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The troubled life of the banking industry

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Introduction[1]

The history of banking is a history of troubles. Since the emergence of modern banking, runs, bubbles, and crises have been a distinctive feature of the financial sector and banks have been heavily involved before, during and after them.

The sources of the instability are well known. Banks use their balance sheets to perform two tasks: maturity transformation and risk transformation. By borrowing short-term and lending long-term banks supply liquidity to the economy. They borrow through liabilities perceived as safe, and therefore comparable to money, and they invest in risky loans, whose quality is difficult for third parties to evaluate. If, for any reason, the safeness of banks' liabilities is questioned, a systemic run may ensue. The consequences of a financial crisis are potentially huge, as we well know from recent history, so why have maturity and risk transformation not been banned once and for all? The answer is fairly straightforward: these services are fundamental to ensuring an efficient allocation of capital and modern market economies need them in order to grow and prosper.

Trying to enhance stability, governments granted banks public insurance, both on credit (through deposit insurance) and on liquidity (lender of last resort), This, however, is not sufficient to ensure either stability or efficiency. Since public insurance is difficult to price, it generates moral hazard that may eventually lead to excessive risk-taking. In return for insurance, therefore, banking systems are heavily regulated. The literature on industrial organization teaches us that tightly regulated markets tend also to be highly inefficient. Policy makers' attempts to strike the right balance between efficiency and stability have been a major driver in shaping the financial industry over the last 100 years.

Financial crises have marked turning points in the regulatory stance. Following the crisis of the 1930s, the quest for stability induced policy makers to shelter the banking industry from competition, thus isolating it from innovation. In Europe and

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many other jurisdictions large sections of the banking sector were directly or indirectly placed under public control.

The policy reaction to the global financial crisis which started in 2007 has been no less far-reaching. After almost a decade, financial regulation has been greatly reformed, new authorities have been created, supervisory practices have been fundamentally innovated.

But this time it is different. No compensation, in terms of monopolistic rents, has been granted in return for tighter regulation. By significantly restricting the scope for public intervention in the case of banks' distress, the new regulation largely reduces the supporting role of governments. Furthermore, in several jurisdictions, especially in Europe, the new rules and supervisory standards have come into force while banks are still in the process of repairing their balance sheets from the damage caused by long and deep recessions, and the financial cycles have not yet turned upwards.

The regulatory framework is a very powerful driver of the industrial organization of the banking sector, but it is not the only one. First, the overall demand for the financial services offered by banks ultimately depends on the pace of economic growth. By exerting strong downward pressure on nominal interest rates, wide output gaps, secular stagnation, and deflation risks compress the margins and volumes of traditional banking activities. Second, technical change affects the competitive position of banks with respect to other financial firms and with respect to new entrants in the industry. Specifically, the digital revolution, as in many other industries, is eroding long-standing barriers to entry and enabling a host of new agents to compete in the provision of financial and banking services.

In the transition to a new steady state, the life of the banking industry is once again troubled. But so is the life of regulators and supervisors, newly called upon to strike the right balance between stability and efficiency in uncharted waters.

In what follows I address some of these themes. My starting point is a rehearsal of the well-known story of how the banking industry survived the threat posed by the removal of the regulatory barriers that insulated it from competition in the 1980s and '90s. On the one side, this story is instructive on the capacity of banks to adapt to rapid changes by leveraging their comparative advantages. On the other side, the new

outcome was an unstable equilibrium which in the end toppled into a disastrous crisis. I will then turn to the ongoing progress towards a new configuration of banking and of the financial industry. I have no definite answer to offer in my conclusions, only some hints on the huge challenges facing both banks and policy makers in the search for a safe, efficient, and growth-supportive financial system.

From crisis to crisis

In the troubled history of banking there was a notable exception: from the 1930s to the 1980s banks enjoyed a quiet period. The structure of the industry did not undergo any significant changes, profits were relatively stable, and no systemic crises erupted in any of the major market economies (Chart 1). Burnt by the experience of the Great Depression, regulators were mainly concerned with stability. Interest rate ceilings, restrictions on geographical expansion, limits to maturity transformation, and separation between commercial and investment banks were the main instruments in the worldwide regulators' toolbox. The result was a stable banking industry largely insulated by significant barriers to entry, with few incentives for excessive risk-taking. The price paid was efficiency.

In the 1980s, consensus on the priority given to stability began to weaken. The new regulation paradigm was to lift barriers to entry and any norms protecting banks from competition, while discouraging risk-taking by means of capital requirements (Claessens, 2016: Chart 2). This process culminated in 1988 with the first Basel Capital Accord, which was implemented by the ten largest market economies by 1992. In Europe, deregulation was part of the larger project to create a single European market. The purpose of the First and Second European Banking Directives (enacted in 1977 and 1992) was to enhance capital allocation across the Continent by levelling the playing field through regulatory convergence. National banking markets, once strongly protected from foreign competition, became gradually more susceptible to challenge. In the US, the change in the regulatory framework was driven not only by considerations of efficiency but also by financial innovation (Wall, 2014). The expansion of money market funds in the early 1980s that threatened banks' deposit base eventually led to the removal of interest rate ceilings on deposits (Berger et al., 1995). Banks avoided large deposit outflows, but their margins shrank. On both sides of the Pond banks' profitability was at risk.

The adjustment to the new paradigm was not straightforward and life grew difficult for the banks. In some countries they responded with excessive risk-taking, which ended in systemic, though not too painful, crises. In the US the idea that banks were in deep trouble and that they would become irrelevant became mainstream. In 1993 William Isaac, former president of the Deposit Insurance Corporation, said that 'the banking industry is becoming irrelevant economically, and it's almost irrelevant politically' (Bacon, 1993). In the same year Carter Golembe, a leading consultant of the American banking industry at the time, highlighted that 'the major problems faced by the banking industry [are], most notably, its eroding competitive position in the financial community and the crushing burden of regulation' (Golembe 1993).

However, paraphrasing the title of a famous paper, the banks were not dead yet: the reports were greatly exaggerated. Boyd and Gertler (1995) showed that the apparent decline of commercial banks was mainly due to mismeasurement, in particular to the habit of computing the weight of commercial banks in the financial system by considering their total assets. Once off-balance-sheet items (such as loans sold to other intermediaries, credit commitments, and derivatives) were included, the statistics indicated that commercial banks were actually alive and thriving. They were just adapting to the new environment.

The findings of Boyd and Gertler were the prelude to the events of the following decade: to sustain their profitability banks changed their business model. In Europe (Chart 3), where deregulation allowed them to adopt the universal bank model, banks expanded their activities (Pagano et al., 2014). A wave of mergers and acquisitions profoundly changed the structure of the banking system as European intermediaries sought to sustain their profitability by exploiting scope and scale economies. The universal bank model, once confined to a few countries, became pervasive and the share of customer loans over total assets declined significantly. Banks increased loans to other financial intermediaries and their proprietary trading. Off-balance-sheet activities such as derivatives, asset management, and underwriting became increasingly important. In some countries, smaller banks, unable to engage in sophisticated investment bank activities, rapidly expanded their loans, especially to the real-estate sector. Moreover, increasing their size was also a way for banks to secure significant cost advantages through the implicit public guarantee granted to those 'too big to fail' (Lambert et al.,

2014). The total assets of some of the largest banks became a multiple of the GDP of their country of residence (Chart 4).

