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Abhandlungen

Cross-Border Retail Banking: Exploring the Unknown Financial Globalization in Times of Financial Crises

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Abstract

The surge in cross-border banking prior to the 2007/08 global financial crisis took place not only in the interbank market but also in the retail market, e.g. between banks and their private customers abroad. Cross-border retail activities of banks now account for a substantial share of total international activities. Despite its rising importance, we are just starting to understand the role of cross-border retail banking for globalization and stability. In this study, we assess this less known part of financial globalization by reviewing the development and structure of cross-border banking, identifying the factors that drive retail customers across borders and assessing the impact of financial crises on global retail banking. (F3, F15, F65, G01, G15, G21)

Zusammenfassung

Grenzüberschreitendes Retailbanking: Eine Analyse der „unbekannten" Finanzmarktglobalisierung in Zeiten der Finanzkrise

Der rasante Anstieg des grenzüberschreitenden Bankengeschäfts vor der Finanzkrise von 2007/08 fand nicht nur im Interbankenmarkt, sondern auch im Retailbanking – dem Markt zwischen Banken und ausländischen Privatkunden – statt. Das grenzüberschreitende Privatkundengeschäft hat sich mittlerweile zu einem wesentlichen Teil des internationalen Bankengeschäfts entwickelt. Aber trotz der zunehmenden Bedeutung beginnen wir gerade erst, die Rolle des grenzüberschreitenden Retailbanking für Globalisierung und Stabilität der Finanzmärkte zu verstehen. In dieser Studie nehmen wir eine Bestandsaufnahme dieser un-

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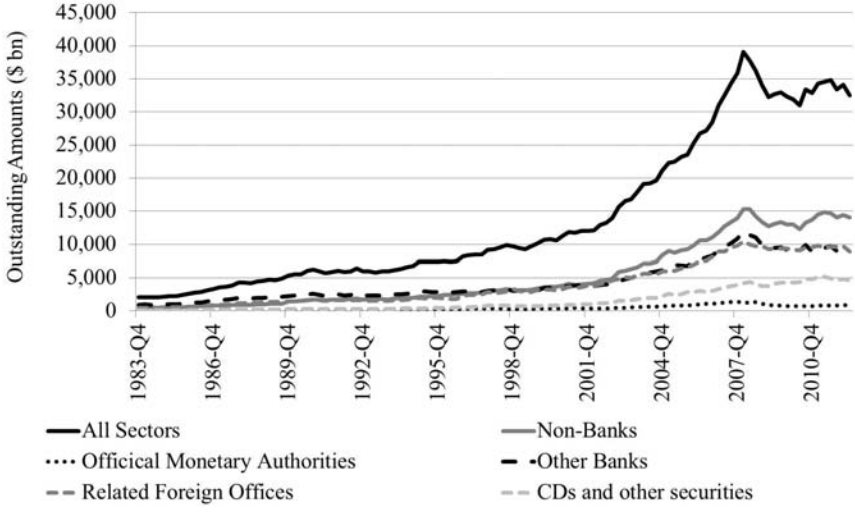
bekannteren Form der Finanzmarktglobalisierung vor. Dazu analysieren wir die Entwicklung und Struktur des grenzüberschreitenden Bankengeschäfts, identifizieren die treibenden Kräfte, die Nichtbanken zu Kunden ausländischer Banken werden lassen, und bewerten auf der Basis empirischer Analysen, welchen Einfluss Finanzkrisen auf das globale Retailbanking haben. (F3, F15, F65, G01, G15, G21)

I. Introduction

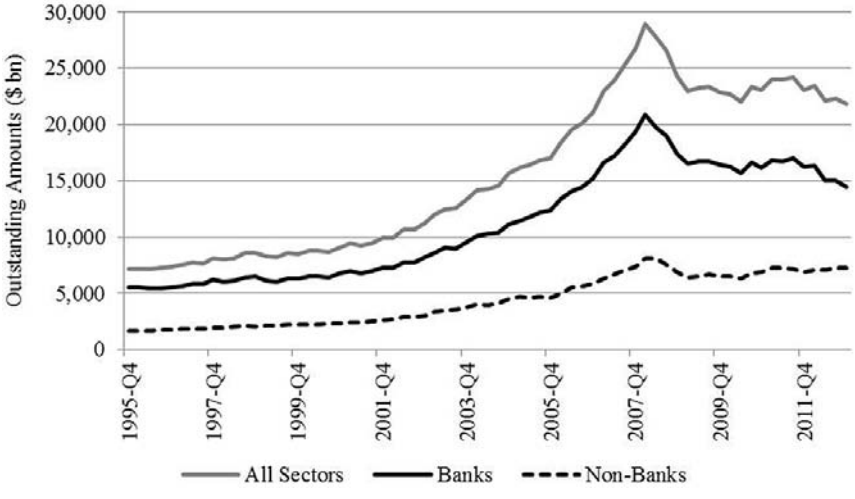
Cross-border banking has been a major driving force of financial globalization in the early 2000s. Likewise, with the financial meltdown following the global financial crisis of 2007/08, cross-border banking has been the driving force of the financial retrenchment. Figure 1 and Figure 2 illustrate the evolution of cross-border loans and deposits from 1996 to 2012 based on the Bank of International Settlements' (BIS) locational banking statistics. Against the background of a striking quadrupling over the last 17 years in both cross-border claims and liabilities, the financial retrenchment is clearly visible and persistent.

Cross-border banking can take different forms. Banks can engage in cross-border banking by means of direct cross-border lending and funding as shown in Figures 1 and 2. This has been dubbed the international model of global banking (*McCauley* et al. (2010)). Alternatively global banks can aim at funding abroad and reaching foreign borrowers indirectly through regional subsidiaries and branches. Some observers detect a long-term trend towards this multinational model of global banking and evaluate it more positively in terms of financial stability than the cross-border model of global banking (*McCauley* et al. (2010)). However, the international model is not uniform and can differ in its implications for financial stability. In particular, cross-border lending and funding can be conducted directly with retail non-bank borrowers and depositors or with unrelated foreign financial institutions. For example, global banks can provide funding to foreign banks through cross-border operations, who, in turn lend to the local borrower rather than funding and lending locally. Likewise, banks may raise funds in foreign markets through the global wholesale banking market, i.e. the money markets, and re-invest in foreign banking markets like the collateralized mortgage market. As *Shin* (2011) convincingly points out, this model of international banking – global wholesale funding and foreign re-investing – is particular vulnerable to financial shocks and has clearly contributed to the 2007/08 financial crisis.

