). On average, between 2016 and 2019, the UK secured $9.4 billion annually in venture capital investment, compared to just $4.5 billion in Germany and $3.6 billion in France (Figure 2). In FinTech specifically – designated as one of the three "key tech sub-sectors" along with AI and cleantech – the UK saw an enormous 96 percent increase in its venture capital investments from 2018 to 2019, compared to a 73 percent and 61 percent rise in Germany and France respectively (Tech Nation 2020).

Overall, then, there is a slightly more nuanced story in the area of investment compared to jobs. On the one hand, it is definitely true that some UK-based firms – in particular, mobile asset management firms and large banks – have made multiple relocations to ensure continuity in operational capacities across EU27 jurisdictions. However, this has not negatively impacted UK financial FDI levels, which remain exceptionally robust and clearly show that the UK is not losing ground *relative* to continental rivals. On the contrary, UK investment in keys areas like FinTech continues to outstrip that of its EU27 competitors by a considerable margin, while the number of firms looking to establish a presence in the UK after Brexit appears to match or exceed those moving

9 Unicorn data available at: https://www.cbinsights.com/research-unicorn-companies.

Figure 2 Venture capital investment 2016–2019, including averages, in UK, Germany, France (billions of US dollars)



Source: Tech Nation 2020.

in the opposite direction. Similarly, the continuing operational expansion of global investment banks in their UK headquarters is a key marker of the long-term confidence placed in the City.

Trading market share

One of the most frequently cited threats facing the City is the prospect of losing market share in the lucrative market infrastructure business in which London holds a dominant international position. In particular, this relates to the high proportion of derivatives trading and foreign exchange (FX) currency activities handled by the City's major dealers and central counterparties (CCPs). Even more specifically, it refers to the vast number of *euro-denominated transactions* managed and cleared by London, and which would fall outside the EU's supervisory purview after Brexit.

In terms of London's dominant position, note that, at the time of the 2016 referendum, UK dealers handled 78 percent of all FX trading executed within the EU, including 43 percent of (global) euro foreign transactions and 69 percent of EU-based euro currency trading (European Central Bank 2017, 29). Overall, this meant London traded approximately *twice* the number of euros than all of the eurozone countries combined. Similarly, UK CCPs cleared 82 percent of all EU-traded Interest Rate Derivatives (IRDs) – by far the most commonly used derivative by corporates and investors – and 75 percent of euro-denominated IRDs (PricewaterhouseCoopers 2018, 7). More generally, UK markets cleared 70 percent of all euro-denominated over-the-counter (OTC) derivatives compared with French clearing of 11 percent and German clearing of 7 percent (European Parliament 2017, 47). Central to London's advantage are "margin pool benefits" that derive from UK CCPs' handling of multicurrency trades across instruments, giving them the capacity to significantly compress collateral requirements by offsetting different payment positions among customers. By contrast, French and German CCPs are too small in scale to engage similar portfolio efficiencies (European Parliament 2017, 46–48).

Nevertheless, damage to London's position is often considered an inevitability. Schoenmaker, for instance, specifies euro-denominated clearing in derivatives as the market segment that will face the "greatest impact", speculating that up to half of the City's IRD transactions "could move to continental Europe after Brexit" (2017, 10–11). Similarly, Charlie Bean (deputy BoE governor, 2008–2014) stated soon after the referendum that he had "absolutely no doubt at all" that euro-denominated IRD clearing would shift to EU27 jurisdictions (Pratley 2016).

Indeed, several post-referendum developments indicate that the relocation of various instruments is a distinct possibility. One headline development is the considerable shift in repurchase agreements (repos). In 2018, London Clearing House (LCH) announced that it would increase provision of clearing in these instruments at its Paris-based subsidiary. LCH made this decision on the basis that EU27 firms could simultaneously "net" their bond transactions with the ECB at the same location (Stafford 2017a). In this respect, the move is actually part of a larger LCH efficiency strategy initiated *before* the Brexit referendum, but nonetheless given further impetus by an impending UK exit (Jones 2018b). The move also had an underlying political logic: as the LCH chief Daniel McGuire acknowledged, the ECB has a legitimate interest in keeping repos – a primary channel of monetary policy transmission – under their direct supervision. At the same time, however, McGuire hoped that the ECB would appreciate the sharp "distinction" between repo trading and LCH's even more lucrative IRD market – the latter of which would be damaged by a similar relocation due to the loss of London's exclusive margin pool benefits (hence reducing liquidity and increasing costs for end users), and is irrelevant to monetary policy (Jones 2018b).