In the US, where the separation between commercial and investment activities was maintained, commercial banks increasingly shifted their business out of the balance sheet, as far as possible from the regulators' eyes. The morphology of the US financial system changed dramatically: an unregulated shadow banking system emerged and banks became its most important providers of services (Cetorelli et al., 2012). The shadow banking model of financial intermediation was characterized by a long credit intermediation chain that involved a multitude of agents (Pozsar et al., 2010). Banks issued deposits to shadow banks, secured with the senior tranches of the securities produced by the shadow banking system that were in part backed by sub-prime loans (Gorton, 2010). On top of this, banks' ability to provide liquidity was reinforced by their (insured) customer deposit base and by their eligibility as monetary policy counterparties (Chart 5). This mechanism worked smoothly until the quality of the securities backing the shadow banking system deposits was questioned. When real-estate prices began to fall and sub-prime borrower default rates to increase, the system lost confidence in the value of the securities, provoking a run. Deposit inflows weakened, impairing banks' ability to provide liquidity (Acharya and Mora, 2015); eventually, the system did not collapse only thanks to wide public support.

The financial crisis crossed the sea, spreading to Europe and most of the major market economies. The effects on the real economy were comparable only with those of the Great Depression. A huge amount of taxpayers' money was used to bail out a number of large systemic institutions.

As in the 1930s the priority of policy makers shifted to stability, but the regulators did not pull the same instruments as before from their toolbox. They did not resort to regulatory restrictions that would generate stability by granting banks protection from competition; on the contrary, they remained anchored to the prudential regulation paradigm, extending its reach to protect financial stability from those vulnerabilities that had led to the financial crisis.

The banking industry is now facing a regulatory tightening intended to mitigate not only solvency risk but also liquidity and systemic risk (Beck et al., 2016: Chart 6).

On solvency, although the minimum capital requirement has remained unchanged at 8 per cent of risk-weighted asset (RWA), the loss-absorbing capacity of regulatory capital has been greatly increased. On top of this, new layers of capital in the form of buffers have been introduced. Recognizing that RWA are necessarily an imperfect measure of risk exposure, the regulators have also introduced a requirement for the leverage ratio, which is computed without weighting total assets for risk. Liquidity risk has been tackled by requiring banks to hold an amount of liquid assets sufficient to cover funding needs over a short period of stress (liquidity coverage ratio) and by limiting maturity mismatches through the holding of a sufficiently large fraction of stable funding (net stable funding ratio).

Systemic risk has been addressed by strengthening solvency and liquidity requirements for large systemic institutions and by introducing a brand new set of tools to tame the financial cycle: macroprudential policies.

Strengthened prudential regulation has been accompanied by a radical change in the policy makers' attitude towards state intervention in cases of distress. Most jurisdictions have introduced norms to severely limit the possibility for the state to bail out insolvent intermediaries, greatly reducing the value of the implicit public guarantees so far enjoyed by banks.

Challenges for banks

The consequences of the regulatory reforms on banks' profitability in the long run are extremely difficult to predict: the available estimates are subject to great uncertainty, stemming partly from the fact that much of the new regulation still has to be fine-tuned (Charts 7 and 8). The impact of higher capital requirements will depend mostly on how significant are the frictions that prevent the Modigliani-Miller theorem from holding in the real world. A number of academic papers have been published on this topic, reaching quite different results. The negative consequences for profitability of the limits on maturity transformation imposed by the new liquidity requirements seem less controversial. The loss of the implicit state guarantee will increase banks' funding costs.

In the short to medium term the prospective for bank profitability is challenged not only by adjustment to the new rules but also, especially in Europe, by the legacy of the crisis and the prolonged period of low growth and low interest rates. The downward

pressure on margins and volumes is forcing banks to reduce their size, sometimes painfully (Charts 9 and 10).

Moreover, in Europe banks are redefining their role in the new financial system, similarly to what happened to the US banks in the 1980s and '90s. Compared with the experience of the US, however, there are two key differences. First, the financial crisis has heightened the awareness of regulators, supervisors and academics of the risks for financial stability intrinsic to bank-market interaction (Boot and Ratnovski, 2016). Second, capital markets in Europe are still far less developed than in the US and it is uncertain whether they can provide banks with the same range and scale of business opportunities to compensate for their declining revenues from traditional intermediation (Chart 11).

From the policy maker's perspective, with banks receding, a transition to a more market-oriented financial system is much needed to sustain growth. Recent studies show that the traditional agnosticism regarding the effects of the financial structures on growth was not fully justified, at least for advanced economies (Cull et al., 2013). New findings suggest that the marginal contribution of banks to growth is diminishing while that of securities markets is increasing. There are a number of reasons that make this result plausible; for instance, markets are more efficient than banks at spreading risks among a wide array of investors and at financing highly innovative enterprises. But moving from a bank-centred financial system to a market-oriented one is not straightforward, especially in economies where small and medium-sized enterprises rely mostly on relationship intermediation for their external finance. The European Union has launched an ambitious project for a Capital Markets Union. The full development of a single capital market in Europe is hampered by significant national differences in regulatory frameworks, supervisory approaches, taxation, and bankruptcy laws. Going forward, a genuine capital markets union will require policies that, without necessarily aiming at a full harmonization, make member states more alike and compatible with each other, significantly reducing the cost of operating in the entire European market without barriers relating to national borders.

A new and different challenge to the traditional bank business model comes from outside the financial industry. Exploiting the opportunities offered by technological change, a number of new companies, labelled FinTech firms, are entering the financial

services market, posing, according to many analysts, a serious threat to banks' profitability. How is this possible? After all, progress in Information and Communication Technology (ICT) began several decades ago and the financial industry has historically been at the forefront in its adoption. The efficiency gains deriving from innovation should have been transferred to customers under the pressure of competition, leaving little room for new entrants. Philippon (2016), however, shows that, in spite of the advances in ICT, the unit cost of financial services for the end users has not changed significantly over the past 130 years (Chart 12): efficiency gains have been reaped by incumbent banks and other intermediaries.

As in several other industries (Brynjolfsson, McAfee, 2014) the more recent developments in ICT may have radically improved the chances for FinTech firms to successfully enter the financial sector. These changes affect the economics of the technological space along three dimensions: i) data storage and processing, ii) data transfer, and iii) data availability. Cloud computing allows large amounts of information to be stored and processed, using on demand computers with a high-level of computational capacity without incurring huge fixed costs. The Internet allows data to be transferred in bulk without the need for costly dedicated networks. The digitalization of the society and the economy produces an enormous amount of valuable information (big data). FinTech firms are leveraging these changes to provide services that have historically been the bread and butter of commercial banks, and a large source of their earnings (Chart 13).

Banks have so far taken advantage of their quasi-monopoly in the deposit market. Deposits are often the first way households and firms start their relationship with the financial industry. Presenting themselves as a one-stop-shop, banks offer their customers other services, typically more profitable than deposits. Moreover, the higher the number of products a customer buys, the higher the costs to switch to competitors are likely to be, granting the incumbent bank oligopoly power and further profits. High switching costs also make it less compelling to invest in innovation that improves the customer's experience.

FinTech firms are using technological innovation to take advantage of these features of banks' business model, trying to leave to banks the business of low value-added products while stealing the oligopoly profits deriving from the sale of other

services. Switching costs are lowered through the intensive use of remote distribution channels. Client acquisition is also fostered by an extremely close attention to customers' needs, particularly of those born in the 1970s and '80s who place a high value on accessibility, speed, and user-friendliness.

