

Investment Banking since 2008: The Geography of Shrinkage and Shift

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Abstract

Investment bank capitalism might have foundered during the global financial crisis in 2008, but what has happened to investment banks? Our analysis reveals that the industry has experienced a major and perhaps irreversible contraction, accompanied by diminished institutional and geographical concentration. Large banks have suffered the largest losses and Asian banks have capitalised on the growth of their local capital markets. With direct access to the largest market in the world, US banks remain dominant globally, but their shares have declined. These transformations may have positive implications for financial stability, competition, and distribution of power.

Keywords: investment banks, financial crisis, globalisation, geographical concentration

JEL codes: F30, F65, G24, L10, R10

Introduction

If the Global Financial Crisis is remembered by only one date, it will probably be September 15th of 2008, when Lehman Brothers declared bankruptcy. The 158-year old investment bank was unable to finance its highly leveraged investments including those linked to failed mortgage backed securities (McDowell 2011). The US government intervened to prevent the collapse of other large investment banks by brokering the take-over of Bear Stearns by J.P. Morgan and Merrill Lynch by Bank of America, while Goldman Sachs and Morgan Stanley quickly converted their legal status into bank holding companies to access the federal bailout programme for banks. The events of September 2008 led financial historian Niall Ferguson to declare the extinction of the US investment banks (2008). While this was an exaggeration, the industry has been battered with lawsuits over misrepresented investment products and manipulation of markets, including forex and interest rates, leading to multi-billion dollar fines (The Economist 2015).

Investment banking has attracted the attention of geographers for a long-time, much of it inspired by the pioneering work of Susan Strange in which she characterised investment banks as croupiers in the casino of capitalism (1986). The pre-2008 geography of investment banking concentrated on: specific products and practices of investment banks (e.g. Hall 2007; Grote and Lo 2002); mobility of investment bankers (Beaverstock 2007); investment banks as agents of neoliberalism (Leyshon and Thrift 1997); and as a case study of the nature of

globalization and the dynamics of capitalism (Jones 2002; Wrigley, Currah and Wood 2003). The post-2008 works have investigated the very geographic role of investment banks in the securitisation of mortgages (Aalbers 2009; 2015; Martin 2011; Wainwright 2012; 2015), and the banks' relationship with institutional investors and asset managers (Clark and Monk 2014; Beaverstock, Hall and Wainwright 2013). Wójcik (2012, 349) has identified investment banking "as a hotspot of power, which was instrumental in generating the crisis, and whose potential restructuring in the wake of the crisis may lay foundations for a major transformation of the world economy in the 21st century". The central question of that paper, expressed in the title 'The End of Investment Bank Capitalism?' however, still awaits an answer.

In this paper we address this challenge somewhat by mapping the changing landscape of investment banking since the crisis, with four questions in mind:

1. How much has the level of investment banking activity declined since the crisis?
2. Have investment banks re-oriented themselves from international to domestic activity?
3. How have the institutional structure and concentration in the industry changed?
4. How has the geographical structure of the industry, based on bank nationality, changed?

The analysis draws on unique access to a proprietary database on investment banking deals, complemented with hand-collected data on individual banks. We also rely on interviews with investment bankers and other finance professionals conducted around the world, including London, New York, Hong Kong, Tokyo, Singapore, Frankfurt, Zürich and Sydney, both before and after 2008. Additional insight into the industry comes from a review of media reports, including the leading specialist trade magazine in investment banking *The Financial News*.

Our results show that the size of investment banking in relation to global GDP has nearly halved since 2007 with both domestic and cross-border activities affected to a similar extent. The investment-banking league is now less top-heavy, reflecting a major decline in the institutional concentration of the industry. Falling institutional concentration has been accompanied by decreasing geographical concentration based on bank nationality. US banks have been in gradual decline, while the position of Asian banks, Japanese in particular, has risen considerably. Canadian banks have also been big winners in terms of market shares. The European banks have contracted even more than US banks, with particularly heavy losses in Switzerland.

The paper's contribution to the political economic geography of finance is through its focusing on the nationality of investment banks, rather than cities where they operate, which is the subject of a separate article (Wójcik et al. 2016). We document changes in a key part of the global financial system – the investment banks – and draw out implications for understanding geo-politics and geo-economics in the wake of the crisis. Significantly we show how diminished levels of investment-banking activity, with smaller banks spread more evenly across the world, may be seen as positive news for the stability of the world economy, balance between

finance and the 'real' economy, and the geographical and institutional distribution of power.

Political economic geography of investment banking

A longstanding political economy approach to geography of finance, also known as the geopolitical economy of finance, has focused on “the geographical and structural shifts in power between states, between states and markets, and between groups of social and economic actors involved in the regulation and operation of markets” (Leyshon 1995, 532). Our research questions are designed to contribute to each element of this agenda. Assessing the absolute and relative size of investment banking as a whole, its international reach, and the institutional concentration in this industry, helps evaluate the power of investment banks as a key group of social and economic actors. Investigating the geographical structure of investment banking based on bank nationality, offers an insight into the shifts of power between states.

To be sure, we do not treat investment banking as an undifferentiated industry. We allow for significant differences among investment banks between, and within, national economies. Some countries, notably the USA, have a tradition of specialist investment banks, while elsewhere, for example in continental Europe, investment banking has long been integrated within commercial or universal banks (Story and Walter 1997). Fligstein and Habinek (2014) show that not all banks in countries that deregulated their financial sectors in the 1980s and the 1990s imitated US investment banks in the run up to the crisis. Individual bank strategies matter and firm-level heterogeneity has to be considered seriously. As such our focus on investment banks incorporates an actor-oriented approach to understanding globalisation and global economic change since the crisis (Yeung 2002). In what follows we develop hypotheses to each of our four questions, with particular focus on political and economic factors that have affected investment banking since 2008.

With investment banks central to the crisis, there are many reasons to expect a significant decline in their level of activity. The crisis has exposed weaknesses in securitisation design, which allowed banks to buy mortgages and other loans in bulk from retail banks, repackage them into securities and sell these on to investors, pocketing hefty fees (Aalbers 2015). When the market prices of mortgage-backed securities and other related complex financial products plunged in 2008, the business model of securitisation that fed investment banking for at least a decade collapsed (Lewis 2011). The crisis not only made clients wary of banks' financial innovations but also diminished demand for investment banking services more broadly. A buoyant market for advice on capital raising and M&As comes with ongoing expectations for corporate growth, yet these were undermined by economic recession and uncertainty.

In addition to depressed demand for their services, investment banks faced the direct regulatory consequences of their actions: increased capital requirements, bans on proprietary trading, taxes on short term-trading, plans for protecting retail from investment banking activities through ring-fencing, caps on remuneration, and so on.

To be clear, the translation of regulatory ideas into laws has been slow. In the USA, for example, it took five years from the Dodd-Frank Financial Reform Act of 2010 to the introduction of Volcker rule limiting proprietary trading. In the UK, ring-fencing recommended by the Independent Commission on Banking (2011) is scheduled to come into effect only in 2019. Delays are due to lobbying by the financial sector, but also due to failure of states to reach international agreement. Unilateral implementation of rules involves the risk of driving financial business out of a country or even making new rules ineffective (Knaack 2015). Beyond regulation, investment banks have suffered reputational crisis, which deepens as scandals relating to market manipulation are uncovered (McDowell 2011; Ashton and Christophers 2015). Inevitably, investment banking culture is in crisis (Ho 2009) with long term structural consequences underway. Asset management firms, for example, alarmed by the regulatory and reputational challenges of the investment banks, are increasingly by-passing investment banks by in-sourcing many of the functions previously contracted to the banks (Dixon and Monk 2014).