Other limited business transfers have occurred both on the provider and client side, often as a result of explicit poaching tactics. Eurex – the clearing platform owned by Deutsche Börse – has been particularly aggressive in this regard. In 2017, it recruited over twenty investment banks onto its new profit-sharing incentive scheme as a means to boost trading volumes (Stafford 2017b). Similarly, in 2019, Dekabank – a key intermediary for German savings banks – took a significant share of its derivatives booking business to the Eurex platform in order to avail of a 100 percent fee discount for relocating customers (Vaghela 2017).

Table 3 Total IRDs and euro-denominated IRDs in UK, France, and Germany: 2016 and 2019 (daily averages, in millions of US dollars)

	2016			2019		
	UK	France	Germany	UK	France	Germany
Total IRDs	1,180	141	31	3,670	120	56
Percent of global	38.8	4.6	1.0	50.2	1.6	0.8
Total euro IRDs	574	101	17	1,584	87	32
Percent of euro global	74.9	13.1	2.1	85.6	4.7	1.7

Source: Bank for International Settlements (2016a; 2019a); full data from all Triennial Survey reports, tables, commentaries, and interactive graphs available at https://www.bis.org/statistics/rpfx19.htm?m=6%7C32%7C617.

Despite these developments, however, official data by the Bank for International Settlements (BIS) provides a powerful counter to the notion that Brexit might loosen London's grip on trading markets. By good fortune, the BIS Central Bank Survey tracks dealing and clearing in FX and OTC derivatives markets on a triennial basis, with the most recent reports released in 2016 and 2019. As such, these surveys are perfectly placed to capture post-referendum market shifts.

Beginning with the prized OTC IRD market (Table 3), in April 2019, the UK recorded an average daily turnover in IRDs of $3.7 trillion, representing an 11 percent *increase* from three years earlier. As such, approximately half of the world IRDs are now handled in the UK. Crucially, this increased capture of global trading holds specifically in relation to euro-denominated contracts, as UK-based dealers registered a likewise 11 percent increase, taking their share of the euro-denominated IRDs from 75 percent in 2016 to a massive 86 percent in 2019. These results are devastating from the perspective of those that see Brexit as an opportunity to grow their domestic centres: for instance, France (the second largest EU27 trader) saw their already meagre level of IRD turnover fall from $141 billion to just $120 billion, or from 4.6 percent of total global IRDs in 2016 to 1.6 percent in 2019. Moreover – and contrary to the alternative hypothesis that business may relocate from London to non-European centres such as New York – the UK also increased its share of dollar-denominated IRD contracts by an extraordinary 19 percent.

A similar story emerges in relation to the FX market (Table 4). In this segment, the UK consolidated its position as the number one trading location, increasing its share of the global market by 6 percent and becoming responsible for 43.1 percent ($3,576 billion) of total FX activity. This compared with a decrease in both French (2.8 percent to 2 percent) and German (1.8 percent to 1.5 percent) FX activity. Once again, in the most relevant sub-category of euro-related transactions, the UK increased its share of these trades by 4.5 percent, now handling 47.8 percent of all global euro FX dealings. Meanwhile, France and Germany registered increases of 1.3 percent and 0.1 percent respectively, bringing their *combined* share of total euro FX transactions to just 8.3 percent (5 percent in France; 3.3 percent in Germany).

Table 4 FX total, FX euros, FX dollar swaps: 2016 and 2019 (daily averages, in millions of US dollars)

	2016			2019		
	UK	France	Germany	UK	France	Germany
Total FX	2,406	181	116	3,576	167	124
Percent total FX	36.9	2.8	1.7	43.1	2.0	1.5
FX euro	885	104	68	1,287	100	88
Percent total FX euro	43.3	5.0	3.3	47.8	3.7	3.2
FX dollar swaps	1,090	121	72	1,516	99	73
Percent FX dollar swaps	37.1	4.1	2.4	39.2	1.3	1.8

Source: Bank for International Settlements (2016b; 2019b).