Banks' margins are attacked from all sides: the FinTech ecosystem is populated by firms offering basically all financial services. Income from payment services is challenged by firms like Apple, Google, and PayPal. Fees from wealth management are threatened by robo-advisors that offer online financial advice and portfolio management mainly through automated algorithms. Peer-to-peer lenders have the potential to erode origination, servicing and interest rate income by disintermediating loans to households and small and medium enterprises. In a more futuristic scenario, virtual currencies may menace the last stronghold of banks: the creation of private money.

Is the threat to banks' profitability posed by FinTech firms real? Venture capitalists seem to believe that these challengers actually have the potential to create value: from 2010 to 2015 the amount of equity financing to the FinTech space increased from 2 to 22 billion dollars (Accenture, 2016). However, it is probably too early to give an answer to this question; FinTech firms' market shares are still tiny, although increasing very fast. The markets where banks are likely to suffer the most are those for services, where the production function is highly intensive in data processing such as payments, standardized consumer credit, brokerage of securities, and passively managed funds (Dermine, 2016). If technology allows soft information to be sufficiently substituted with an effective analysis of big data, other markets, such as small and medium enterprises loans, could also be at risk.

Banks are actively responding to the threat from FinTech firms, although they are somewhat slowed down by old and complex IT systems that are not designed to take advantage of the more recent advances in technology. In some cases, banks are trying to replicate the models of the FinTech firms, such as by setting up online lending platforms. Other intermediaries are partnering with the new entrants, externalizing part of their production processes to exploit FinTech firms' greater efficiency. Many banks consider the adoption of new technologies a strategic priority. The most likely scenario is that margins will shrink and some of the products now offered by banks will also be provided by other firms.

Financial stability issues

Greater reliance on non-bank sources of finance must be accompanied by a broadening of the standard prudential regulatory toolkit. Actually, the 'traditional' sources of systemic risk – excessive credit growth and leverage, excessive maturity and liquidity mismatch, direct and indirect exposure concentrations, misaligned incentives – transcend sectoral boundaries; potentially, they may arise anywhere in the financial system. Thus, appropriate legislative, regulatory and institutional frameworks are needed to face systemic risks wherever they appear. In addition, broadening the scope for macroprudential measures outside the banking system is necessary in order to avoid 'regulatory leakages', whereby risky activities migrate to institutions and markets that are less regulated and supervised than banks.

Although desirable, the construction of a comprehensive framework for macroprudential policies beyond banking is an extremely complex task. Ideally, one would need entity-based instruments, that is instruments targeted at the different entities populating the non-bank universe (e.g. broker-dealers, investment funds, pension funds, insurance companies…), tailored and tuned according to the type and magnitude of the systemic risk posed by each. In addition, activity-based instruments would also be necessary, namely the introduction of a set of restrictions in key financial markets that would apply to every entity engaged in trading, regardless of its type. An example of this is the limits (i.e. numerical floors) to haircuts and margins used in financial transactions, which can be employed to tackle pro-cyclicality in financial markets. Finally, one would also need borrower-based instruments, such as the setting of overall limits on the leverage of end-borrowers (e.g. households and corporates) regardless of the provider of the funds.

Introducing macroprudential instruments in banking regulation was relatively easy because it was possible to rely on the traditional microprudential regulatory toolkit. Things are much more challenging for macroprudential policy beyond banking. First of all, the implementation of entity-based instruments is made particularly difficult by the fact that microprudential regulation of non-bank intermediaries varies considerably among countries and entities. It is thus much more challenging to find a 'common denominator' upon which to build consistent macroprudential tools. Second, activity-based instruments have to take into account that financial markets are very integrated

across the globe and continuously changing and developing, so that the risks of regulatory leakages and the necessity for international coordination are particularly acute in this field. Finally, borrower-based instruments may have direct consequences for the welfare of households and firms by constraining their borrowing capacity and thus influencing the possibility of smoothing consumption and investment decisions over time. In this case, a proper balance between social and financial stability goals has to be found. In order to foster the necessary accountability, a clear definition of the respective responsibilities of the political and financial authorities is of utmost importance.

There are also challenges that are common to all types of instruments for macroprudential policy beyond banking. For many of them, one is the lack of a reliable theoretical and empirical background. As mentioned before, macroprudential instruments for the banking system are essentially microprudential instruments used for macroprudential purposes. As such, their definition and calibration could take advantage of the wide set of analyses available for the banking industry. Unfortunately, this is not always the case for non-bank instruments, for which economic analyses and impact studies often have to be built from scratch. Another major challenge of extending macroprudential policies across entities and markets is the need to coordinate a larger and larger number of institutions and stakeholders, which often have different perspectives and potentially conflicting goals. Last but not least, the growing scope of macroprudential regulation will increase the interactions among the available tools, such as entity-based and activity-based instruments. In this environment, the room for significant unintended consequences of macroprudential policy decisions is likely to grow considerably as well.

Summing up

Regulatory and competitive pressure in the industry are reshaping the structure of the financial system, where markets and new entrants will play a more significant role at the expense of banks.

Banks, however, are the incumbent players and have strong competitive advantages with respect to other intermediaries, at least in the medium term, in some key fundamental functions. Thanks to deposit insurance and access to central bank

refinancing, banks are in a unique position to provide liquidity simultaneously through sight deposits and credit lines (Kashyap et al., 2002). Through their balance sheets they can absorb economic shocks and provide intertemporal smoothing. They can reach opaque borrowers which still account for a sizeable proportion of credit markets even in advanced economies.

In principle, a financial system where credit and capital are sourced from a balanced mix of markets and (bank and non-bank) intermediaries is more efficient, resilient and stable than a bank-dependent one. More efficiency would be granted by greater specialization on the part of the different players based on their comparative advantages. Banks would continue to offer information-sensitive credit contracts, while market-based financing and alternative lenders would represent a valuable alternative for large corporations and in the market for standardized credit products. More resiliency would derive from a wider distribution of risk among investors, so that shocks mostly affecting banks could be offset by ampler recourse to other channels. Finally, the availability of multiple forms of financing should make the financial system less prone to pro-cyclical behaviour, whereby even small initial changes in asset values can cause large swings in the lending activity of levered institutions.

Great opportunities, however, always come with great risks. After all, before 2007 the above considerations on the potential benefits of diversification were also often listed as the potential advantages of the originate-to-distribute model. Thakor (2011) develops a model in which competition leads to financial innovation aimed at increasing profits by lending to new classes of borrowers, but this may in turn increase the probability of crises. In the last decade the new class of borrowers was sub-prime mortgagers, in the next decade it could be borrowers from online lenders.

The transition to the new financial landscape, therefore, may not be smooth and must be governed by regulators. To regulate ‘the non-banks’ we are faced with complexity in the choice of approach, complexity in the choice of instruments, and we are also faced with political and legislative complexity, as macroprudential regulation beyond banking calls for the coordinated use of different tools by different authorities, which often have different mandates and whose actions are inspired by different cultural and historical backgrounds. All these difficulties explain why the process of introducing macroprudential instruments beyond the banking sector is somewhat slower than one

would have expected or desired. Nevertheless, efforts at the international level have been considerable and the process, albeit slowly, is still expected to move forward.