While it is easy to hypothesise about the aggregate level of investment banking business, it is more difficult to do so with regard to its internationalisation. The crisis that erupted in September 2008 is the first crisis in history to be tagged as a global financial crisis. Indeed, many see it as a crisis of financial globalisation or globalisation in general (Stiglitz 2010; Rodrik 2011). Even the IMF (2016) has since acknowledged the disadvantages of unrestricted cross-border capital flows. In addition to scepticism about free and open capital markets, in which investment banks are key agents, some new regulation targets cross-border business specifically. Many countries are moving from an approach which welcomes branches of foreign banks and relies on light-touch regulation by home-country institutions, to a model requiring foreign banks to operate well-capitalised subsidiaries subject to strict host-country regulation (Danisewicz, Reinhardt and Sowerbutts 2015). There might also be a behavioural reason to expect less international activity in capital markets, as banks might retreat from complex cross-border activities to simpler activities in familiar domestic markets, where they have established relationships.

However, there are forces that might counter a trend towards de-globalisation in investment banking. One is the ongoing assistance needed by companies seeking investments and capital abroad. With the supply of capital drying out in the USA and Europe, but not in Asia and other parts of the world, companies in Europe and the USA that need to raise capital and those in Asia and elsewhere looking for investments for surplus savings still need investment banks to help them locate partners abroad. Many companies outside of the USA and Europe would also see the crisis as an opportunity to buy assets and companies at depressed prices. Uncertainty may serve as an additional incentive for firms to hire the most experienced advisors globally to assist them in capital market transactions rather than, say, using the services of domestic banks. The bulk of demand for cross-border investment banking services comes from transnational corporations and results from their international trade and investment activities. While cross-border corporate investment activity may have been depressed by the crisis, the volumes of international trade have not been similarly affected.

Hypothesising about change in institutional concentration in investment banking since the crisis is also difficult. On the one hand it is reasonable to expect the biggest investment banks to become smaller. After all, the too-big-to-fail problem has been identified as one of the roots of the crisis whereby big banks would undertake excessively risky behaviour in the expectation of private gains if these risks pay off, and the assurance of a taxpayer bail-out if they do not (Sorkin 2010; Christophers 2014). In 2011, the Financial Stability Board established by G-20, based at the Bank for International Settlements in Basel, issued a list of systematically important global banks. The list has been updated since and complemented with lists of systematically important domestic banks compiled in individual countries. The label implies higher capital and other requirements, such as additional risk management procedures and living wills. In 2015, the USA has imposed a concentration limit, prohibiting mergers and takeovers among financial firms if the liabilities of the resulting company would exceed 10% of aggregate financial sector liabilities (US\$1.8tr in 2015).

The intention of governments to make big banks smaller and therefore less likely a liability to taxpayers, however, is tempered by the fear of undermining home banks' international competitive advantage, a fear obviously stoked by the banks concerned (Johnson and Kwak 2010). In addition, in the aftermath of the crisis we have seen many government-forced or – assisted M&As in the financial sector. While new regulations increase the costs of running a large bank and reduce internal rates of return, economies of scale in investment banking are strong, enhanced by the increasing capital intensity of the industry, driven by rising investment in technology (Morrison and Wilhelm 2007). Moreover, large corporations, the main clients of investment banks, have not become smaller or less international in outlook with leading investment banks needing international presence and size to meet their demands. There is also a possibility that new financial regulations that apply irrespective of bank size actually work in favour of large banks more able to accommodate compliance costs (Wójcik and MacDonald-Korth 2015).

Moving from the institutional to the geographical structure of the industry, we expect the impacts of the crisis to differ depending on the nationality of investment banks concerned. First of all, we would anticipate a difference in performance between the US and European banks on one side and those from the rest of the world on the other. The main triggers of the global financial crisis were the US subprime crisis and the following Eurozone crisis, that is, within the home markets of US and European banks. Between 1998 and 2008 France, Germany, UK and Switzerland registered much larger employment increases in the securities industry compared to the USA, ranging from 42% in Germany to 98% for Switzerland, suggesting that the industry in these countries was inflated even more than in the USA (Wójcik 2012). While the removal of toxic assets in the US financial system was relatively quick, lack of expediency in the European Union combined with a persistent Eurozone crisis means that bad debts continue to threaten the stability of European banks, inviting the use of the term 'zombie banks' (Englen et al. 2011; Christopherson, Clark and Whiteman 2015). Add a more zealous approach to financial re-regulation in the EU (and, arguably, a weaker financial lobby) than in the

USA and we might expect a sharper decline of investment banking activity in Europe than across the Atlantic. Certainly we would expect differentiation in investment bank performance within the EU, including the UK. The UK hosts the most influential financial lobby in Europe, and has already opposed some of the more radical financial regulatory ideas from the EU (Christophers, 2016; Langley 2014). Consider for example the financial transactions tax under consideration on the continent, but rejected by the UK.

A concentration of problems facing investment banks from the USA and (especially) Europe imply opportunities for the rest of the world. Well positioned to take advantage of these circumstances are banks from advanced economies less affected by the crisis, particularly Japan, Canada and Australia. In their favour - rather than, say, the emerging economies or the Global South - is the fact that investment banking is not an industry that can grow overnight; it requires a sophisticated financial system, rooted in a legal system with strong enforcement of financial contracts, and strong networks and relationships with clients that take a long time to build (Wójcik, Knight and Pažitka, 2015). Opportunities for the growth of investment banks from outside the USA and Europe could also be affected by the slower uptake of stricter financial regulation. Even though the post-crisis regulatory initiatives are led by G-20 and international organisations like the BIS, their implementation is overwhelmingly at the national scale, with national authorities further away from the USA and Europe under less pressure to comply. Finance professionals in Asia talk about late-mover advantages Asian countries enjoy with regard to new regulation.

In summary, when hypothesising about the trajectory of investment banking we should be mindful of inertia and hysteresis effects. While the global financial crisis has unsettled the status quo in the industry, the time that has elapsed since 2008 may be insufficient for a major change of the landscape of investment banking. Institutions conducive to capital market development are slow to take root while investment banks take a long time to grow. Household names in the industry, such as Goldman Sachs and J.P. Morgan, have origins in the 19th century. The power of investment banking as agents of high finance is intertwined with broader economic and political power in global geo-economics and geo-politics. The analysis that follows is thus an exercise in political economic geography, with implications going far beyond the confines of the investment banking industry itself.

Data and methodology

Data we have used to map the investment banking industry come from a proprietary database by Dealogic, a specialist financial data provider headquartered in London, which collects information on primary capital market transactions from thousands of banks all over the world. The database covers four groups of deals: issuance of equity, debt (corporate and government bonds), syndicated loans, and mergers and acquisitions (M&As). Trading of stocks, bonds, forex, derivatives and other financial instruments in secondary markets are not covered, but to the best of our knowledge,

data on these on a bank-by-bank basis are not available from any data provider; and, arguably, these activities play a diminishing role in investment banking since the crisis. In other words, the database captures core investment banking activities covering over a million of deals completed in the period 2000-15. What reflects the quality of the database is that it is routinely used by The Economist, The Financial Times and The Financial News in reports on developments in the industry, and by investment banks as a tool for evaluating their changing market shares.

The Dealogic database specifies the subsidiary of an advisor (typically a bank) that conducted a transaction as well as its parent company. For cases where the parent bank has changed, we used M&A data and press releases to obtain the correct historical record. The Dealogic database does not contain information on bank locations, so we hand-collected information on the location of operational headquarters from the websites of Bureau van Dijk's Orbis, Nexis UK, Bloomberg and individual company. To make the task of hand-collecting data efficient, we selected the top 500 advisor subsidiaries for each year/deal group combination, leading to a sample of 7,458 unique names. We then allocated these to their respective parents in each time period (parents were assigned based on control over a given subsidiary at the end of the year), which yielded a sample of 3,558 advisor parents. This sampling procedure has allowed us to cover in excess of 99% of the value of transactions for all year-deal group combinations and is therefore highly representative of the underlying population.