Also instructive is the FX market for US dollars, specifically as it relates to FX swaps and the vital importance of these derivatives for major corporations' liquidity and risk management.[10] As FX swaps are typically conducted OTC and cleared by CCPs, London offers a major pricing advantage for clients, as well as highly customised derivative products. Thus, in the context of Brexit, it might be expected that some of this business would migrate to the continent in order to ease the higher costs for EU27 firms once they lose unfettered access to the City. Nevertheless, once more, the BIS data shows London tightening its grip, capturing approximately 2.1 percent more of this rapidly growing market, while France and Germany *decreased* their share by 2.8 percent and 0.6 percent respectively. Overall, London's extensive dealer-clearing networks presently manage 39.2 percent of the global FX swaps market, compared to only 1.8 percent in Germany and 1.3 percent in France.

The growing dominance of the UK in these market segments is encapsulated by the stellar post-referendum performance of London's leading infrastructure services provider, the LSE Group. In 2017, the company reported a 31 percent clearing flows increase over 2016 levels, resulting in record trading volumes across a range of products including (euro-denominated) IRDs, FX derivatives, and inflation swaps (Raman and Jones 2018). Similarly, in 2018, LSE reported a 30 percent increase in profits and a 12 percent climb in revenue for the first half of the year – results driven significantly by clearing activities and a 34 percent rise in demand for euro-denominated swaps (Hussain and Jones 2018). In 2019, the Group again beat out analysts' expectations as operating profit rose by 15 percent, total income by 9 percent, and clearing revenue by 13 percent (Hussain and Jones 2019). To put this remarkable four-year performance into context, LSE shares went from £25 on June 24, 2016, (the day after the Brexit referendum) to set off on a more or less permanent climb towards £79.50 on January 24, 2020 – a 318 percent rise in share valuation.

10 These swaps are crucial for protecting eurozone banks against currency exposure given the inordinately high level of dollar-denominated bonds on their balance sheets. Moreover, they allow banks to use the dollar as a "substitute type" of repurchase agreement (Lysandrou, Nesvetailova, and Palan 2017, 170–71).

Overall, it is clear from the data that conventional expectations regarding the UK's position in key infrastructure markets have, thus far, proven to be incorrect. Against all expectations, the City has actually strengthened its dominance over most of these vital services, rendering financial end users – and, in particular, end users of euro-denominated products – more dependent than ever on continued access to London. The one exception is in the domain of repos, the majority of which have migrated to EU27 jurisdictions due to efficiency benefits for continental end users (EU27 banks) and the necessity for the ECB to maintain direct control over this critical market for monetary policy transmission. Nevertheless, as noted in the case of LCH, this migration was already underway before the Brexit referendum, albeit at a more gradual and less urgent pace.

3 Implications of the City's resilience

The foregoing analysis has important implications for the wider literature on the political economy of UK-EU financial relations, three of which are elaborated upon here: namely, the balance of power within ongoing negotiations, the future competitive prospects of both the UK and EU financial system, and various perspectives regarding the theoretical basis of London's persistent superiority.

Negotiating balance of power

A key analytic consequence of the City's resilience is that *the EU maintains a considerably weaker negotiating position (vis-à-vis financial services) than is commonly assumed* (cf. James and Quaglia 2018). This is because a tough stance against British attempts to "cherry-pick" access to financial markets is less tenable if EU27 firms are unable to procure vital financial services at competitive rates. The limited relocations to date are not nearly comprehensive enough to replace – much less challenge – London's unique service provision. Moreover, given the specialised nature of different EU27 financial centres, future relocations are prone to occur in a fragmented and decentralised manner.