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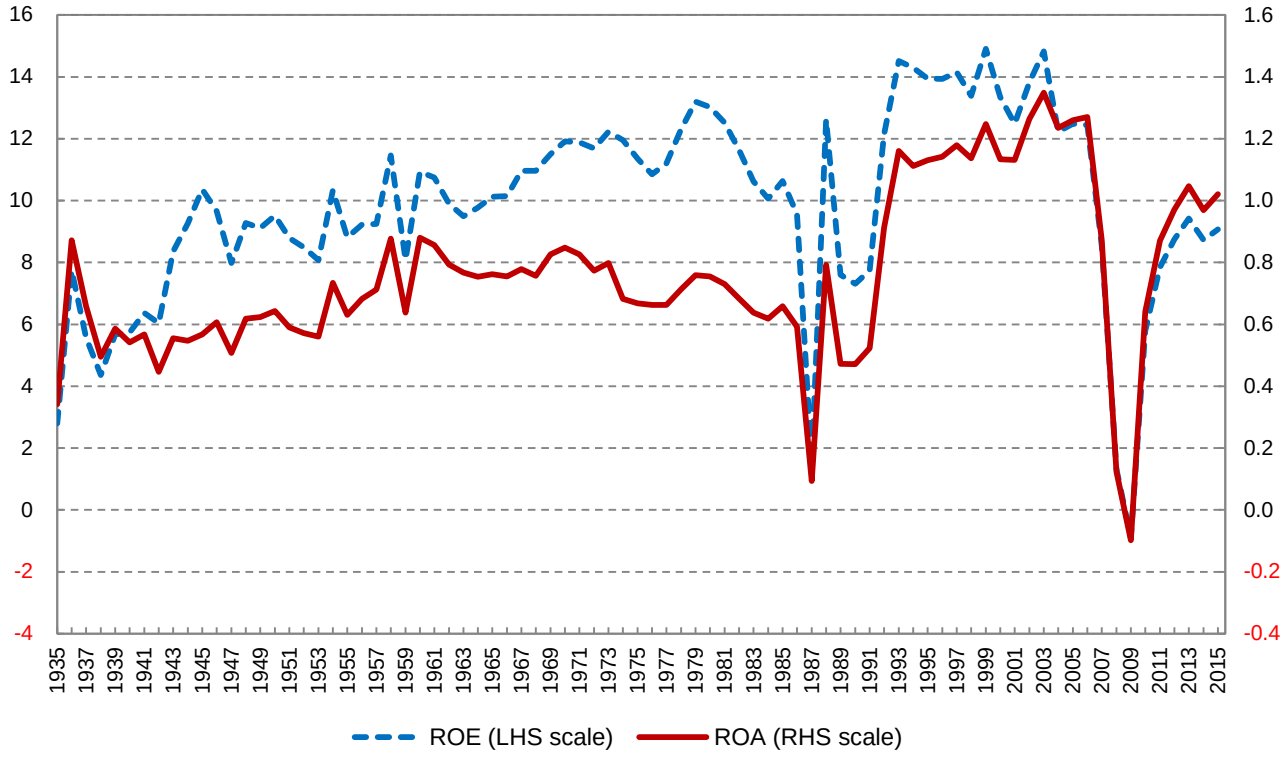
Chart 1: US commercial banks' profitability



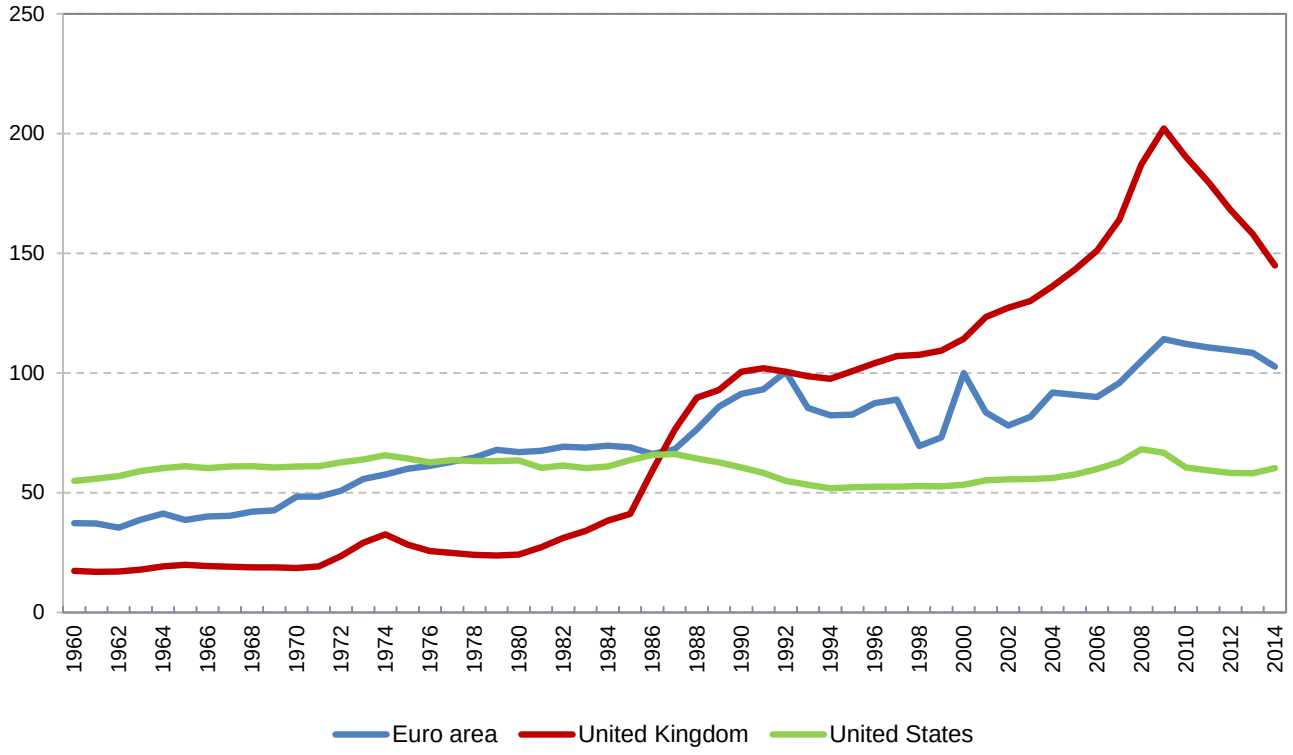
Source: FDIC.