While the deal value – the value of funds raised through an equity, debt or syndicated loan transaction or the price paid in an M&A – is available for an absolute majority of deals covered by Dealogic, the fee paid by the issuer, target or acquirer to an investment bank/s involved in the transaction is only available for approximately 20% of deals. As fees expressed as a percentage of deal value vary significantly, and can reach as much as 7% on equity issuance but fall below 0.5% on other transactions, estimation of missing fees was necessary for a meaningful aggregation of investment banking activity across the four deal groups. This estimation proceeded as follows:

- Fees as percentage of deal value for each group were modelled as a function of transaction size, industry and location of the client, other specific deal characteristics (e.g. distinguishing between initial and secondary public offerings, creditworthiness of the issuer of bonds or borrower, stock exchange where equity was listed), as well as a full set of time period fixed effects.
- The models have then been used to predict percentage fees for deals that had missing data on fees. In order to prevent outliers from skewing the results and to ensure consistency between the distributions of hard data on deal pricing and its estimates, the distributions of estimates have been winsorized at the extremes (minimum and maximum of the distributions of the hard data on deal pricing).
- Finally, percentage fees were multiplied by deal values to arrive at the value of fees. The latter have been adjusted for inflation by dividing current USD values by GDP deflator from Oxford Economics, thus obtaining inflation

adjusted constant 2012 USD. We have allocated fees to lead advisors working on every deal. In cases when more than one lead advisor was involved in a deal, we have apportioned the fee among all lead advisors either according to their respective shares in the deal (if available from Dealogic) or on an equal basis.

In the analysis we focus on fees aggregated by: bank parent; nationality of bank parent, defined as the country hosting its operational headquarters; time-zone, using the division into Americas, Europe, the Middle East and Africa (EMEA), and Asia-Pacific, as defined by MSCI; and globally. Global and national aggregates help us address the questions of industry size, its internationalisation and geographical structure, while parent-bank-level data help tackle the issues of institutional structure. Where relevant we have also used data from the World Bank (for country-level GDP and savings), the IMF World Economic Outlook database (global GDP), and the World Trade Organisation (global exports). Note that all values expressed below are USD unless otherwise stated.

The size and internationalization of investment banking activity

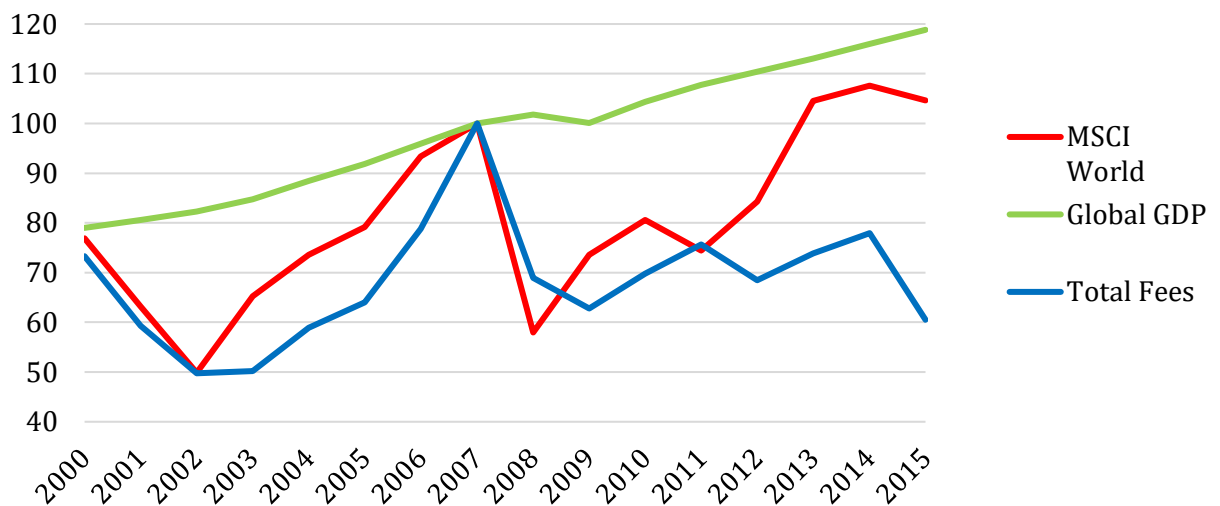


Figure 1. Total fees in investment banking in relation to global GDP and MSCI World stock market index (2007 = 100)

Source: authors based on data from Dealogic, MSCI and the IMF

As figure 1 shows, from the peak of approximately US\$134bn (earned from over US\$10trn of underlying deals) in 2007, fees worldwide fell by nearly 40% by 2009. When the global stock market and economy started to recover in 2009 and 2010, investment banking stopped plunging, and started fluctuating at around 70% of 2007 activity. However, the situation has since deteriorated. In 2013 and 2014 the industry lagged recovery in the stock market and then in 2015 contracted much more than the fall in the stock market would justify. While in the aftermath of the dot-com bubble in 2002 and 2003 fee revenues in absolute terms were lower than in 2015, in relation to global GDP investment banking activity in that year reached its lowest level for any

year this century, barely half of its 2007 level. Moreover, considering our data focus on investment banking activity in primary capital markets rather than trading in secondary markets, which would have been affected much more by new regulation, our figures represent a conservative estimate of the decline in the industry.

For the analysis of the internationalisation of investment banking we define cross-border transactions as those where the country hosting operational headquarters of a parent bank is different from the country hosting operational headquarters of the client. The share of cross-border transactions defined in this way has been quite stable at around 45% since at least 2000 with only minor falls during the crisis (figure 2). When we group home countries of banks by time-zone, we see the degree of internationalisation differs considerably. Over three-quarters of deals in the European time-zone (EMEA) are cross-border, compared to just above a quarter in the Americas and Asia-Pacific. This reflects the relatively small domestic markets and high level of financial integration in the European Union, fledgling financial integration in Asia-Pacific, and the size of the US domestic market in the American time-zone. Percentages of cross-border fees by time-zone, however, show no clear trends over time.

If cross-border transactions were defined as those where the country hosting the operational headquarters of the bank subsidiary (not parent) involved in a transaction is different than the home country of the client, the share of cross-border fees falls to approximately 36%. This drop of 9 percentage points is not surprising. For example, if a US bank serves a British client through a subsidiary in London, this would count as a cross-border transaction under the first definition, but domestic under the second. Importantly, the level of internationalisation in investment banking

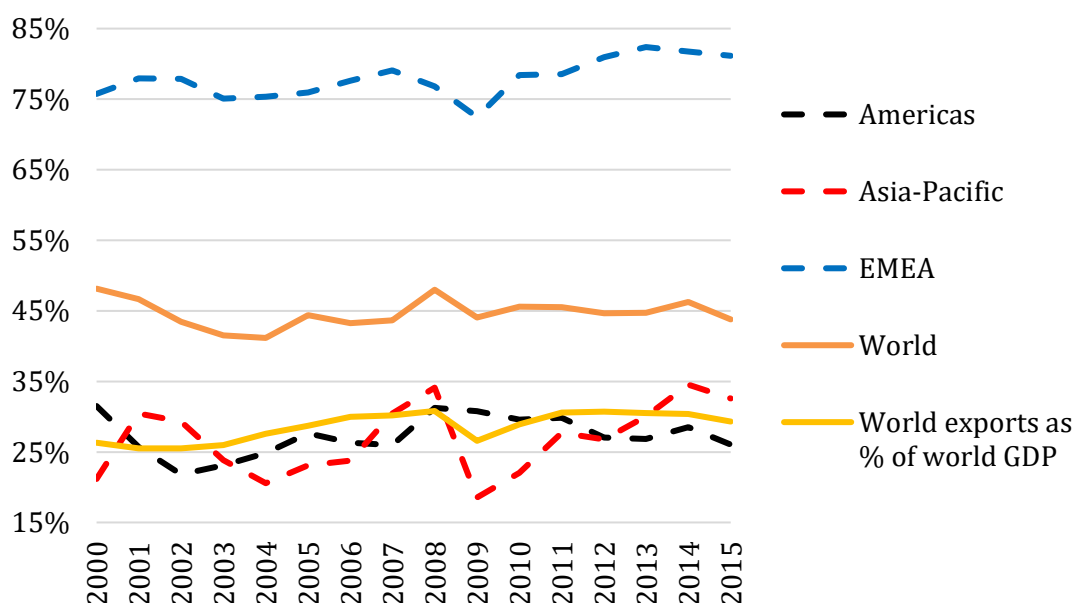


Figure 2. Fees from cross-border deals as percentage of total fees (according to the nationality of parent bank)

Source: authors based on data from Dealogic, WTO and the IMF

according to the second definition is as stable over time as that under the first definition. To investigate this further, we distinguished between cross-border fees from clients in the same time-zone as the parent bank and those elsewhere. Here again we see a picture of relative stability, with fees earned from foreign clients in the same time-zone constituting between 12% and 13% of total fees throughout the period and those from clients in a different time-zone between 31% and 34%.