This exacerbates a core dilemma for EU negotiators: how to wield a credible severance threat while European businesses, and indeed many governmental agencies, are excessively dependent on the City's financial ecosystem. Recognition of this dependence is increasingly clear to EU officials as the Brexit process progresses. This is why, in early 2019, EU officials capitulated by agreeing to a range of contingency protections that would effectively preserve open financial relations with the UK in the event of a no-deal Brexit. This move was discordant not only with the EU's unwillingness to provide special dispensations for all other sectors but also with three years of messaging that a special carve-out for London was impossible (Kalaitzake 2020). Similarly, recognition by EU banks of their deep reliance on London is why they consistently urge policymakers to grant positive equivalence decisions and maintain relations that are "as strong as possible" (European Banking Federation 2020).

By contrast, the British negotiating stance is one of increasing belligerence, beginning with Theresa May's hard-line position of fully exiting the Single Market. While some analysts interpreted this as a sign of the declining influence of the City (James and Quaglia 2019a), from the perspective of UK officials, submission to future EU regulation without a voice at the table (i.e. being a "rule taker") is entirely inappropriate for a centre of London's international standing. Moreover, operating from a "third country" position gives the UK more informal negotiating leverage over future EU regulatory decisions, allowing the UK to advance a credible threat of selective divergence from rules considered detrimental to London's competitiveness (Armour 2017).

In the context of substantial non-relocation, the Johnson government is even more confrontational. Conscious strategic positioning on the basis of London's resilience is demonstrated by Michael Gove, who, at a May 2020 House of Lords EU Select Committee, stated that, contrary to predictions, the number of transferred jobs and services had been "small…and unconcentrated" and that no "specific, single, rival centre of financial services" had emerged on the continent. As such, Gove argues that failure to agree on equivalence would be an "own goal" for the EU and that the loss of "access to one of the deepest and most liquid capital markets in the world" would do serious damage to EU27 businesses. On this basis, Gove expresses confidence that a deal on financial services is forthcoming, stressing that the EU equivalence framework is "primarily…a rules-based rather than a discretion-based process" (Gove 2020).

Undoubtedly, Gove's argument is simultaneously part of a broader bargaining strategy that seeks to convince EU negotiators of the UK's readiness to tolerate a no-deal Brexit, and thus coerce the EU into acceding to its demands. However, the crucial point is that the pressure exerted on EU negotiators is not merely a function of some subjectively constructed negotiating tactic but, more importantly, a consequence of the *objective market developments* outlined previously. Thus, to the extent that EU officials recognise the empirical reality of a broad non-relocation of financial services since 2016, it is an entirely legitimate fear that the EU economy will be injured by severing ties with London. Similarly, to the extent that UK officials are cognisant of the City's resilience, they can more confidently leverage this threat against their European counterparts.

None of this suggests that the EU does not hold its own negotiating leverage or will inexorably succumb to this pressure. In the final instance, equivalence decisions are a matter for EU officials to authorise or not. As such, the EU could bargain concessions in financial services against other matters of contention. Alternatively, EU27 countries might be motivated to sever financial ties as a means to wean themselves off a disproportionate dependence on London: as the EU's chief negotiator puts it, "look[ing] beyond short-term adaptation and fragmentation costs, to our long-term interests" (Barnier 2020). Nevertheless, acknowledgement of these "costs" indicates the real trade-offs in play and underscores the basic analytic claim: in the context of London's continuing resilience, UK negotiators wield genuine leverage over their EU counterparts. This fact is largely obscured by those working under an implicit (and unsubstantiated) assumption of inevitable relocation.

Relative competitiveness

The evidence on relocation also illuminates the relative competitive strengths of the UK and EU financial system and their future prospects, especially as they are perceived by investors. On this score, London's resilience testifies to the high level of confidence among market participants in the UK's ability to chart a successful independent course in financial services. Multiple factors are at play here, many of which are not sufficiently accounted for in the extant literature on Brexit, yet are central to firms' deliberations over their future commitment to the City.