Chart 2: Trends in financial regulation

Structural Regulations		Conduct Regulations		Prudential Regulations	
Functional separation of institutions	↓	Regulations of bank's deposit and lending rates	↓	Deposit insurance	=↑
Entry restrictions	↓	Regulations of fees and commissions	↓	Discount window	=↑
Ownership restrictions	↓	Credit quotas	↓	Restriction on asset concentrations	↓=
Discriminatory rules against foreign investors	↓	Branching limitations	↓	Information disclosure	↑
				Solvency ratios	↑

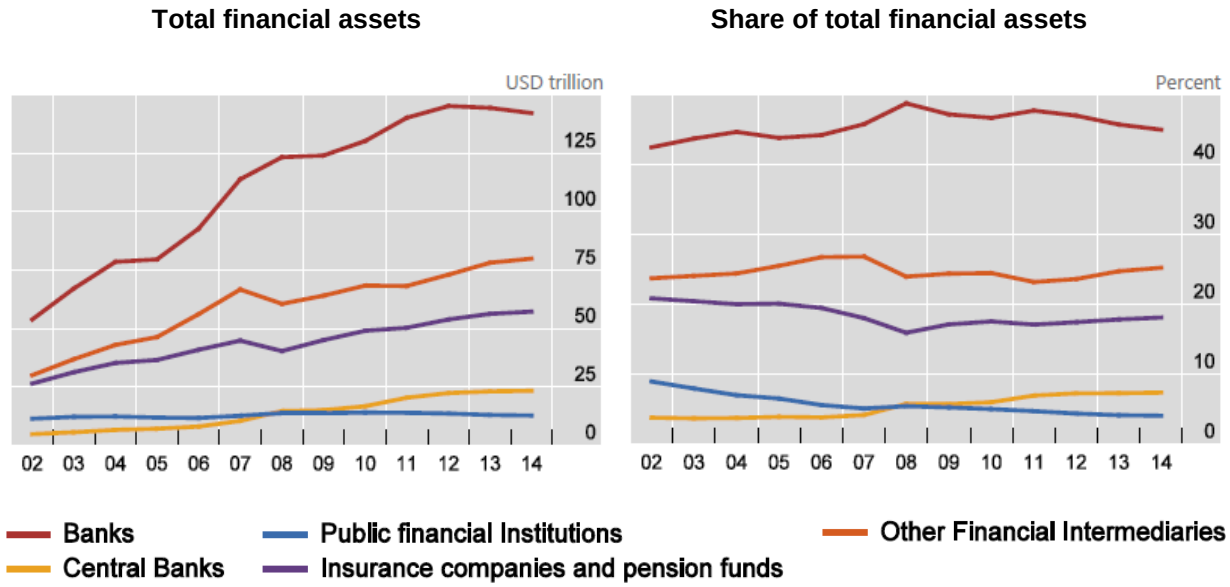
Source: Claessens (2016).

Chart 3: Banks' asset-to-GDP ratio



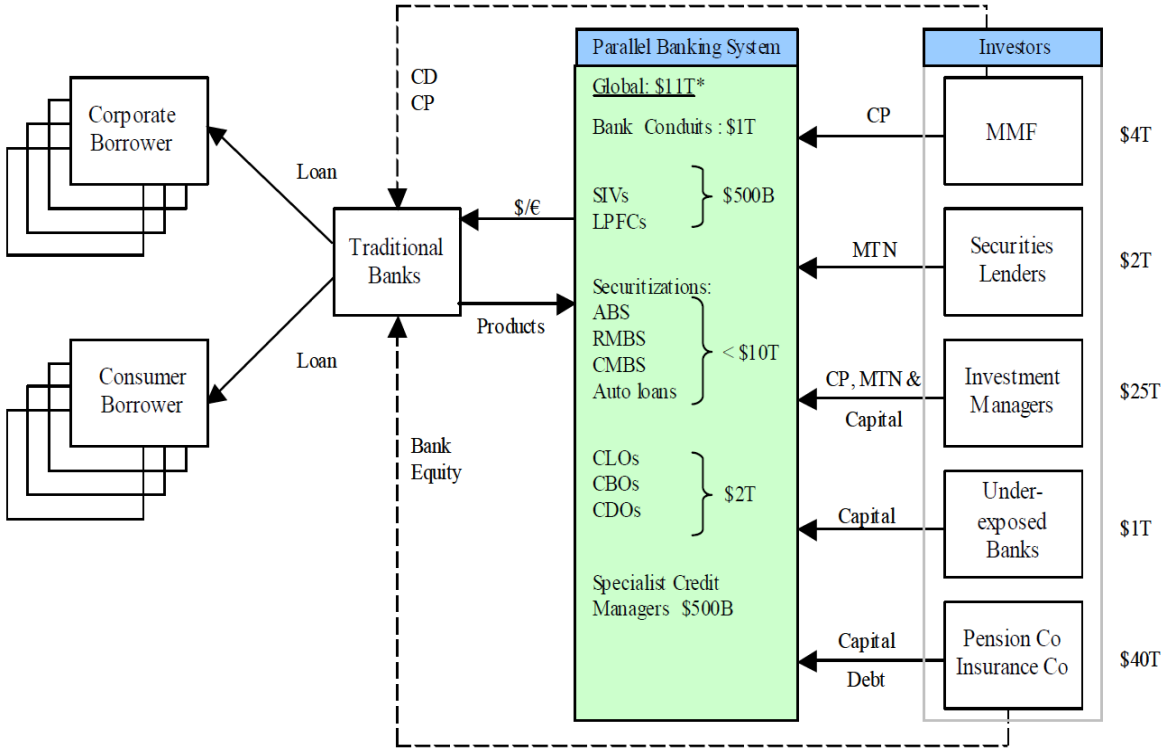
Source: Global Financial Development database, The World Bank.

Chart 4: Assets of financial intermediaries - 20 jurisdictions and euro area



Source: FSB Global Shadow Banking Monitoring Report 2015.

Chart 5: Traditional banking funding via the parallel banking system (pre-crisis numbers)



Source: Gorton (2010).

Chart 6: Basel III phase-in arrangements

Basel Committee on Banking Supervision

BANK FOR INTERNATIONAL SETTLEMENTS

Basel III phase-in arrangements

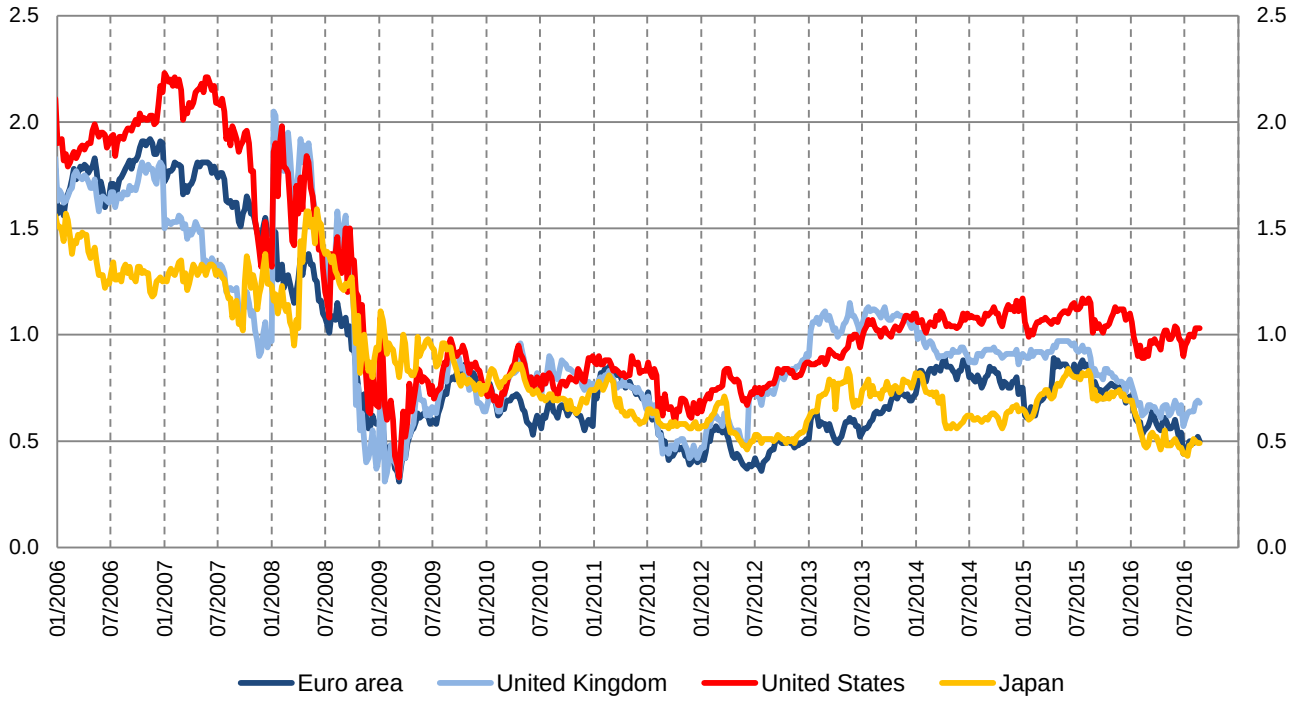
(All dates are as of 1 January)