In summary, although international investment banking activity globally has declined since 2007 in both absolute terms and in relation to world GDP, the share of international transactions in total activity has been stable, reflecting the relative stability of international integration in the world economy as a whole, with global exports consistently representing approximately 30% of global GDP, with only a minor dip in 2009 (figure 2). This ratio also provides a benchmark against the 45% share of cross-border in total fees. Financial markets, particularly wholesale financial markets (the realm of investment banking), remain more internationalised than global trade which is still dominated by tangible goods. It also appears that despite new regulation and the crisis of financial globalisation as an idea, investment banks have not retreated to serving clients in domestic markets, and companies have not turned away from foreign towards domestic service providers.

Institutional concentration

Figure 3 shows institutional concentration in investment banking, based on total fees and fees from cross-border transactions only, the latter defined as deals where the country hosting the operational headquarters of a parent bank is different from the country hosting the operational headquarters of the client. While it is evident that investment banking is more concentrated than retail banking or insurance, it is less concentrated than re-insurance and many other globalised industries such as the production of mobile phones, computers, soft drinks or even cars (Nolan 2012). Assistance with capital market transactions – the core of investment banking – is still about close long-term relationships with client companies rather than about producing standardised services where lower barriers to entry can readily erode privileged market positions. As the figure shows, concentration in the market for cross-border services is higher than in the market for all transactions. This makes sense considering that the market for domestic transactions is more fragmented, with domestic banks playing a major part. While all banks that operate across borders are also active in domestic markets, we expect there to be many banks that operate only domestically.

That said, institutional concentration declined considerably between 2007 and 2015. The share of the top 5 banks in total fees fell from 36% to 32%, from 60% to 49% for the top 10, and from 74% to 68% for the top 20. The share of the top 5 in cross-border fees plunged by over a quarter from 47% to 34%. While the top 10 banks, and particularly the top 5, lost market shares, banks in the second ten (ranked 11th to 20th) became significantly stronger, and those beyond the top 20, even beyond the top 50, grew market shares as well. The top 5 banks saw their market

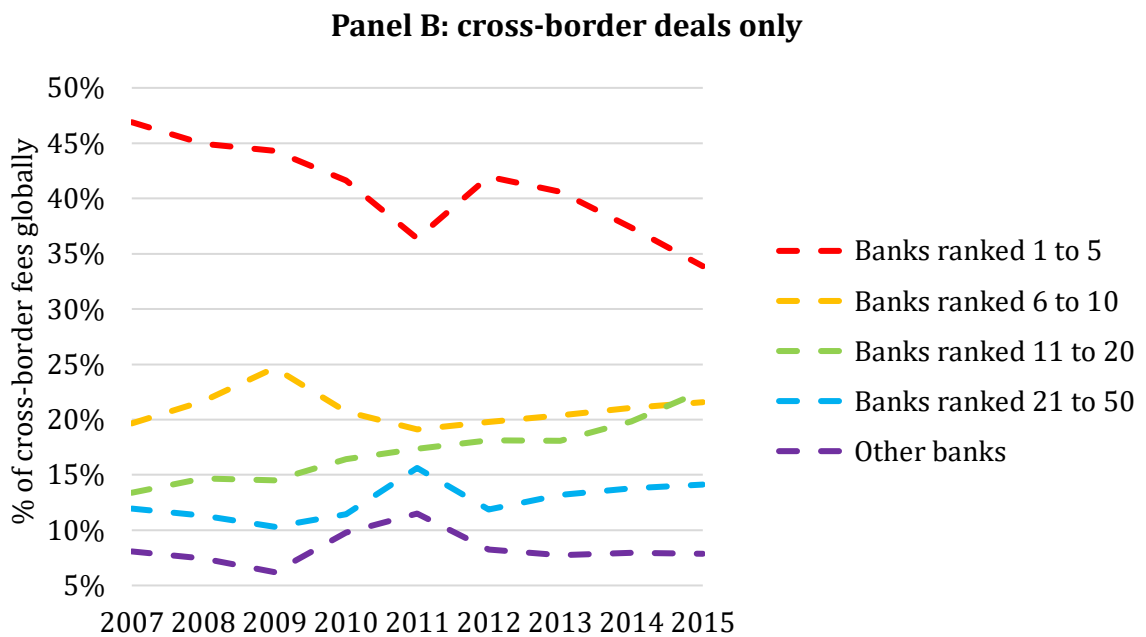
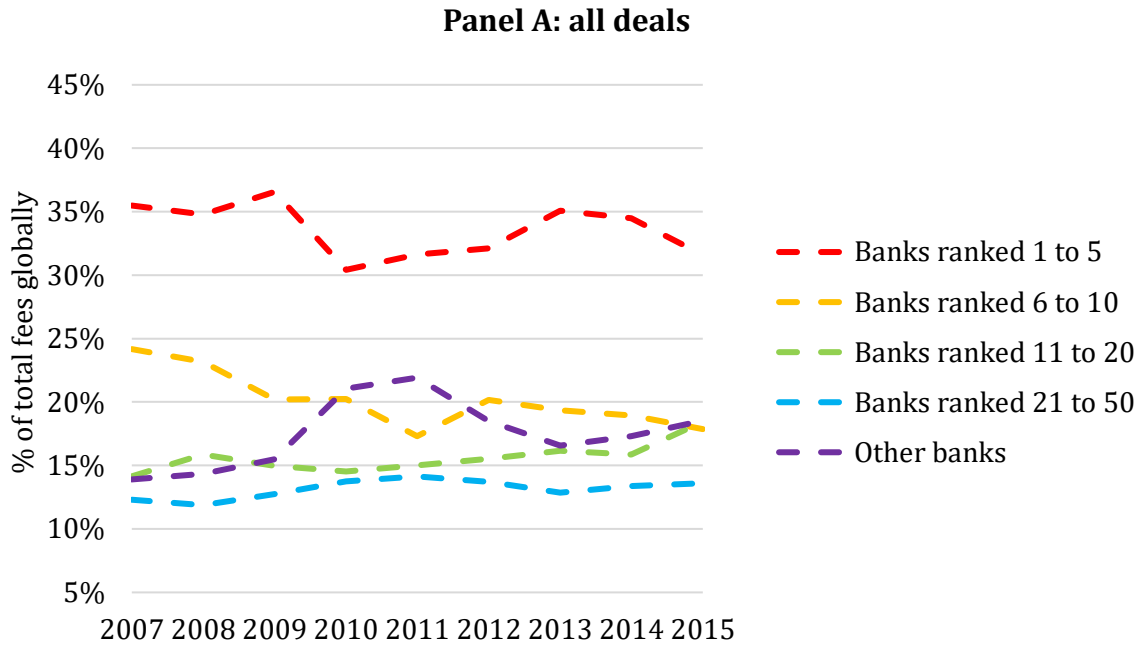


Figure 3. Institutional concentration in investment banking

Source: authors based on data from Dealogic

power eroded between 2007 and 2011; then their market shares stabilised briefly, followed by more decline in 2014 and 2015.