First, while the EU is the UK's largest exporting partner, City-based financial firms still derive only 24 percent (approximately £50/£208 billion) of their overall revenue from EU clients. Thus, more than three-quarters of their business is unconnected to Brexit negotiations. Second, even the most basic equivalence agreement would protect a substantial share (approximately half) of this EU-related business, due to the fact that EU equivalence measures are disproportionately available for *exactly those areas in which the UK has a comparative advantage* – that is, wholesale banking/capital market and infrastructure services (Armour 2017; Scarpetta and Booth 2016). Moreover, with the UK already in perfect alignment with EU rules – certainly more than any other existing third country equivalence partner such as the US or Japan – there is a strong bureaucratic rationale for regulators to approve equivalence in these key areas (James and Quaglia 2019b).

Third, even where the UK is not able to secure equivalence, the City will experience mitigating effects through two alternative means. First, nationally crafted market access regimes determined by individual EU27 member states,[11] and second, well-established market workarounds that will enable City-based firms to continue servicing clients through opaque – but legal – transactions. This second path involves mechanisms such as reverse solicitation, back-to-back trading, conduit vehicles, portfolio delegation, as well as outsourcing measures (Arnold 2017). While some workarounds can potentially be curtailed by EU regulators, such restrictions would run contrary to the prominent EU goal of developing integrated and modern-functioning capital markets – not to

11 This was a key avenue through which contingency planning for a no-deal outcome occurred in early 2019. For details, see Kalaitzake (2020, 18–19).

mention that these very same workarounds are commonly used by EU27 banks to facilitate business in Latin America and Africa (Binham and Jones 2018).[12]

Fourth, looser ties with the EU opens the door to closer – and profitable – relations with other regions. For instance, the UK is seeking a fast-track deal in financial services with the US, which would solidify the prevailing Anglo-American dominance of global markets and standards (Hutton 2020). Also likely is a further pivot towards rapidly growing markets across Asia. Engagement with China, for instance, is a major strategic plank of UK policy in the post-crisis era, with London becoming the largest offshore Renminbi trading hub – controlling 44 percent of all transactions in 2019 and more than doubling its trading volume since the Brexit referendum (Green and Gruin 2020).[13] This partnership is also progressing through FinTech collaboration, the supervision and financing of large infrastructure projects, and the substantial relocation of Chinese financial and professional service firms into the City (Hall 2019).

Fifth, London possesses an array of unique strengths that are unlikely to be matched by rival EU centres in any near-term timeframe. Key examples include the City's deep liquidity pools, mature capital markets, colocation and agglomeration synergies, cutting-edge technological infrastructure, a competitive tax regime, the use of English law and language, highly customised products (e.g. in insurance and asset management), and tight functional interconnections with world-leading business schools. Brexit or not, these are major reasons for firms to resist premature disinvestment – a perspective that shines through in the data on US investment banks, Temporary Permissions Regime sign-up numbers, and the City's FDI and FinTech performance. In short, incentives to leave the City will be tempered by investors' concern with retaining access to these longstanding competitive advantages.

As regards Europe, limited relocation raises competitive concerns about that region's financial system and the policy goal of further integration. Ironically, it is the drive for financial integration over the past two decades that has placed the EU in such an acute position of dependence vis-à-vis the City. Throughout this period of rapid liberalisation, London captured the majority of EU27 clients seeking access to sophisticated capital markets, while continental systems remained overwhelmingly bank-based. This engendered a relatively organic division of financial labour, whereby London functions as the internationally connected wholesale banking hub of the region, while EU27 centres predominantly cater to their respective domestic economies (e.g. Paris and Frankfurt), or carve out niche roles in sub-sectors such as fund management (e.g. Dublin and Luxemburg).

12 Investment bank relocations were attenuated in part by the realisation that, irrespective of the loss of passporting, various market workarounds would enable them to preserve much of the commercial status quo (Arnold 2017).