Panel A: Total International Liabilities



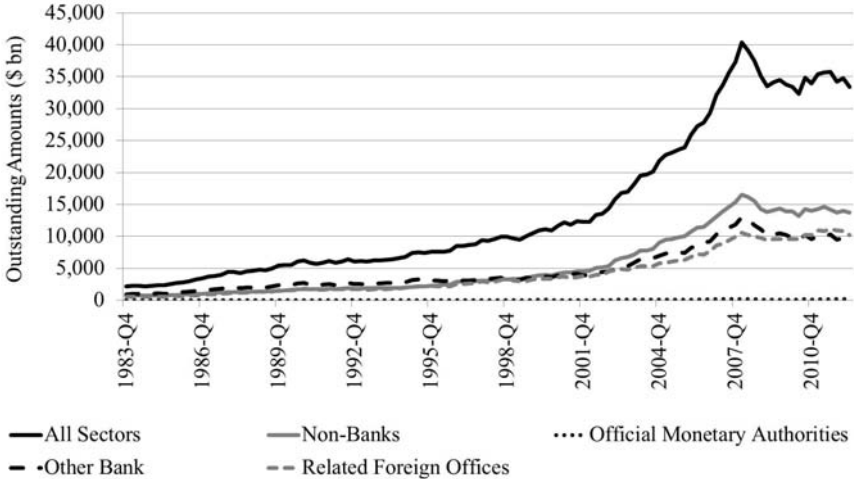
Panel B: Cross-Border Deposits



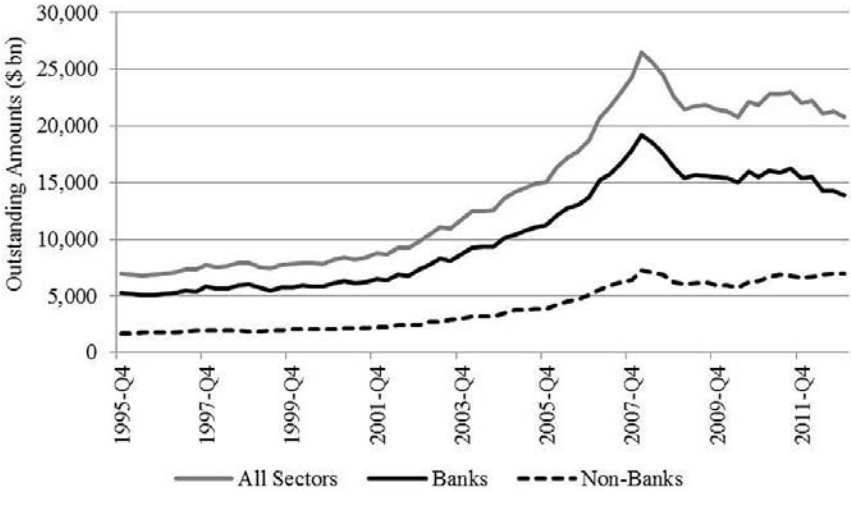
Source: BIS, locational banking statistics.

Figure 1: International Liabilities by Customer Type

Panel A: Total International Claims



Panel B: Cross-Border Loans



Source: BIS, locational banking statistics.

Figure 2: International Claims by Customer Type

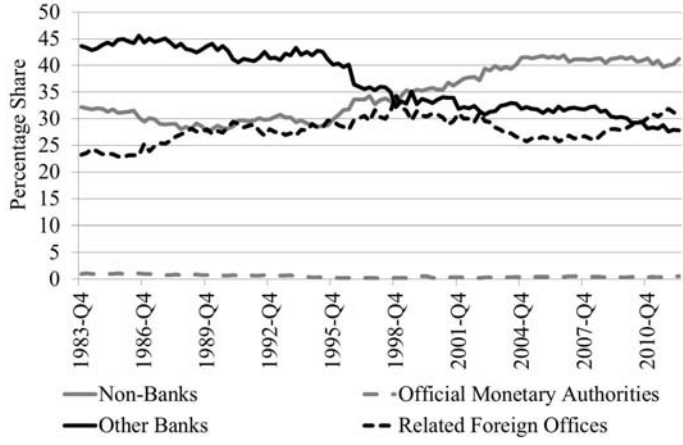
While most studies focus on the role of the interbank market in financial globalization it is often overlooked how much the global retail banking market – direct cross-border lending and deposit taking vis-à-vis individuals and non-financial corporations – has contributed to banking market globalization. Direct cross-border lending and depositing are today a substantial part of cross-border liabilities and claims, respectively. In this paper we shed light on this under-researched form of global banking. In section II we review the historical development of cross-border retail banking. In section III we present and discuss the emerging empirical literature on the economic, institutional and behavioral drivers of and barriers to cross-border retail banking. Section IV focuses on the role of cross-border retail banking for financial stability and in particular we review recent evidence on cross-border retail banking and the impact of financial crisis. Section V concludes.

II. Cross-Border Retail Banking: Historical Developments

In the following we present the evolution and structure of international and cross-border retail banking since the 1980s utilizing the BIS's Locational Banking Statistics.[2] These statistics utilize the concept of residence and come thus closest to balance of payments statistics and the concept of cross-border transactions and mirror the concept of merchandise exports and imports. In line with the recent literature on cross-border finance we analyze gross rather that net cross-border banking assets and liabilities as well as flows. As argued by *Borio/Disyatat* (2011) and *Shin* (2011) this is essential for understanding the 2007/08 crisis because both cross-border lending and depositing have increased simultaneously in the past. In our own studies – see *Kleimeier* et al. (2013) and *Sander* et al. (2013a) – we demonstrate that cross-border depositing and lending are each driven by different factors, thus demanding differentiated analyses.