Figure 4 further illustrates a trend towards market de-concentration. Of the top 5 banks in 2015 (J.P. Morgan, Citigroup, Goldman Sachs and Morgan Stanley) 4 saw total fees shrink by at least 40% since 2007. The only exception was Bank of America which took over Merrill Lynch in 2008. In contrast, the second 10 (ranked 11th to 20th) is full of banks that grew in absolute terms: Canada’s RBC (up by 64%),

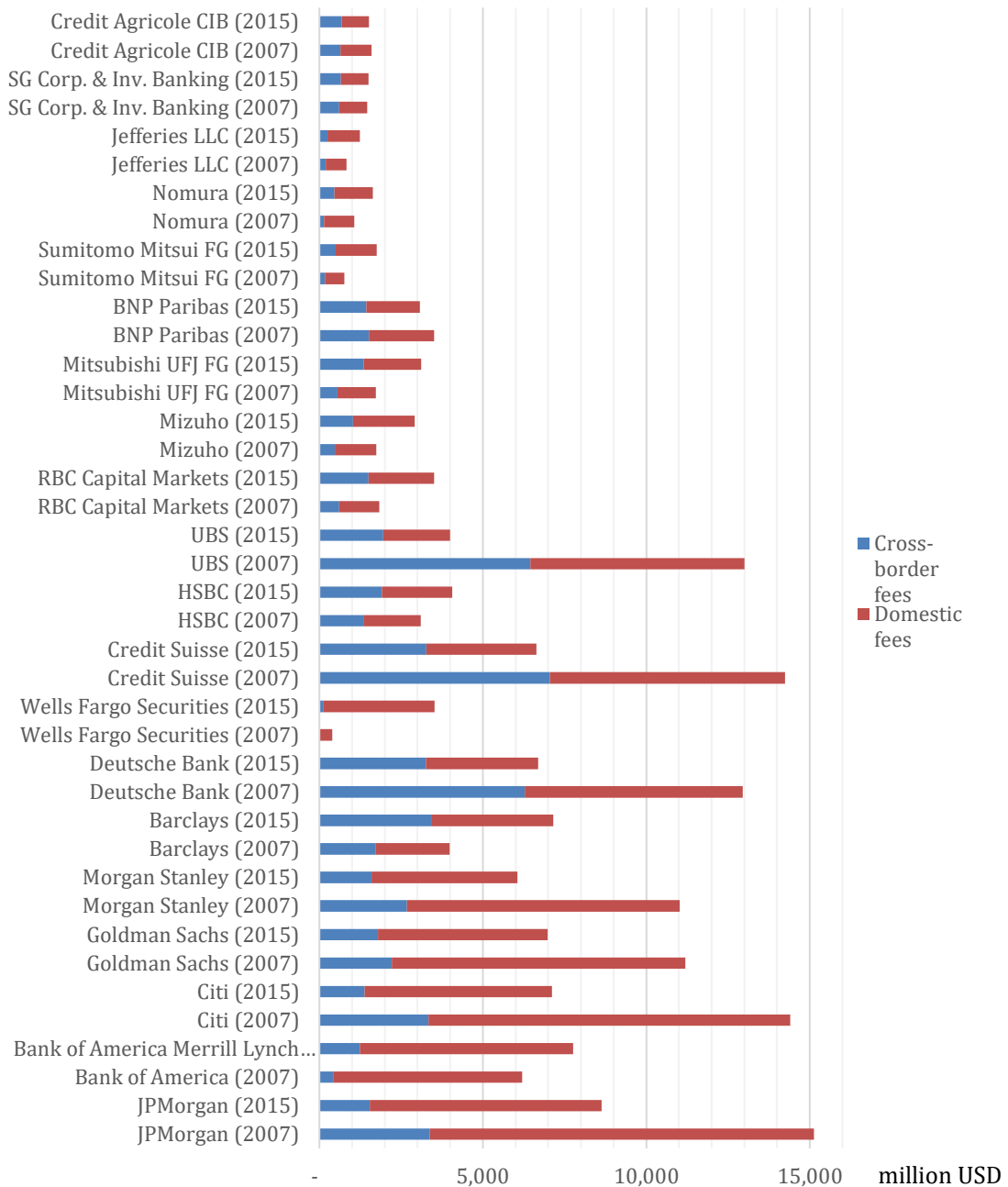


Figure 4. Top 20 investment banks in 2015 (based on total fees) and their fees before the crisis and in 2015

Source: authors based on data from Dealogic

Japan's Mizuho, Mitsubishi UFJ, Sumitomo Mitsui and Nomura (which took over Lehman's operations in Europe and Asia), US bank Jefferies (up by 90%); and 3 French banks that, while declining slightly in absolute terms, grew their market shares (BNP Paribas, Société Générale, and Crédit Agricole). A closer look at the identities of the leading banks also shows that independent investment banks, not operating as part of universal banking groups, have declined in significance, although have not become extinct. Their number in the top 50 has fallen from 19 in 2007 to 15 in 2015, with Goldman Sachs and Morgan Stanley as the only independent investment banks left in the top 10.

In summary, despite some consolidation in investment banking during and after the crisis, the biggest investment banks are now smaller in both absolute and relative terms. As a result, 2015 saw a much flatter hierarchy of investment banks reflecting the impact of the regulatory pressures on the largest banks. While no government resorted to breaking down their large banks as an aggressive solution to the too-big-to-fail problem, higher capital requirements, new regulation, and fines resulted in most of the largest banks losing market share, in addition to a decline of revenues in absolute terms. One consequence of this trend is reinvigorated competition from second-tier institutions. These findings also presage significant reshuffling in the geographical structure of investment banks, which we now explore.

Geographical structure

In this section we report on the geographical structure of investment banks by nationality, defined as the country hosting the operational headquarters of the parent bank. Before we embark on a country-level analysis, however, it is useful to start with world regions defined by time-zones.

In cross-border markets, there has been a marked increase in the share of banks headquartered in Asia-Pacific, up from 5% to 17%, two-thirds of which took place at the expense of EMEA banks (almost exclusively European), down from 59% to 51%, with American banks down from 36% in 2007 to 32% in 2015 (figure 5). In domestic transactions, the share of the Americas fell from 80% in 2007 to 62% in 2009 – a result of recession in the USA – and recovered partly to 67% in 2015. EMEA's share increased from 11% in 2007 to 17% in 2009; but, following the ensuing Eurozone crisis and recession, declined to 9% in 2015. The share of Asia Pacific in domestic transactions jumped from 9% to 24% over the entire period. When cross-border and domestic fees are aggregated, we see the share of Americas fall from 61% to 52%, EMEA's from 32% to 27%, with Asia-Pacific growing from 7% to 21%. These changes look less dramatic if we relate them to the changing shares of different time-zones in global GDP (panel C of figure 5). In general, in investment banking the Americas punch much above their weight in GDP, Asia-Pacific much below, and EMEA slightly below. Since 2007, however, there has been some convergence across the time-zone groups.

While GDP level in a region is a useful proxy to measure potential for capital market transactions, how GDP affects the volume of investment banking activity conducted by banks headquartered in a region depends on the level of capital market development in the region, as well as the strategies of investment banks. In contrast to the USA and much of Europe where the global financial crisis exposed the abuses and excesses of capital market development, capital market development has progressed in the Asia-Pacific, the region affected least by the crisis and subsequent new regulation, and where integration of financial markets has intensified (Ananchotikul, Piao and Zoli 2015). Regarding bank strategies, closer examination shows that while banks from the Asia-Pacific have continued to focus on regional customers, their shares in the Americas and EMEA markets have increased signifi-