13 Again, contrary to expectations, the City has excelled in RMB currency trading since the Leave vote (Szalay 2019).

Seen in this light, the EU's failure to attract more business from London becomes less surprising and connects to a deeper story regarding the decline in international competitiveness of EU27 centres over recent years. This is illustrated plainly in global financial centre rankings. In 2007, Frankfurt and Paris held the sixth and eleventh spot respectively, yet by 2019 those centres had fallen to fifteenth and seventeenth. Over the same period, London remained either first or second, swapping places only with New York as the world's leading centre. Similarly, while there were a total of eight EU-based financial centres (excluding British locations) in the top thirty in 2007, by 2019 this had reduced to just three (Mainelli and Yeandle 2007; Yeandle and Wardle 2019).[14]

This decline is also driven by the debilitating effects of the eurozone crisis, including stagnant regional growth, weak bank profitability, and an inability to deal decisively with legacy losses. This has resulted in top European investment banks losing significant market share to London-based rivals and has left the EU27 banking system in desperate need of consolidation (Goodhart and Schoenmaker 2016; Arnold 2018). In a very real sense, then, the post-referendum requirement to lure new business away from London and into continental centres has come at the most inopportune time for the EU.

One potential means to alleviate the excessive dependence on London is the Capital Markets Union (CMU) project, which aims to replace the fragmented interaction of national systems with an integrated provision of capital market services across the continent. This would not only reduce the disproportionate exposure of EU corporates to (nationally based) bank lending, but could also generate diverse sources of financing that are external to the UK. The catch, however, is that the original plan to kick-start the CMU project was heavily premised upon leveraging the technical know-how of UK authorities, as well as the firepower of market intermediaries based in the City. Consequently, since the 2016 referendum, the project has ground to a virtual standstill (Jenkins 2019).

At the present juncture, EU policymakers face a major dilemma regarding the future involvement of the City. On the one hand, London's substantial engagement with the CMU will – at least in the short run – increase the reliance of EU27 countries on a financial system operating outside of their supervisory purview. On the other, a determination to shut London out, while offering the prospect of reduced dependency over the long run, is likely to impede the project's full development and create capital markets that are limited in scope and international influence (Faull and Gleeson 2019). How policymakers navigate this predicament will be a key determinant of Europe's future financial standing.

14 EU27 centres have largely been displaced by Asian centres, six of which are now ranked in the top ten. Again, this indicates the large commercial reward that could come from the City redirecting its attention towards Asia's rapidly developing financial markets.

Theorising resilience

The discussion above identifies both contingent factors (equivalence expectations, market workarounds, bilateral agreements, etc.) and structural factors (deep liquidity, co-location, the legal system, etc.) as causally responsible for London's resilience. However, fully explaining the "why" of resilience requires embedding these considerations into a broader theoretical account of the institutional transformation (or constancy) of financial systems. Given space constraints, I advance here only a cursory overview of several theoretical frames that speak to the "stickiness" of London's political-economic superiority.

One perspective envisages the City as one half of a broader "Anglo-American" dominance in finance. As evidenced by the overwhelming presence of Wall Street institutions, London is deeply entwined with the world's other leading financial centre, New York, and, as such, its competitive position is substantially connected with the ongoing primacy of the US in international affairs (Fichtner 2017; Wójcik 2013). This "joint dominance" of "NY-LON" is consolidated by a close regulatory and legal alignment among supervisors, in turn promoted as a best-practice benchmark for the entire industry through supranational regulatory fora (Helleiner and Pagliari 2010).

The emergence of London's vast Eurodollar market is perhaps the most salient illustration of how the City both thrives on, and sustains, the (infra)structural power of US finance in international affairs (Braun, Krampf, and Murau 2020; Green 2016). A similar dynamic is at play with regards to London's aforementioned supremacy in FOREX dollar trading. As the world's reserve currency, the dollar is an indispensable resource for global trading, commercial funding, and management of a state's economic stability. By facilitating one of the largest markets for dollars and dollar-denominated assets in the world, then, the City can be conceived as a crucial foreign offshoot of US hegemony.

Hence, while Brexit might represent an exogenous shock to London's EU-centred exporting potential, it has done little to undermine its core connections to the US: for example, the commitment of US firms to maintain City-based headquarters, the disproportionate flow of FDI and venture capital from US investors, the primacy of London dealers in handling dollar transactions, and the close ideational alignment between US-UK supervisory officials. Unless the Brexit fallout begins to corrode these and other Anglo-American entanglements, it remains unlikely that the City will be displaced as the global financial centre of gravity.