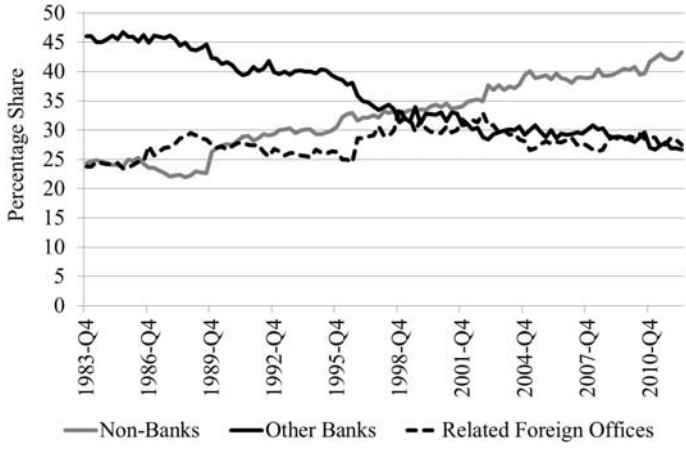
Figures 3 and 4 show that international bank claims as well as liabilities vis-à-vis non-bank retail customers have become the dominant form of international banking in the new millennium. As part of these total international claims and liabilities, the share of cross-border retail loans and deposits as shown in Figure 5 almost doubled.

[2] For details regarding these statistics see *BIS* (2003).



Source: BIS, locational banking statistics.

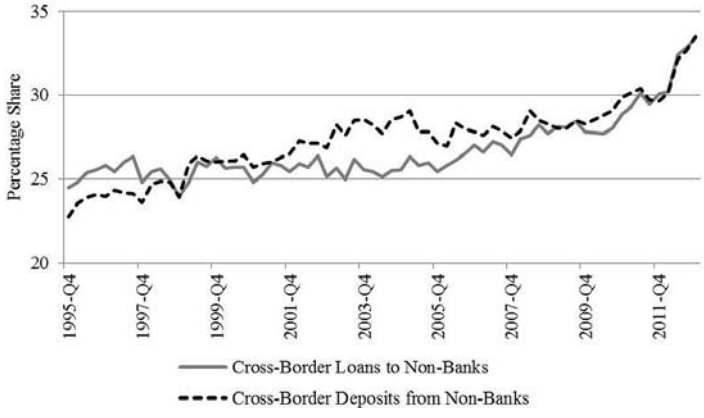
Figure 3: Composition of International Claims by Customer Type



Source: BIS, locational banking statistics.

Figure 4: Composition of International Liabilities by Customer Type

Moreover, the share of retail claims remained stable during and after the 2007/08 crisis while claims to other banks suffered to the benefit of related banks. Even more strikingly, cross-border retail loans gained most market share during and after the 2007/08 crisis. These trends indi-



Source: BIS, locational banking statistics.

Figure 5: Market Share of Retail Positions in Cross-Border Lending and Depositing

cate that reaching borrowers abroad mediated through a non-related foreign banking system has proven to be the most vulnerable banking model in times of global financial crises. The evidence from exchange rate adjusted flows (see Table A1 in the Appendix) confirms this impression: In general it appears that international banking is extremely volatile with the standard deviations exceeding the averages by a multiple. However, claims against foreign unrelated banks are the most volatile international claims, in general and during crises. In tranquil times international claims seem to be even less volatile than claims against related banks. In crises times, though, the volatility of direct loans increases dramatically, especially exceeding that of cross-border lending components to related foreign offices.

Figures 4 and 5 reveal that international liabilities as well as cross-border deposits by non-banks are a major driving force behind the increase in international depositing as indicated by their share in total liabilities or deposits of BIS-reporting banks. This share almost doubled, arguably a consequence of prior financial crises in depositor countries as we will show later. Interestingly this trend has not subsided during the financial crisis as customers are looking for safe havens. This interpretation is also confirmed by the volatility data (see Table A2 in the Appendix): Not only are international liabilities less volatile than claims to related banks in tranquil times, but retail liabilities, though becoming vol-

atile too, are the most stable international liability flows during crisis times. Again liabilities to foreign unrelated banks are the most volatile international liabilities, in general and since the outbreak of the financial crisis.

Looking more deeply into the structure of cross-border retail banking reveals that these banking activities are highly concentrated in several countries that are often engaged with a multiple of their GDP in cross-border lending and depositing. Table 1 is based on table 3b of the BIS locational banking statistics, which reports cross-border loans and deposits from the point of view of the BIS-reporting banks. Next to the well-known tax havens and countries with a high secrecy level, it is interesting to see countries like Belgium and Ireland in the top 10 of cross-border retail banking when scaled by their economic size. Not least the recent financial crisis in Cyprus shows that relatively substantial cross-border banking can pose a problem to financial stability.

Turning to the customer side, borrowing from abroad has also increased dramatically relative to the economy, but again with a strong bias towards few economies (Table A3 in the Appendix). Whereas in the 1990s foreign borrowing used to be below 10 % of GDP, in 2012 it exceeds 50 % in several countries, who thus accept a potentially high exposure to shocks emanating from foreign financial systems. Next to several offshore centers, we find several strong borrowers from the Central and Eastern European Countries, which often resort to bank finance from the more advanced European countries, but we also find countries like the UK and the Netherlands in this group. Moreover, even seemingly similar (financially) developed like France and Germany differ in their exposure. With respect to depositing countries (Table A4 in the Appendix) it is interesting that German residents are more active in cross-border depositing than their French neighbors. Again, among the larger developed countries UK and the Netherlands are the relatively most engaged in cross-border depositing. It is also important to note that the in several Eurozone countries cross-border depositing increased sharply after the introduction of the common currency.

Table 1

Top Ten Bank Countries Making Loans to and Receiving Deposits from Non-Residents Worldwide

	1995	2000	2007	2012
Panel A: Outstanding Amounts of Cross-Border Loans in $ Billion				
United Kingdom	219.3	390.5	1,895.6	1,786.5
United States	122.8	175.5	634.0	928.3
Germany	113.1	245.7	662.5	599.1
Japan	127.6	286.4	316.8	538.5
France	75.7	83.2	215.0	299.6
Netherlands	34.6	45.6	236.8	293.6
Singapore	173.3	92.1	156.7	282.5
Cayman Islands	180.2	180.4	362.6	267.9
Switzerland	57.1	74.7	147.5	151.0
Hong Kong	303.4	82.9	60.8	150.8
Panel B: Outstanding Amounts of Cross-Border Loans in Percent of Bank Country's GDP (1 = 1 %)				
Bahrain	303.0	542.9	1,710.6	1,500.4
Bahamas	1,263.3	677.0	500.4	880.2
Belgium	208.4	234.9	1,152.0	781.3
Luxembourg	456.5	473.8	883.3	721.8
Isle of Man			2,581.0	570.8
Macao			57.2	379.3
Singapore	214.5	114.0	194.0	349.6
Cyprus				250.0
Panama			120.9	183.5
Ireland	24.4	65.6	291.3	161.8
Panel C: Outstanding Amounts of Cross-Border Deposits in $ Billion				
United Kingdom	310.7	401.4	1,572.6	1,698.5
United States	92.1	147.0	952.2	971.6
Cayman Islands	159.6	298.2	726.0	555.8
Switzerland	226.2	281.3	504.2	472.8
Japan	20.4	28.7	153.2	420.8
Netherlands	56.5	69.1	260.7	325.2
Germany	150.9	285.7	436.9	312.5
Singapore	80.6	121.2	198.9	254.2
Hong Kong	64.4	86.9	128.0	219.6
Belgium	54.0	80.9	226.8	201.9