	Phases	2013	2014	2015	2016	2017	2018	2019
Capital	Leverage Ratio		Parallel run 1 Jan 2013 – 1 Jan 2017 Disclosure starts 1 Jan 2015				Migration to Pillar 1	
	Minimum Common Equity Capital Ratio	3.5%	4.0%	4.5%				4.5%
	Capital Conservation Buffer				0.625%	1.25%	1.875%	2.5%
	Minimum common equity plus capital conservation buffer	3.5%	4.0%	4.5%	5.125%	5.75%	6.375%	7.0%
	Phase-in of deductions from CET1*		20%	40%	60%	80%	100%	100%
	Minimum Tier 1 Capital	4.5%	5.5%	6.0%				6.0%
	Minimum Total Capital		8.0%					8.0%
	Minimum Total Capital plus conservation buffer		8.0%		8.625%	9.25%	9.875%	10.5%
	Capital instruments that no longer qualify as non-core Tier 1 capital or Tier 2 capital		Phased out over 10 year horizon beginning 2013					
Liquidity	Liquidity coverage ratio – minimum requirement			60%	70%	80%	90%	100%
	Net stable funding ratio						Introduce minimum standard	

* Including amounts exceeding the limit for deferred tax assets (DTAs), mortgage servicing rights (MSRs) and financials.