A second perspective emphasises the stubborn "immobility" of critical knowledge-based clusters in the modern economy. According to Iversen and Soskice, the ICT revolution has ushered in a period of development whereby the specialised knowledge competencies and resources of leading economic sectors are geographically embedded within a small number of "big-city agglomerative peaks" (Iversen and Soskice 2019, 188). London's financial ecosystem is a prototypical example of such a peak.

As is well documented, the highly concentrated spatial interaction of complementary financial firms and workers within London produces (and reproduces) positive spillover and network effects (see Cook et al. 2007). Firms (and their employees) across discrete financial sub-sectors create enduring relations of commercial trust and dependency, knowledge diffusion, and the capacity to dramatically compress costs compared to rival locations; closely related sectors (law, accountancy, consultancy, and technology) blossom around these clusters due to market incentives, skill overlaps, and the need for specialist suppliers; third-level institutions develop programs to produce the graduates required and training for future advancement; successful clustering fosters the creation of trailblazing technologies and advanced infrastructure. Indeed, London possesses the potent fusion of a world-leading financial *and* digital sector, ramping up opportunities for cross-sectoral partnership, employee/skill migration, funding, and innovation.

The key implication of this with regards to resilience is that financial firms are by no means "footloose" in the sense that they can easily turn their back on the City's unique ecosystem (Iversen and Soskice 2019, 159). Exiting prematurely will not only diminish their capacity to leverage these benefits but also put them at an immediate disadvantage vis-à-vis their competitors. Even the most determined drive by rival centres to replicate the City's colocation clustering and knowledge agglomeration – a task made more difficult by the limits to EU27 financial integration – would take many years, perhaps decades, to bear fruit. Hence, it should not come as a surprise that firms are hesitant to relocate, adopting instead a "wait-and-see" approach before making any rash decisions. Moreover, even those that have decided to expand operations abroad have been sure to maintain the bulk of their business within London.

In short, London's unrivalled "agglomeration peak" gives the UK government a crucial first mover advantage and, hypothetically, an unusual degree of autonomy in financial policymaking. Notably, the geographical dependence of financial firms on London's agglomeration benefits runs in direct opposition to the widespread understanding of finance as a thoroughly mobile form of investment, liberated from spatial commitments, and capable of disciplining policymakers through the threat of exit.

A final theoretical lens leverages the notion of "structural interdependence" and posits that UK and EU policymakers have exceptionally strong incentives to avoid major disruptions to cross-border financial relations (Kalaitzake 2020; Oatley 2019). This is because *both* economies are likely to be badly damaged by a major reconfiguration of the intricate and commercially vital entanglements between London and EU27 corporates, amassed over two decades of regional integration. Of course, this view highlights the previously discussed dependence of EU corporates on the City. However, it also hones in on the corresponding interest of UK officials in protecting the City's profitability due to the centrality of finance to the UK's internal debt/consumption-led growth model (Hay 2011).

Given the strong path dependence in UK-EU financial integration, this perspective is perhaps the most bullish in anticipating an outcome that sees policymakers pull back from rhetorical brinksmanship to reach an amicable agreement – much like what occurred in early 2019 (Kalaitzake 2020; Ringe 2018). At the very least, it indicates that one should not be surprised to find substantial equivalence arrangements eventually agreed upon, and arranged specifically to shield those core cross-border interactions relating to wholesale and capital markets.

One key strength of the interdependence lens is that it focuses attention on those *agents* that could most effectively work to deliver a mutually beneficial agreement – namely, technocratic supervisors/regulators. The expectation here is that officials from agencies such as the Bank of England, the Financial Conduct Authority, the European Central Bank, and the European Securities and Markets Authority are especially sensitive to disturbances stemming from severed financial ties and thus are motivated to engage in various means of transnational collaboration to mitigate the worst effects. Moreover, given their superior technical understanding of how financial markets work, these actors are well-placed to exert sway over negotiations and construct elaborate carve-outs for financial sub-sectors. Along similar lines, for instance, James and Quaglia have shown how, on the fraught issue of euro clearing, the salience of "bureaucratic politics" among various supranational agencies has led the EU to shy away from a combative stance on CCP relocation policy, favouring instead a path of close regulatory cooperation and "joint supervision" with UK authorities (James and Quaglia 2019b, 9–16).