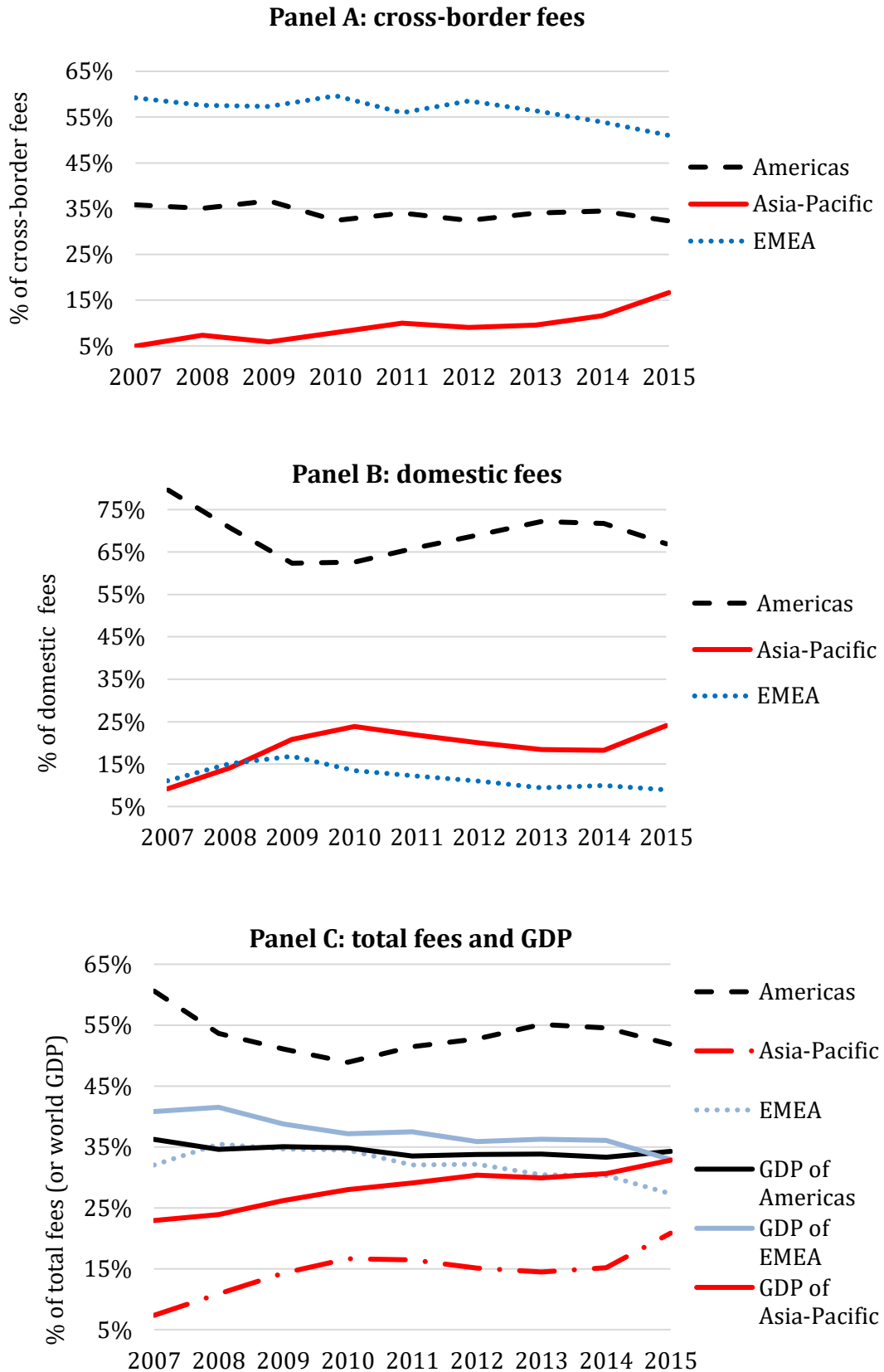


Figure 5. Market shares of parent banks based on the time-zone of their headquarters

Source: authors based on data from Dealogic, and the World Bank

icantly, from 2% to 8%, and from 2% to 7% respectively across the measured period. In their own Asia-Pacific region, their dominance has increased, from 51% to 72%. As a corollary, American and European banks lost market shares, predominantly in the Asia-Pacific. It is also worth considering savings levels in addition to GDP. In 2009 Asia-Pacific surpassed EMEA in terms of the total value of savings with the Asia-Pacific increasing its global share steadily to 45% in 2015, compared to 30% for EMEA and 25% for the Americas. It seems, then, that Asian banks are managing an increasing share of their region's capital.

While GDP level in a region is a useful proxy to measure potential for capital market transactions, how GDP affects the volume of investment banking activity conducted by banks headquartered in a region depends on the level of capital market development in the region, as well as the strategies of investment banks. In contrast to the USA and much of Europe where the global financial crisis exposed the abuses and excesses of capital market development, capital market development has progressed in the Asia-Pacific, the region affected least by the crisis and subsequent new regulation, and where integration of financial markets has intensified (Ananchotikul, Piao and Zoli 2015). Regarding bank strategies, closer examination shows that while banks from the Asia-Pacific have continued to focus on regional customers, their shares in the Americas and EMEA markets have increased significantly, from 2% to 8%, and from 2% to 7% respectively across the measured period. In their own Asia-Pacific region, their dominance has increased, from 51% to 72%. As a corollary, American and European banks lost market shares, predominantly in the Asia-Pacific. It is also worth considering savings levels in addition to GDP. In 2009 Asia-Pacific surpassed EMEA in terms of the total value of savings with the Asia-Pacific increasing its global share steadily to 45% in 2015, compared to 30% for EMEA and 25% for the Americas. It seems, then, that Asian banks are managing an increasing share of their region's capital.

At the country-level (figure 6) we see a gradual decline in the share of US banks in cross-border transactions from 32% in 2007 to 23% in 2015. Aggravated by the fall in the US domestic market, the US banks' share of total fees declined from 56% to 44%. It is worth noting, however, that domestic US transactions still represent 61% of the world's domestic fees, and a third of the world's total investment banking fees: an important reminder of how the US domestic market underpins the power of US investment banks. As they did in 2007, US banks earn approximately three-quarters of their fees from US clients, be they served through US-based or foreign-based subsidiaries. While in 2007 J.P. Morgan and Citi were ranked 4th and 5th in the world, based on cross-border fees, with 3 more US banks in top 10, in 2015 the top 5 spots were occupied by European banks, and only 3 US banks made it to the top 10 (J.P. Morgan, Goldman Sachs and Morgan Stanley).