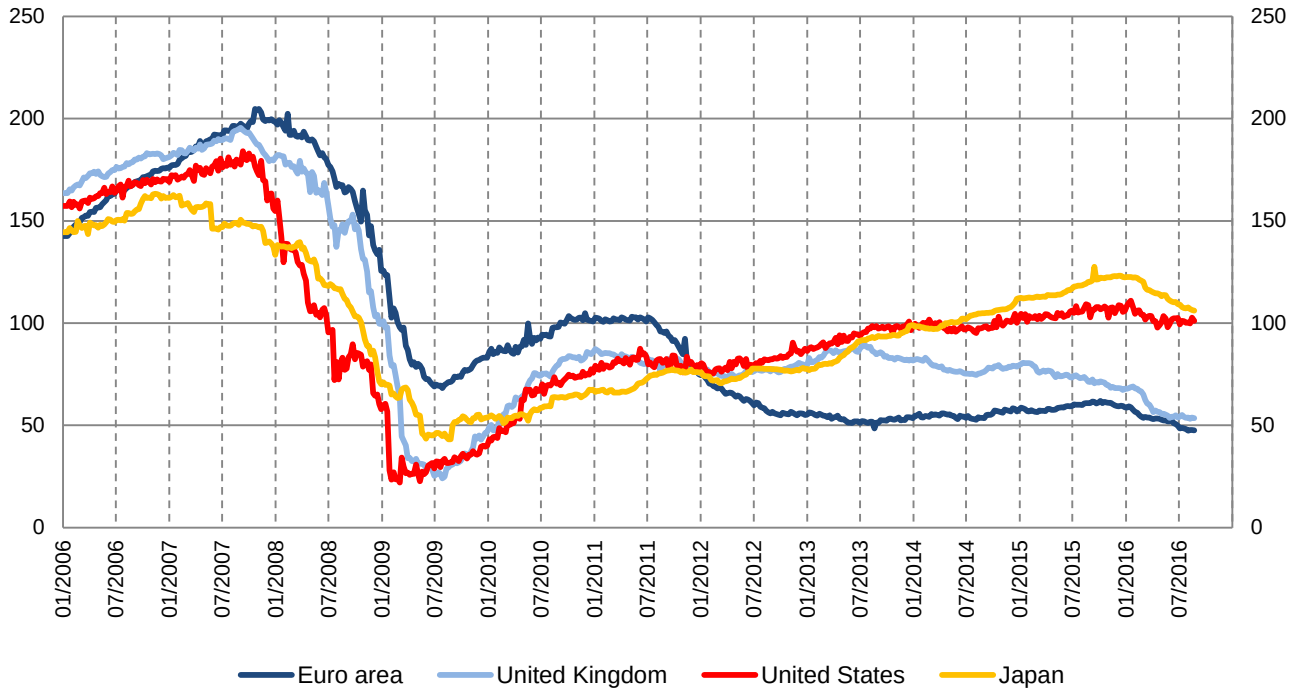
– – transition periods

Chart 7: Bank price-to-book ratio



Source: Datastream

Chart 8: Bank 12-month forward EPS



Source: Datastream

Chart 9: EU banks' leverage - changes by country

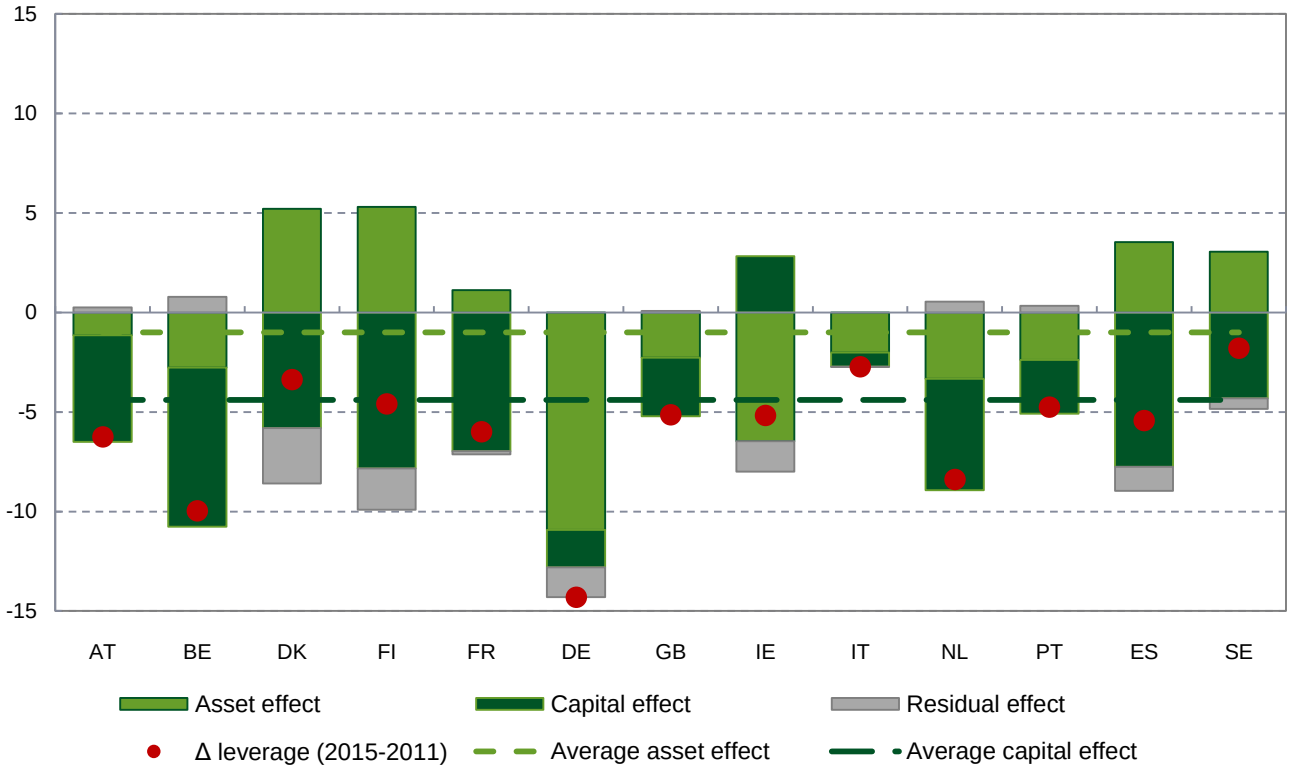


Chart 10: Changes in leverage by country - a closer look at asset growth

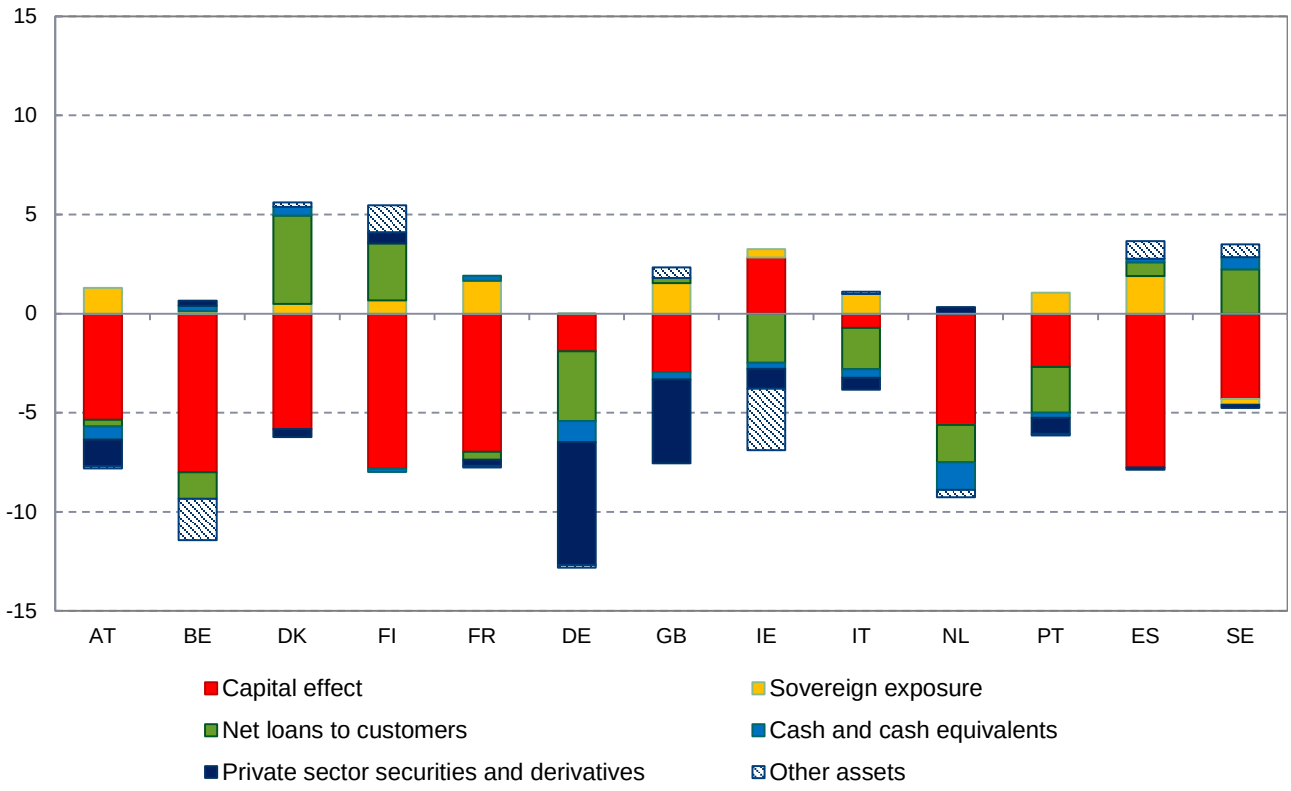
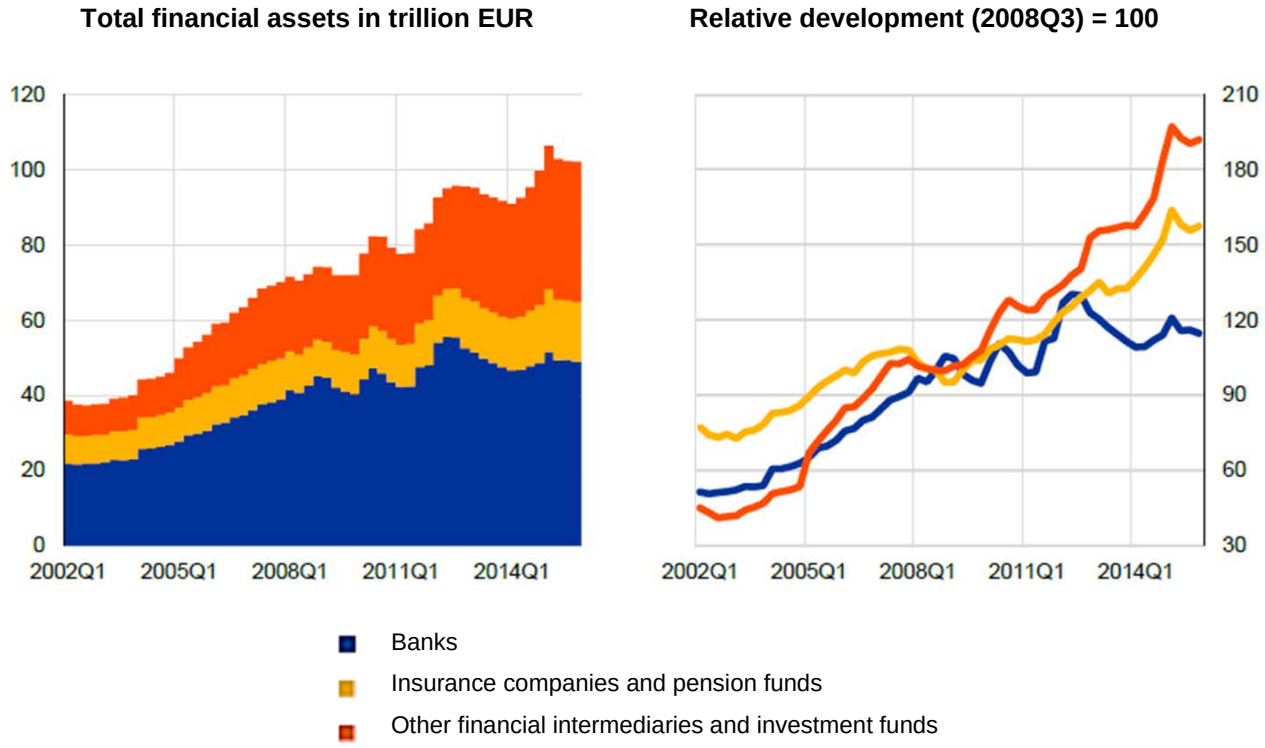
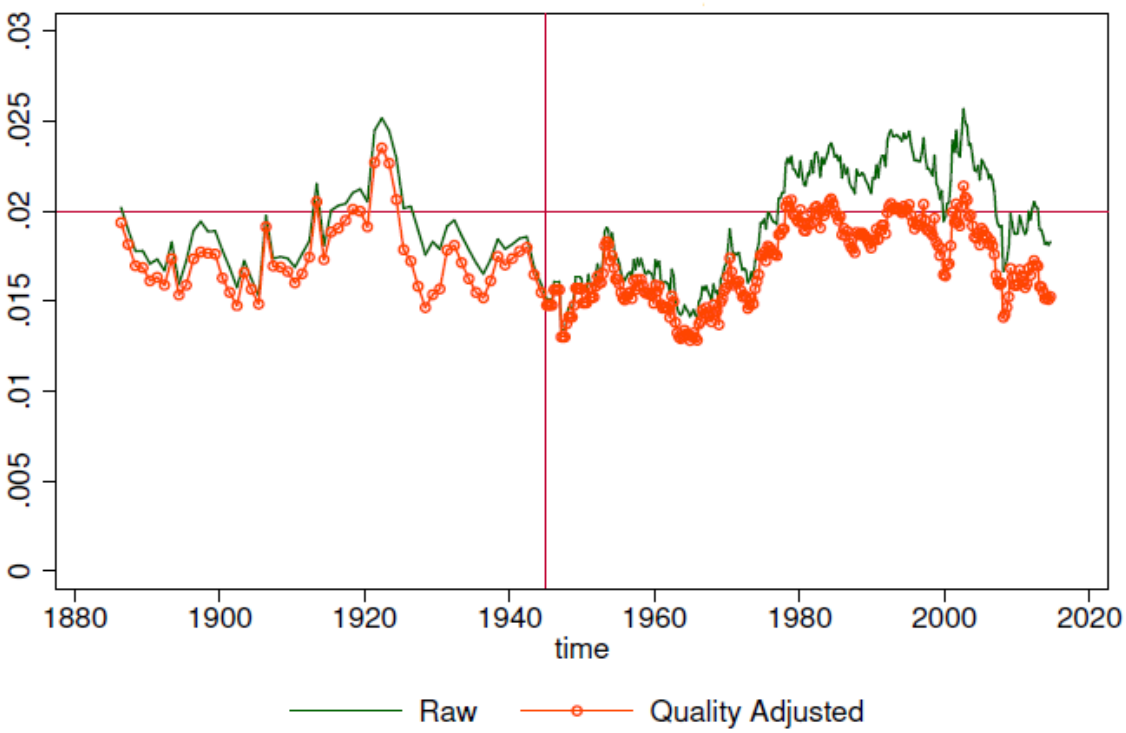