Finally, structural interdependence presents an image of financial political power that is quite distinct from the perspective highlighting London's agglomeration benefits. In the latter case, the fear of capital flight is said to be significantly neutralised, thus allowing the UK government a high degree of policy autonomy. Structural interdependence, however, underscores the ways in which policymakers are uniquely *constrained* by long-established financial interactions and the challenges they face when attempting to roll back such complex entanglements. This bestows upon the financial sector an indirect, yet potent, means of influence over policy choices. As noted, the chief constraint for UK policymakers is the fact that their domestic growth model relies so heavily upon a prosperous, open, and globally operative financial centre. According to the rationality espoused by structural interdependence, then, these strictly economic incentives have the potential to overwhelm any political motivations to disengage entirely from the EU, at least in the crucial domain of finance.

4 Conclusion

The evidence on relocation shows decisively that, since the 2016 referendum, the City of London has maintained – and in key instances advanced – its competitive lead over EU27 hubs. This is a confounding result for the majority of commentary that anticipates Brexit causing irreparable harm to the UK's most prized economic sector.

Of course, as the Brexit process moves forward, the evidence on transfers might well begin to change in light of new developments – for instance, negative equivalence assessments due to a breakdown of negotiations and a disorderly Brexit, or, even in the context of an amicable settlement, the long-run impact of lost passporting rights. Nevertheless, the data thus far strongly indicates that scholars should re-evaluate some core assumptions regarding relocation prospects and sharpen their understanding of the competitive motivations that underlie potential transfers.

In particular, researchers need to develop a more sophisticated account of the strategic market calculations of financial participants. At present, the relocation thesis rests upon a simplistic and largely undifferentiated notion of capital flight and firm/investor behaviour. Undoubtedly, Brexit forces firms to deliberate over costly commercial preparations under highly uncertain circumstances. However, rather than leveraging the vague assumption that firms will relocate in order to retain existing EU27 clients, analysts should seek to provide a more fine-grained analysis of the costs, benefits, alternative scenarios, and multiple strategies that are being weighed by different financial actors. This would advance a more investor-centred perspective on Brexit-related decisions and likely yield a more variegated picture of how firms from different sub-sectors interpret their strategic options.

Researchers should also elaborate upon the factors that make the City a particularly resilient location despite the uncertainty surrounding Brexit. Of course, the existing literature emphasises London's unmatched liquidity pools and agglomeration benefits derived from the clustering of financial services. As noted, however, London maintains a plethora of other distinctive advantages, some of which receive scant attention. A prime candidate is its *highly advanced technological infrastructure*. For example, transatlantic submarine cables transmit FOREX data from US markets to the City in milliseconds. Similarly, numerous state-of-the-art data centres provide investors direct access to key price matching engines and data providers (Stafford 2017c). These technologies substantially power the City's overwhelming dominance in trading markets – perhaps the most striking illustration of London's post-referendum vitality. A similar focus might be trained on the City's uniquely enabling FinTech environment, which, as demonstrated, continues to outflank continental rivals in terms of investment attraction and innovation.

Lastly, researchers should give greater attention to the EU's disproportionate level of dependence on UK financial services. At present, the focus is almost exclusively on the threat of Brexit to the City, while much too little analytical space is given to the potential damage that might be inflicted on EU27 countries. Particularly important is the need to specify the dangers posed to EU corporates (both financial and non-financial) from losing access to the City and the strategies they are deploying (e.g. market workarounds, alternative providers, relocation to London, etc.) to mitigate such threats. At the supranational level, scholars should consider the impact of relocation trends on the positioning of EU officials regarding the future involvement of the City in European financial markets. As indicated, the willingness of EU officials to strike an independent path is very likely to be constrained – although not dictated – by a need to leverage the UK's liquid and diverse markets in the service of regional stability and growth. This is pertinent not only with respect to immediate decisions on equivalence but also in relation to long-term choices over the direction of EU financial integration.

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