(Continue next page)

(Table 1: Continued)

	1995	2000	2007	2012
Panel D: Outstanding Amounts of Cross-Border Deposits in Percent of Bank Country's GDP (1 = 1 %)				
Isle of Man			6,116.3	4,127.1
Bahamas	2,057.0	2,163.9	4,133.9	3,138.8
Belgium	386.4	578.9	1,622.9	1,444.8
Bahrain	258.3	463.7	987.4	946.8
Luxembourg	733.4	595.9	960.7	750.3
Cyprus				381.9
Singapore	99.8	150.1	246.3	314.6
Panama			114.0	234.6
Macao			128.3	232.7
Ireland	19.9	43.8	436.9	174.4

Source: BIS, locational banking statistics, table 3b.

III. Drivers of and Barriers to Cross-Border Retail Banking

The descriptive analysis has revealed that both, cross-border lending and depositing may move together with economic development, the size of the economy or the size of the domestic financial market – but it also shows that cross-border activities in several countries often substantially exceed or fall below this "normal level". The size of this deviation needs to be explained in more detail and separately for loans and deposits.

A common empirical instrument to analyze the drivers of and the barriers to cross-border finance is the gravity approach. This approach was first applied to international trade by *Tinbergen* (1962) and *Pöyhönen* (1963) and explains cross-border trade flows by the size of both involved economies and the physical distance that separates them. Without any extensions, in this simple framework the distance variable serves empirically as a proxy for all trade costs that constitute barriers or drivers of trade and thus lead to deviations from the expected level of trade according to the sheer size of the involved economies. The trade literature has later refined this distance measure and made clear that distance is a relative concept. One has to take into account not only the absolute distance between any pair of countries, but also the remoteness of both countries involved, the so-called multilateral resistance (e.g. *Bergstrand*

(1985), (1989); *Deardorff* (1998); *Anderson/van Wincoop* (2003)).[3] The gravity approach – and in most cases the extended version that properly accounts for multilateral resistance – has also been successfully applied to cross-border finance and banking (e.g. *Portes/Rey* (2005); *Buch* (2005); *Aviat/Coeurdacier* (2007); *Buch/Lipponer* (2007); *Heuchemer* et al. (2009); *Sander* et al. (2013a); *Kleimeier* et al. (2013)).

While the size variable is less controversial (and measures like GDP or more directly the size of the analyzed financial markets are used in empirical research), the distance variable needs more careful attention given the weightlessness of financial products. Distance is generally understood as a proxy for all type of informational and transactional frictions in cross-border finance that may increase with geographical distance. It is therefore important to disentangle the various driving factors and barriers to cross-border retail banking for both, loans and deposit separately.

1. Cross-Border Loans

Loans are typically subject to information asymmetry and monitoring problems (*Holmstom* (1979); *Holmstrom/Tirole* (1991); *Diamond* (1991)) and as such distance is expected to matter in cross-border lending. In a similar vein, borders and the subsequent differences in regulation matter too. But these differences depend on both, differences in legal and cultural heritage and the attempts to overcome these differences e.g. by means of regulatory convergence. Naturally such approaches can be found and are most advanced in regional integration schemes, though at a different degree: free trade areas (FTAs) constitute the lowest level of integration while the European single market project with a single banking market regulation (though not yet a banking union) may constitute the most advanced attempt to overcome such differences.

In a recent study on the impact of regional integration schemes and currency regimes on cross-border retail banking, we show (*Sander* et al. (2013a)) that deep integration schemes like the European Union (EU) have a strong and positive effect on cross-border loans. According to this

[3] In an empirical gravity model researchers can control for multilateral resistance by introducing country dummies (*Baldwin/Taglioni* (2006)). Alternatively, *Baier/Bergstrand* (2009) have proposed a modification of the explanatory variables. The advantage of this latter method is that the impact of time-invariant country characteristics can be estimated. This is not possible when using country dummies.

empirical analysis, being a member of the EU increases cross-border loans by 49.0 %. Interestingly this does not to apply to other FTAs. Likewise, the study could not establish an EMU effect as the estimate closely misses the 10 % significance level, but one might expect some future impact in case integration momentum and stability of the Eurozone is guaranteed. However, such an effect has not been found for other currency unions, who may even have negative effects.

As long as borders in the broadest sense are of relevance, interest rate differences remain and offer certain possibilities for arbitrage. Moreover and additionally arbitrage may also take place to exploit product differences. In this case, the financial systems of any pair of countries would be complementary. Alternatively, cross-border loans may be driven by differences is financial sector development, thus turning the two financial systems into substitutes. In a study on the Eurozone cross-border loans using a data set from 1999 to 2006, *Heuchemer* et al. (2009) show that both factors, product variety and differences in financial development, have been driving cross-border lending. This reflects the fact that differences in financial development persist in the Eurozone while at the same time highly developed national financial markets coexist. The study again shows that cross-border finance follows trade and FDI, but it also demonstrates that geographical distance still matters and thus supports *Degryse/Ongena* (2005) who argue that it is premature to predict the "death of distance" in European banking. *Heuchemer* et al.'s (2009) empirical evidence supports this conclusion even after they control for cultural differences and differences in legal heritage, which were both found to be highly significant. However, their findings also indicate that confidence in institutions, especially in the EU, matter. Thus, policy makers do have an impact on (regional) banking market integration.