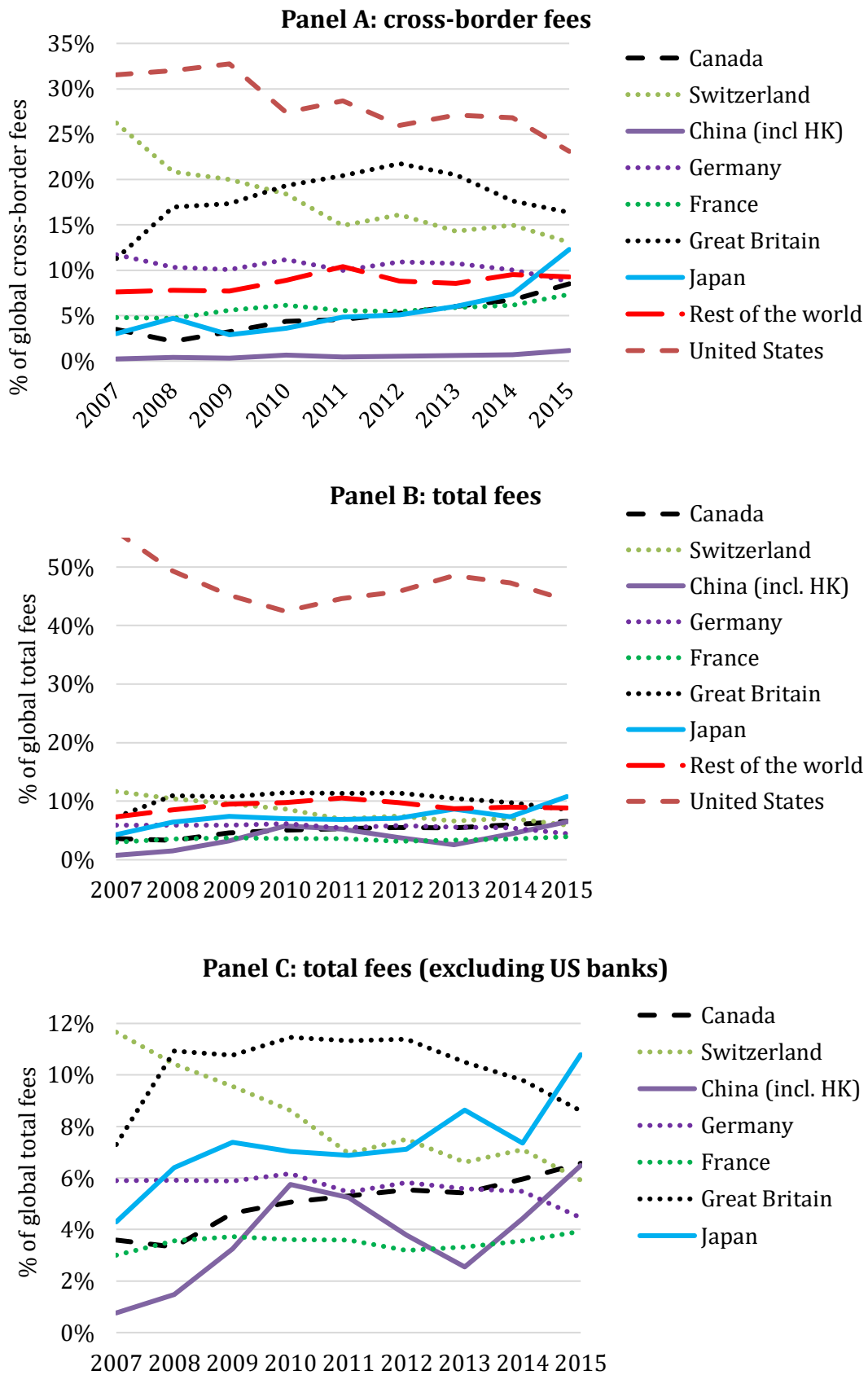


Figure 6. Market shares of parent banks based on the country of their headquarters

Source: authors based on data from Dealogic

The biggest decline, however, was experienced by the Swiss banks. In 2007 they were second in total fees, and nearly matched the US banks in terms of cross-border fees. By 2015 the Swiss banks fell to the 3rd position in cross-border and 7th in total fees. With a small domestic market, Swiss banks rely heavily on cross-border deals. In 2007, Credit Suisse was the largest bank in the world in terms of cross-border fees, and the largest non-US bank in terms of total fees. In 2015, Credit Suisse was the 3rd largest in total, and 2nd largest in international markets, UBS shared a similar fate. The decline of Swiss banks since 2007 is due in no small part to the stern response of Swiss authorities to the crisis, including new minimum capital requirements significantly higher than those recommended by the Basel III framework. It appears that in the wake of the crisis Swiss authorities became nervous at underwriting banks with balance sheets many times the Swiss GDP. Instead, banks seem to have focused their strategy on asset and wealth management, where capital requirements are lower, and so are the risks as perceived by banks and regulators (Carney 2016).

Japanese banks have shown the largest gains, rising from the 5th to the 2nd position in total fees, and from 6th to 4th in cross-border fees. In part, Japanese banks have benefited from their large and relatively stable domestic market, second in the world only to the US market, and representing approximately 5% of the global market for investment banking services. Gains in international transactions, however, have been remarkable. In 2007, only Mitsubishi UFJ made the world top 20 in cross-border deals. In 2015, it rose from 20th to 12th place, with 3 more Japanese banks entering the top 20. The number of Japanese banks in top 20 based on total fees doubled from 2 to 4.

Many factors have contributed to the success of Japanese investment banking. Following the crises they experienced in the 1990s, Japanese banks entered the 2000s with more capital, less leverage, and less risk appetite than their European and American counterparts. When the crisis erupted in 2008, the Japanese economy was not affected directly, and Japanese banks stood ready to take advantage of their competitors' weaknesses. In fact, Nomura took over Lehman Brothers' operations in Europe and Asia, while Mitsubishi UFJ invested US\$9bn to buy 10% of Morgan Stanley's equity and created successful investment banking joint ventures with the American bank. In addition, Japanese banks took advantage of the rise in the foreign activity of Japanese companies. Japan's outward FDI rose by approximately 50% between 2010 and 2015, much above the world average of 20% (UNCTAD, 2016). This activity focuses on Asia, and is related to the government strategy of increasing Japanese economic and political presence and influence on the continent. Abenomics have played its part as well, as some of its economic reforms, including change in corporate governance to make companies more shareholder value-oriented, revitalisation of capital markets, and a push towards a more diversified investment strategy of the Government Pension Investment Fund, directly or indirectly generate demand for investment banking services.

Although shrinking in absolute terms, British banks, performed well in terms of market shares, particularly in international markets, taking second position in the

world from the Swiss. Barclays has grown in absolute terms, boosted by the takeover of Lehman Brothers' US operations, and is now the largest investment bank in the world in terms of cross-border fees and the largest non-US bank in total fees. HSBC has grown in absolute terms as well, while RBS has gradually withdrawn from investment banking. Since 2013, however, market shares of the British banks have declined. This may reflect a delayed restructuring process. Barclays, for example, has re-emphasised its trans-Atlantic positioning, and announced plans to reduce its presence in Asia and Africa. HSBC, in turn, has concentrated more on Asia, reducing its presence in the Americas, including withdrawal from Brazil (Steinberg and Patrick 2016).

German investment banking has been shrinking significantly. While in 2015 Deutsche Bank was still the 3rd largest in the world in cross-border fees, after Barclays and Credit Suisse, and, after Barclays, the 2nd largest non-US bank in total fees, in absolute terms Deutsche Bank's fee intake has nearly halved since 2007. French banks contracted less in absolute terms than the German ones, and closed the gap on the latter in both total and international markets. BNP Paribas was joined by Société Générale and Crédit Agricole in the world top 20 by total fees. While both French and German banks faced sharply declining domestic markets in investment banking services, the lesser decline of French banks (see also figure 4), may be due to the fact that the French banking system as a whole is much more concentrated and centralised than that of Germany. As a result, the leading French banks can shore up their balance sheets with profits from domestic retail and commercial banking, whereas their German counterparts have to compete with numerous and strong regional and local banks (Buell 2016).

Canadian banks have risen most notably alongside the Japanese banks, growing in absolute not just relative terms. While the Canadian domestic market shrank in absolute terms, the contraction was smaller than in the UK, France and Germany. Canadian banks made significant gains internationally, with RBC in the lead, rising from 19th place in total and cross-border fees to 12th and 9th respectively. With a relatively buoyant economy and arguably better financial regulation than in the USA and European Union, Canadian banks maintained much stronger balance sheets and reputations allowing them to expand internationally (Bordo et al. 2011).

Our survey period coincides with the international emergence of the mainland Chinese banks, which by 2015 surpassed Swiss banks in total fees. This growth was based mainly in Mainland China, by 2009 the third largest domestic market in the world, after the USA and Japan. As China maintains a separation of commercial from investment banking, specialist investment banks have benefited from a booming domestic market, with 6 of them joining the world top 50 ranking. Put together, however, these 6 banks still earned in total 4 times less in fees than J.P. Morgan. Moreover, the share of Mainland Chinese banks in cross-border business remains negligible, even when we add Hong Kong to Mainland Chinese figures. Hong Kong may be a major location for investment banks, but it does not host their headquarters. 13 other Chinese institutions made it to the world top 100 in 2015, compared to one from India and none from Brazil or Russia.

Our focus on the above eight countries is because each had at least 3% share of the global investment banking market in 2015, with combined coverage of over 90%. The 9th country in the ranking was Australia, with 1.3% share in both total market and cross-border transactions (up from 1.1% and 0.9% in 2007 respectively). Like their Canadian counterparts, Australian banks benefited from milder impact of the global financial crisis on the domestic economy, leaving them with relatively strong balance sheets and resources for continued expansion. In cross-border markets, three other countries had market shares exceeding 1%: Italy (1.2% in 2015, down from 1.3% in 2007), Netherlands (1.7% up from 1.2%), and Spain (1.3% in 2015, up from 0.9% in 2007). Conspicuous by its absence is Singapore, with a share in cross-border deals of merely 0.2% in 2007 and 0.5% in 2015. Resembling Hong Kong, while being the seat of subsidiaries of many global investment banks, Singapore does not host headquarters of significant investment banks (Wójcik et al. 2016).