Chart 12: Components of the EU financial system



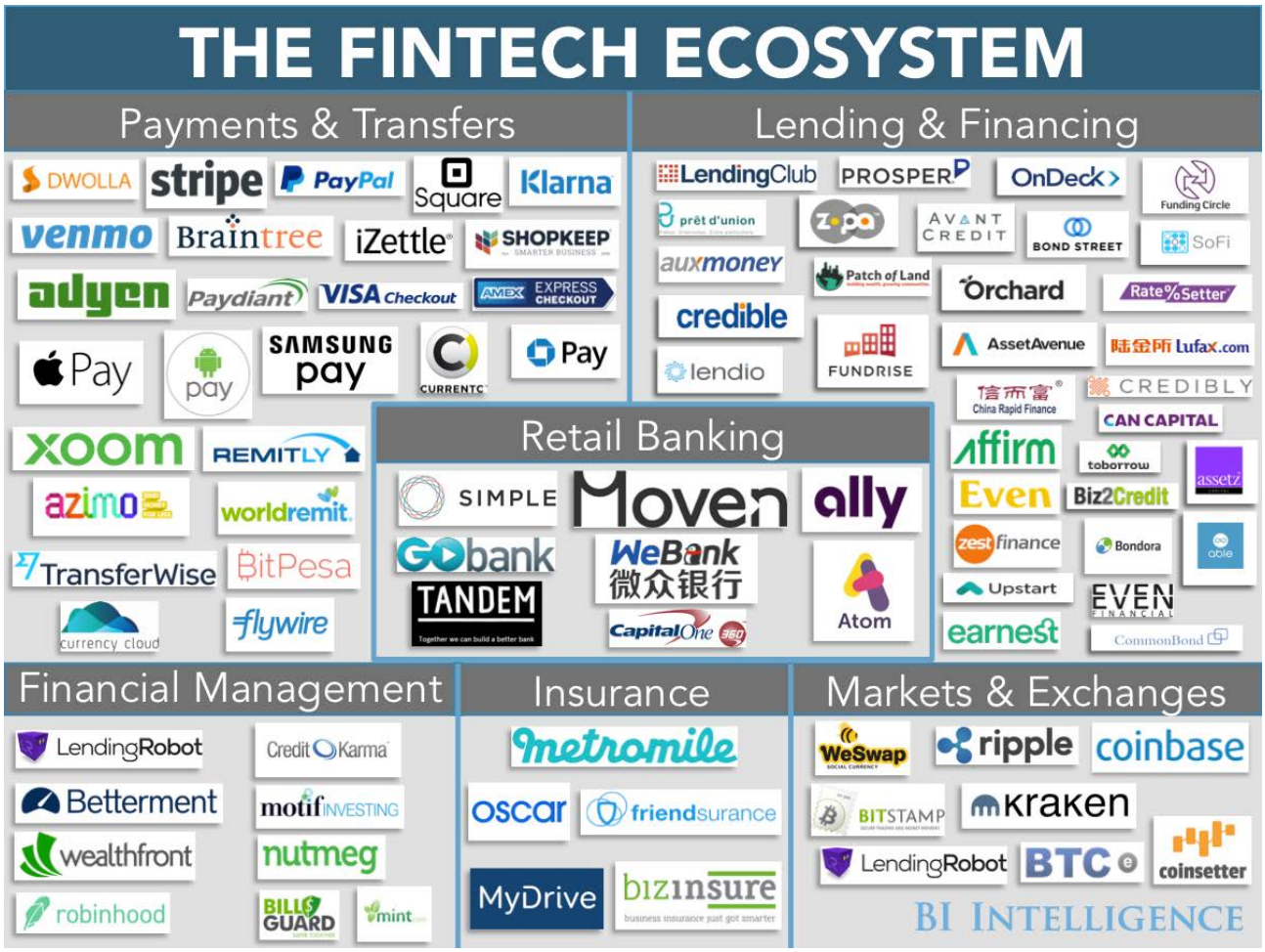
Source: ESRB Strategy Paper on Beyond Banking *(ECB and ECB calculations).*

Chart 13: Unit cost of financial intermediation in the US



Source: Philippon (2016).

Chart 14: The FinTech ecosystem



Source: Businessinsider.