2. Cross-Border Deposits

Similar to cross-border loans, the size of both the country of origin (e.g. customer country) and destination (e.g. bank country) matters, either in terms of economic size or in the terms of the size of the deposit market. While deposits may follow and thus be complementary to economic activities – such as trade, FDI or migration and cross-border labor mobility – peculiarities of the destination markets and their differences from the home market are particularly relevant for the cross-border depositing decision.

Substantial interest rate differences are a clear motivator for cross-border depositing. Moreover, and equally obvious, the literature focuses much on regulatory arbitrage – this can start with differences in deposit insurance systems and extend to differences in taxation and subsequent reporting to the home authority, e.g. the tax evasion motive. For example, *Grilli* (1989) argues that cross-border retail depositing is largely driven by taxation and bank secrecy. *Huizinga/Nicodème* also focus on taxation (2004) and deposit insurance (2006) and confirm that tax evasion is at least a partial explanation for cross-border deposits. In contrast, *Alworth/Andresen* (1992) highlight the role of differences in financial market efficiency, the degree of specialization of financial centers, and – again – bank secrecy. Building on *Alworth/Andresen* (1992), *Fornari/Levy* (2000) argue that financial market characteristics matter more than general macroeconomic factors – a reasonable conclusion given the enormous role of offshore centers. The very substantial size of several cross-border liabilities relative to GDP in such countries (shown in the previous section) speaks for itself. But this effect may even be relevant when such tax havens are excluded from an analysis. In other words, even small regulatory differences may matter and regulatory approximation may thus reduce the incentives for cross-border depositing. Empirical evidence would thus indicate that the on-going debate to substantially reduce bank secrecy in Europe will indeed be effective in reducing cross-border deposits.

In *Sander* et al. (2013a) we show, that cross-border deposits have in general been driven by the existence of an FTA agreement between the bank and customer country. However, such an effect is not statistically significant for the EU. In the European context, the EMU effect seems to dominate as it is significantly positive and with 30.7 % also quantitatively important. It is also noteworthy that a similar but slightly smaller effect (25.1 %) is found for other currency unions as well. In sum, it seems that shallow FTA agreements promote cross-border deposits – possibly because cross-border finance is more deregulated while larger differences in regulation act as an incentive, which can be further promoted by common currency. In the European context, regulatory differences seem to be important still, but it was not so much the single market but the single currency that has helped promoting the European mobility of deposit(or)s.

In a different, yet unpublished study we have focused on the determinants of Eurozone cross-border depositing (*Sander* et al. (2013b)). For the pre-crisis times we show that cross-border deposits follow the market size and other cross-border economic activities, yet cultural distances

still matter while physical distance loses its impact – at least in a fully specified gravity model that covers all relevant determinants. Likewise and in line with the literature we find strong evidence for depositors going to countries with higher bank secrecy and better deposit insurance than at home. Likewise a high tax burden at home is also identified as a strong driver of cross-border depositing. Despite the long history of European integration, national cultural features still matter: countries with a high individualistic cultural trait tend to be more prone to depositing abroad, while those nations who report a high level of trust seem to have this trust in their own country rather than in others. Thus they tend to deposit significantly less abroad than their less trusting European fellows. However, it is remarkable that confidence in EU institutions is a strong driver of cross-border depositing in the Eurozone.

IV. Cross-Border Retail Banking and Financial Crises

Cross-border retail banking links the fortunes of banks and customers across countries. These international banking activities offer potential benefits and costs for both, the banks and the customer as Table 2 summarizes. As usual in international finance both groups of participants in cross-border lending and depositing can gain from diversification benefits. Banks typically gain from cross-border banking as it cushions shocks emanating from the real domestic economy, either because banks have a portfolio of foreign loans that is not affected by a crisis-induced increase in borrower default or because banks can rely on more stable foreign funding.[4] Conversely banks heavily engaged in cross-border banking are more vulnerable to shocks in the real sector abroad. Similarly, customers also gain in general from diversification benefits, but they expose themselves to foreign financial crises. At the same time, however, funding and depositing abroad can cushion the impact of a domestic financial crisis.

In global banking outside stable and undisputed currency unions, the situation can be more complicated depending on the currency composition of loans and deposits as exchange rate risks are to be considered, especially as financial and real crises can lead to currency crises and result in especially severe twin crises, where effects of banking and currency crises are combined (*Kaminsky/Reinhardt* (1999)). Moreover, finan-

[4] This assumes that entering or extending foreign retail funding is costly and cannot immediately fill gaps when a crisis arrives.

Table 2

Costs and Benefits of Cross-Border Banking

	Customer	Bank
Panel A: Cross-Border Loans		
Benefits	Diversification	Diversification
	Insurance against local financial crisis that restrict loan supply	Insurance against crisis originating in domestic real sector
Costs	Vulnerability to foreign financial crisis when banks reduce foreign loans	Vulnerability to crisis in foreign real sector
	Vulnerability to exchange rate risks for loans denominated in foreign currency	
Panel B: Cross-Border Deposits		
Benefits	Diversification	Diversification
	Insurance against local financial crisis	Insurance against crisis originating in domestic real sector
	Potential exchange rate gains	
Costs	Vulnerability to foreign financial crisis	Vulnerability to crisis in foreign real sector
	Potential exchange rate losses	

cial crises can occur in the bank country, in the bank country or in both at the same time. Especially during a global financial crisis with a strong repercussion on the real economy, the benefits of cross-border banking quickly can evaporate, leaving banks and depositors with only the costs.

The focus of the cross-border banking literature has been on financial crisis in bank countries and not in customer countries. Most of the studied financial crises are banking rather than currency crises due to the fact that most global banks are headquartered in advanced countries There is strong evidence that such financial crises in banking countries typically lead to a reduction in direct cross-border lending by these banks (*Ivashina/Scharfstein* (2010); *Cetorelli/Goldberg* (2010); *Herrmann/Mihaljek* (2010); *Milesi-Ferretti/Tille* (2010); *Takats* (2010)). However, this "flight

home" effect is also documented for both, the local lending by foreign branches or subsidiaries (*Peek/Rosengren* (2000); *Milesi-Ferretti/Tille* (2010); *Popov/Udell* (2010); *Cetorelli/Goldberg* (2010) and (2012)) and even in the corporate syndicated loan market during the 2007/08 crisis (*Giannetti/Laeven* (2012)). While the home bias in bank's loan portfolio tend to increase in crises periods in general, *De Haas* et al. (2013) caution, however, that the negative impact of crises on cross-border lending can be mitigated when banks are geographically closer to the borrower and have strong ties to local banks. Thus, both the international as well as the multinational model of global banking can expose foreign borrowers to lending shocks when financial crises occur in the foreign bank countries.