Overall, based on bank nationality, the geographical concentration of investment banking has declined (figure 7). The Herfindahl index for total fees fell sharply by 2010, then rose over the following 3 years, and fell again in 2014 and 2015. The post-2010 increase was due mainly to a rebound in the share of US banks in 2011-3, driven entirely by increased demand in the US domestic market. Concentration in the market for cross-border transactions declined consistently throughout the period. When we consider the top five nationalities of investment banks, as far as cross-border markets are concerned, the share of Japan rose while that of the UK remained stable; however, the shares of the USA, Germany, and (particularly) Switzerland plunged. The shares of 4 of the next 5 nations – France, Canada, Australia, and Netherlands, but not Italy – increased significantly. The shares of most countries in the second 10 – specifically Spain, Sweden, China, Norway, Singapore, Denmark, and Brazil – increased as well.

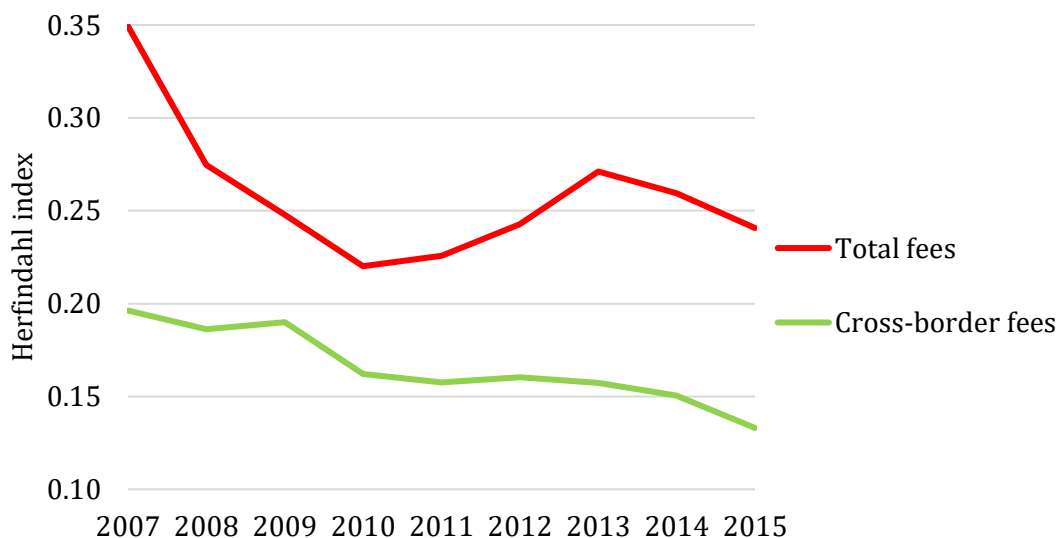


Figure 7. Herfindahl index based on national markets shares in investment banking

Source: authors based on data from Dealogic

In short, the world of investment banking has become less US-dominated. The biggest losers of market share, however, are European banks (with few exceptions), with Asian banks emerging as market-share winners thus far. This is a reflection of economic trends – a short recession in the USA, a long recession in Europe, and continued though slower growth in Asia. In contrast to the USA and Europe, Asia has also witnessed continued capital market development and integration. The changing landscape of investment banking also appears to reflect the geography of regulation, with most radical changes in Europe, delays and dilution of new regulation in the USA, with Asian countries as reluctant and late adopters of post-2008 international financial regulation.

Conclusions and implications

The goal of the paper was to map investment banking since the global financial crisis. Our results show a major change in the industry in terms of size and structure. In the wake of the crisis, investment banking has nearly halved in size in relation to the size of the global economy. Contrasted with the relative, though fragile, recovery in global financial markets, this contraction seems secular and long-term rather than cyclical. It seems almost impossible that investment banking could reclaim the inflated position it enjoyed in 2007 – the all-time high in its history.

First, our findings suggest that size and incumbency have proven insufficient for securing and maintaining competitive advantage in investment banking. In our data, the largest banks have suffered the largest losses in market shares. The crisis found them overstretched, with post-crisis regulation further diminishing their previous expansiveness. The Swiss giants, Credit Suisse and UBS are among the hardest hit, followed closely by Germany's Deutsche Bank. Most notable, however, is the gradual decline of the US hegemony in investment banking. Despite the reasonably efficient clean-up of toxic assets in the US (in contrast to Europe), and signs of recovery in the domestic market, US banks have been losing market shares in transactions with non-US clients. The malaise of European and US giants has presented an opportunity to smaller players, with banks from Japan and Canada the most responsive. Mainland Chinese banks have also boomed, although thus far feeding almost exclusively on their domestic market. Overall, the hierarchy of investment banking, both institutional and national, has become considerably flatter than it was in 2007.

Second, our findings suggest that global economic shocks (such as experienced during the global financial crisis) have not had a negative impact on the involvement of investment banks in cross-border business. Internationalisation of investment banking has not decreased over the study period. Transactions with clients across national borders and time-zones are as important to the business of investment banks as they were before the crisis. Banks from Asia-Pacific have dominated the growing investment banking market in this region more than ever before. In addition, Asia-Pacific banks have made forays into America and Europe, although in these shrinking markets gains have been hard won.

Third, our analysis shows that investment banking as an economic activity seems not to exhibit threshold properties that prohibit smaller institutions from competing across geographical regions. Indeed, our findings suggest that a rise in significance of smaller investment banking, with less domination by large banks and the USA, and a more even spread of activity across time-zones and countries, a condition that should be good news for policy-makers. In the mid-2000s the industry created a seemingly autonomous presence in the global economy, while generating a financial bubble with a collapse that forced calamity on the world economy. For example, Adair Turner (2015) and John Kay (2015), who cannot be characterised as bank-bashers, welcome moves to smaller investment banking. Our results show such a global trend is underway. If too-big-to-fail was a major factor leading to the crisis, lower market concentration in investment banking services is good news, implying less systemic risk from the failure of an individual institution, and more competition in the industry.

Finally, we see our results as confirming the geographical adaptability of investment banking as a professional practice. By this we mean that investment banking practice is not institutionalized in a way that impedes transference to new regions. This is important because lesser geographical concentration in investment banking in terms of bank nationality, with declining shares of US banks, and the rise of competition from Asia-Pacific, may bode well for the future of the global financial system. Considering the power of investment banks as agents in financial markets, and their influence on the valuation of financial assets around the world, a more geographically balanced and representative investment banking industry may imply more pluralistic approaches to financial practices as well as greater self-consciousness about social and environmental responsibility. An investment banking industry with stronger Asian banks, for example, may be more sensitive to different levels and modes of development than one dominated by US banks. Of course, such optimism rests on the assumption that different bank nationalities imply differentiation in practices, in contrast to a homogeneous global industry.

To be sure, it is premature to talk about a long term fall in American investment banking. US banks still command the largest share of international markets and due to the size of their domestic market still command nearly half of the global market share, four times that of second-placed Japan, and seven times that of China, which has the largest growth potential of all countries. The crisis has shocked the whole industry and has shaken US investment banks, but it will take a prolonged geo-economic and geopolitical transformation to de-throne them. Direct access to the world's largest domestic capital market, to USD as the world's most powerful currency, and the support of the world's most powerful government remain key assets of US investment banks (Agnew 2012; Wójcik, MacDonald-Korth and Zhao, 2016).

While our data concludes at 2015, it is now clear that 2016 was not a good year for investment banking. It started badly, with falling stock market indices led by a faltering Chinese market. Then followed low levels of primary capital market activity and M&As, and the UK's EU referendum, which have increased uncertainty in

financial markets, and put at risk the prospect of a Capital Market Union in Europe, a hitherto UK-led initiative. While this is bad news for investment banking globally, European banks, London as the centre of investment banking activity, and US banks operating in Europe are likely to be most affected. Asian banks, which draw only a small part of their earnings from Europe should be affected least. It may be symptomatic that with reports of investment banks considering moving operations away from the UK, the Japanese bank Mitsubishi UFG was planning to expand its London footprint (Burke 2016). Then, as we conclude our analysis, we note new uncertainty arising from the outcome of the US presidential elections. Whatever the future holds, investment banks – the keynote species of a version of investment bank capitalism which imploded in 2008 – should remain an important subject of inquiry in geography.

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