The situation will be reversed when financial crises – in particular banking crises – occur in customer countries or are investigated from the customer's point of view. For the borrower, crises typically lead to reductions in loan supply and may even result in a credit crunch and/or credit rationing. Borrowing abroad is therefore a means to insure against financial crises at home. This argument, however, comes with three major caveats. First, foreign cross-border lending is even more prone to information asymmetry problems than domestic lending. Moreover, differences in legal systems as well as cultural differences are relevant barriers to cross-border lending as argued earlier in the Eurozone context (*Heuchemer* et al. (2009)). But such borders typically represent fixed costs. Once banks and customer have engaged in cross-border lending and borrowing, respectively, these problems have been addressed and do not matter anymore for the duration of the crisis. Second, instead of resorting to cross-border borrowing, customers in crisis-affected countries can resort to foreign banks operating in their country. As subsidiaries and branches of foreign banks can rely on home country or even global funding they are less likely to ration credit and can have a stabilizing effect, thus reducing the demand for cross-border credits. However, the empirical evidence on this effect is relatively weak (*Arena* et al. (2006)).[5] Third, the currency denomination of loans matters as borrowing in foreign currency exposes the borrowers to currency risks. If a financial crises has for example already led to a substantial reduction in the home currency's value, foreign borrowing can became more attractive, particularly after a severe financial

[5] *Dages* et al. (2000) demonstrate that during financial crises in the 1990s in Argentina and Mexico foreign banks contributed to a stabilization of domestic credit supply. However, this effect is attributed to the health of these foreign banks rather than to their nationality.

(twin) crisis. In sum, while demand for cross-border credits may or may not increase, the total effect of financial crises on cross-border lending is also ambiguous because supply may be reduced depending on how foreign lenders evaluate the crisis resolution process. If, however, cross-border lending increases we would expect that this effect becomes permanent after banks and customers have invested in overcoming informational imperfections. Hence, the impact of customer country financial crises on cross-border lending calls for more empirical analyses.

Turning to cross-border depositing it is clear that depositors, regardless of whether they are domestic or foreign, can always react to banking crises. More precisely: in anticipation of banking crises, depositors can withdraw deposits or demand higher interest rates from banks that are considered to be riskier. This so-called direct market discipline (*Berger* (1991)) is strongest when no deposit insurance exists or when depositors hold uninsured levels of deposits above the deposit-insurance ceiling. However, the empirical evidence for direct market discipline is weak except for periods of crisis when depositors realize the problem and "vote with their feet" (*Rochet* (2004), P. 60). Evidence for the US during the saving and loans crisis (*Park/Peristiani* (1998)) as well as during the banking crises in Argentina, Chile, and Mexico in the 1980s and 1990s (*Martinez Peria/Schmuckler* (2001)) indicates that troubled banks can still be able to attract funds by paying higher interest rates. Market discipline is crucially influenced by specific features of deposit insurance schemes, but it is also extremely important how credible these insurance schemes are (*Demirgüç-Kunt/Huizinga* (2004)). However, as argued by *Martinez Peria/Schmuckler* ((2001), P. 1031) depositors are likely to increase market discipline as "traumatic episodes may act as wake-up calls for depositors." The 2013 discussion regarding the rescue package for Cyprus, where in the first announcement the troika of EU, IMF and ECB suggested to bail in even depositors with insured deposits below 100,000 € illustrates this point vividly. One might therefore expect depositors not only to withdraw deposits from troubled domestic banks but also move them out of the domestic banking market, e.g. deposit them abroad. This "flight to safety"- effect has also been documented during the Asian crisis of 1997/08 (see e.g. *Ding* et al. (1999)).

In a recent study (*Kleimeier* et al. (2013)) we investigate the impact of financial crises on direct cross-border retail banking. In line with existing literature we analyze cross-border loans and deposits separately. For this empirical analysis we are using global BIS data for 23 bank coun-

tries and 165 customer countries over the period 1995–2008. Our focus is on not only on the bank reaction to financial crisis but also and in particular on how the retail customers respond to financial crisis at home. With respect to financial crises we consider systemic banking crises, currency crises and the simultaneous occurrence of both, e.g. twin crises.[6] We also investigate a sample excluding and including the first year of the financial crisis of 2007/08. Our results indicate the following results with respect to cross-border loans. In the case of systemic banking crises we find the following:

– Crisis-affected borrowers look early on for funding sources abroad. Cross-border loans increase in the year before the crisis by 60 %, in the crisis year by 55 % and in the post-crisis year still by 22 %.

– These effects have not been visible before the 2007/08 crisis. Thus it seems to be a special effect related to the recent global crisis.

– During the global 2007/08 crisis there was a clear build-up of cross-border lending already before the banking crisis became systemic and it led to a sharp deleveraging from in the year after the outbreak of the crisis.

In sum, we find that previous banking crises had no effect on cross-border loans on average, thus reflecting the interaction of supply and demand forces that can result in ambiguous results. However, the 2007/08 financial crisis was truly different in this respect.

In contrast, currency crises lead to more cross-border borrowing mainly after the onset of the crisis and twin crises provide a particularly strong push towards cross-border loans. This is in line with our argument that deep depreciations of the home currency make borrowing abroad more attractive, especially if the local banking system is suffering from a crisis too. Moreover, from the supply side, the willingness to provide cross-border loans might increase after a deep-reaching adjustment which typically follows twin crises.

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[6] A systemic banking crisis is defined as a "situation where a substantial number of borrowers default or experience repayment difficulties leading to a sharp increase of non-performing loans for lenders and to an exhaustion of capital for the banking system as a whole". A currency crisis is defined as "a nominal depreciation of the currency of at least 30 percent that is also at least a 10 percent increase in the rate of depreciation compared to the year before", and a twin crisis is "a banking crisis in year t, combined with a currency crisis during the period $[t-1, t+1]$" (*Laeven/Valencia* (2008), (2010)).

Regarding cross-border deposits we find the following during systemic banking crises:

– Customers hold higher levels of deposits abroad already in the year before a crisis (+ 35 %), during the crisis (+ 25 %) and in the year after the crisis (+ 22 %).

– Again, this is true only when the 2007/08 crisis is included. Earlier (when restricting our sample to 2005) customers moved deposits abroad only after the start of the crisis. Thus, in line with the wake-up call argument, crisis-affected depositors look for safe havens for their deposits abroad. This is very much. Depositors typically seem not to anticipate banking crises – or at least do not react to it.

– Consequently we find that "this time is different" as customers anticipated the crisis before it became systemic in their home countries.

We also find no anticipation and thus subsequent increases of cross-border depositing in the case of currency and twin crisis. Currency crises lead to higher cross-border depositing only in the crisis year (16 %) and in the post-crisis year (14 %). Twin crises lead to higher cross-border depositing in the crisis year (17 %) and in the post-crisis year (18 %).

But this time may be different as fewer safe havens are available – at least banking globalization will become more concentrated in certain safe havens. In *Sander* et al. (2013b) we study the impact of the 2007/08 financial crisis on Eurozone cross-border depositing and find a very strong resurgence of cultural priors during the years after 2007 as determinants of cross-border investment behavior. Moreover, differences in deposit insurance schemes do not play a role anymore as their credibility depends crucially on the fiscal situation of the government in absence of a Eurozone banking union. Likewise, the former evidence for tax evasion motives disappears during crisis times.

Finally we also investigate the long-term effects of financial crises on cross-border lending and depositing. We find that customers in crisis-affected countries tend to use cross-border banking more intensively also in the long-term as they may shift their business to foreign banking markets permanently after overcoming the initial fixed cost of going abroad. In this sense financial crises have in the past also contributed to banking globalization.

We therefore conclude that cross-border retail banking is therefore not only a cause but also a consequence of financial instability. In this sense,

financial stability in home country financial markets can help to decrease the desire for borrowing and depositing abroad.

V. Conclusions

In this paper we present the geography of the cross-border retail banking market and its role in banking market globalization. While international retail banking has gained substantial market share at the expense of the international interbank market, this "unknown" financial globalization has until recently been largely disregarded by researchers.

Current evidence leads to several key findings: There is a distinct geography in international retail banking despite the weightlessness of financial products. Some barriers to retail cross-border banking seem to be "natural", e.g. are ingrained in the culture and the cultural differences of bank and customer countries. Other barriers, however, are more transient and thus provide policy makers with tools to stimulate financial globalization, for example via currency unions, FTAs or by generating trust in institutions.

Retail banking responds to financial crises in a distinctly different manner than wholesale banking. While crises lead to reduced globalization for the affected banks, customers respond in the opposite way. For them, crises are a reason to engage in more cross-border banking i.e. with banks in crisis-free countries. Thus, crises can also lead to more globalization. This indicates that a return to a more (multi-) national rather than international banking system – as currently envisioned proposed by some researchers and policymakers – may limit diversification benefits and insurance against domestic financial. But these benefits come with risks, too. Especially the global financial crisis shows that safe havens have become a very scarce species and formerly steady foreign suppliers of loans are in even more troubles than those at home, especially when financial crises in the core countries extend into the real sector. Financial crises in destination countries can erode the assumed benefits quickly as the Eurozone crisis shows, not least the case of Cyprus.

It would be too far-fetched to roll-back cross-border banking. However, the presented data and empirical analyses show that tax havens often profited excessively. This points to the urgent need to make both, national and global banking markets more crises resistant. Local funding and lending, together with strong and stable financial development and financial regulation is key to achieving this objective. The world does not

need tax havens but financial markets that do their job of financing the real economy and offering safe stores of value, if need be with global banking but with a regulation that is at par with market developments and not lagging behind.

Appendix

Table A1

Cross-Border Claims

Exchange Rate Adjusted Flows 1983:4 to 2012:2 in $ Million

	Total	Claims on Non-Banks	Claims on Other Banks	Claims on Related Foreign Offices	Claims on Official Monetary Authorities
Pre Crisis (1983:4 to 2007:2)					
SD	424,889	161,762	174,210	153,381	7,990
Average	260,505	105,081	74,573	79,556	1,296
CV	1.63	1.54	2.34	1.93	6.17
Post Crisis (2007:3 to 2012:2)					
SD	870,076	396,480	360,190	260,742	15,034
Average	–9,677	29,239	–95,785	56,510	358
CV	–89.91	13.56	–3.76	4.61	41.98

Note: SD indicates standard deviation, CV indicates coefficient of variation. Source: BIS, locational banking statistics.

Table A2

Cross-Border Liabilities

Exchange Rate Adjusted Flows 1983:4 to 2012:2 in $ Million

	Total	Liabilities vis-à-vis Non-Banks	Liabilities vis-à-vis Other Banks	Liabilities vis-à-vis Related Foreign Offices
Pre Crisis (1983:4 to 2007:2)				
SD	393,070	156,957	166,489	141,548
Average	249,707	96,619	65,846	75,237
CV	1.57	1.62	2.53	1.88

(Continue next page)

(Table A2: Continued)

Exchange Rate Adjusted Flows 1983:4 to 2012:2 in $ Million				
	Total	Liabilities vis-à-vis Non-Banks	Liabilities vis-à-vis Other Banks	Liabilities vis-à-vis Related Foreign Offices
Post Crisis (2007:3 to 2012:2)				
SD	881,586	373,917	428,609	261,296
Average	10,799	51,920	–40,010	22,244
CV	81.64	7.20	–10.71	11.75

Note: SD indicates standard deviation, CV indicates coefficient of variation. Source: BIS, locational banking statistics.

Table A3

Top 20 and Other Selected Customer Countries Receiving Cross-Border Loans from Non-Resident BIS-Reporting Banks

	1995	2000	2007	2012
Panel A: Outstanding Amounts in $ Million				
United States	251.596	523.480	1.656.523	1.285.612
Offshore centres	152.464	222.610	821.721	970.157
United Kingdom	99.145	163.278	769.211	825.375
Cayman Islands	45.812	101.849	362.464	362.178
Germany	116.704	114.414	229.025	308.025
France	35.328	73.169	244.918	307.564
Netherlands	37.679	69.233	267.963	288.405
Luxembourg	12.576	20.509	157.036	241.002
Ireland	22.620	34.036	194.608	222.453
Japan	339.827	98.354	121.959	213.068
Switzerland	25.910	44.525	132.737	146.290
China	15.408	13.381	30.697	140.859
West Indies	7.392	15.309	79.159	116.314
Hong Kong	18.884	19.278	51.648	103.854
Panama	25.423	26.919	48.579	96.140
Spain	16.082	18.833	100.003	88.853
Brazil	30.075	28.107	39.328	88.491
Canada	34.525	24.405	53.072	84.203
Belgium	16.991	29.474	73.434	82.557
India	8.679	11.550	31.056	78.988

	1995	2000	2007	2012
Panel B: In Percent of Customer Country's GDP (1 = 1 %)				
Marshall Islands	0,0	0,0	11.636,9	25.800,0
Liberia	11.018,5	12.038,8	11.652,3	18.885,3
Bermuda	615,7	1.035,8	3.097,7	3.025,9
Isle of Man		0,0	1.846,1	2.234,6
Samoa	1,0	5,0	479,3	1.808,3
Panama	321,6	340,5	614,4	1.216,0
Luxembourg	60,8	99,2	759,6	1.165,8
Bahamas	233,5	355,6	704,9	707,3
Belize	3,7	128,3	249,0	475,9
Barbados	10,4	19,4	476,7	436,6
Qatar	31,8	65,4	202,9	425,4
Seychelles	3,7	20,3	152,5	417,9
Cyprus	41,7	53,9	261,3	362,4
Ireland	33,7	50,8	290,3	331,8
Mauritius	8,2	20,3	162,9	307,6
Malta	41,2	52,1	176,1	249,1
St. Vincent	60,4	132,1	237,4	203,4
Liechtenstein	139,3	147,9	271,1	155,7
Tuvalu	0,0	0,0	0,0	154,2
Andorra	10,3	9,6	128,3	117,8
– *Other Selected Countries* –				
United Kingdom	8,6	14,1	66,5	71,3
Netherlands	9,0	16,5	64,0	68,8
Bulgaria	3,3	2,7	44,6	56,7
Estonia	0,8	7,6	71,6	56,2
Slovenia	1,9	6,3	35,0	48,5
Romania	2,9	4,4	39,1	47,5
Switzerland	8,0	13,7	41,0	45,2
Latvia	1,6	2,9	49,0	43,8
Turkey	7,2	13,8	40,8	42,3
Hungary	4,9	7,1	32,3	37,9
Slovakia	2,9	8,1	17,7	33,5
Greece	6,1	15,1	18,9	32,0
Belgium	6,0	10,4	25,8	29,0
Czech Republic	3,6	5,3	24,0	28,0
Poland	2,2	3,7	16,8	21,8
France	2,2	4,7	15,6	19,6

(Continue next page)

(Table A3: Continued)

	1995	2000	2007	2012
United States	3,4	7,1	22,6	17,5
Portugal	9,4	8,4	20,4	15,4
Spain	2,7	3,2	16,8	14,9
Germany	4,6	4,5	9,1	12,2

Source: BIS, locational banking statistics. table 7b.

Table A4

Top 20 and Other Selected Customer Countries Making Cross-Border Deposits to Non-Resident BIS-Reporting Banks

	1995	2000	2007	2012
Panel A: Outstanding Amounts in $ Million				
United States	300	589	1.693.616	1.604.649
Offshore centres	253	391	1.345.327	1.308.367
United Kingdom	89	168	1.071.258	925
Cayman Islands	58	147	531	522
Germany	203	130	314	382
Ireland	14	31	168	274
Netherlands	111	134	263	232
France	57	50	167	210
West Indies	21	49	197	210
Luxembourg	16	33	190	193
Switzerland	52	65	223	164
Japan	27	54	131	139
Jersey		64	91	103
China	3	8	50	100
Hong Kong	54	40	113	95
Panama	33	32	80	76
Canada	13	20	47	76
Italy	44	41	55	71
Belgium	38	41	73	69
Singapore	12	18	51	67
Panel B: In Percent of Customer Country's GDP (1 = 1 %)				
Liberia	7.962,2	6.930,6	12.639,8	11.166,4
Marshall Islands	0,0	0,0	4.890,6	9.057,4
Samoa	16,0	52,9	1.988,7	4.308,1
Bermuda	642,4	890,3	4.259,8	3.101,6

	1995	2000	2007	2012
Isle of Man		1,0	2.772,6	2.071,0
Belize	22,6	220,0	1.066,0	1.880,3
Seychelles	14,0	28,5	500,4	1.522,5
Equatorial Guinea	13,4	17,2	262,8	1.518,5
Bahamas	273,5	824,8	1.549,7	1.162,6
Barbados	95,0	193,9	654,1	1.091,5
St. Vincent	136,6	332,4	1.155,4	962,5
Panama	421,1	401,9	1.017,3	956,0
Luxembourg	79,0	159,0	921,1	935,0
Ireland	21,2	46,1	251,2	408,8
Qatar	14,6	32,2	56,0	373,3
Cyprus	26,9	38,7	210,9	232,8
Liechtenstein	227,8	203,0	291,2	232,1
Malta	33,0	26,1	279,9	215,2
Mauritius	5,4	21,0	191,8	199,1
Vanuatu	131,3	61,4	220,1	144,1
– Other Selected Countries –				
United Kingdom	7,7	14,5	92,6	80,0
Netherlands	26,4	32,0	62,8	55,3
Switzerland	16,0	20,1	68,8	50,6
Belgium	13,2	14,4	25,8	24,2
Greece	11,1	10,3	12,5	23,2
United States	4,1	8,0	23,1	21,9
Estonia	2,5	5,0	9,6	16,2
Germany	8,0	5,1	12,5	15,1
Hungary	2,0	1,6	6,7	14,3
France	3,6	3,2	10,6	13,4
Bulgaria	2,0	2,5	10,8	12,7
Turkey	5,0	5,2	16,6	12,1
Portugal	6,4	9,4	16,0	11,5
Latvia	2,1	5,8	6,7	9,6
Czech Republic	1,0	1,8	5,6	8,3
Slovakia	0,6	1,0	4,4	8,0
Spain	5,1	6,3	8,5	7,3
Italy	3,9	3,6	4,9	6,3
Romania	0,6	1,0	4,0	4,9
Slovenia	2,4	2,2	5,3	4,7
Poland	1,0	0,9	2,2	3,3

Source: BIS, locational banking statistics, table 7b.

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