

Banking industry hit hard by market turmoil in China—Is China causing the next financial crisis?

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### Key topics

#### I. State of the banking industry (p. 2)

- Despite good P&L results in recent quarters, global banks' market capitalization dropped sharply by -16.8% in Q3 2015 due to market turmoil in China
- Only six of the global top 100 banks showed positive total shareholder return
- Debt markets with significantly increased CDS spreads

#### II. Key banking drivers (p. 8)

- Economic condition in Western Europe remained stable—US growth declined again
- After a sharp increase in Q2 2015, long-term interest rates in Germany and the US dropped again, leading to flatter yield curves
- NPL ratios in BRICS and especially in China continued to rise and effects on European and American banks are expected

#### III. Special topic: Is China causing the next financial crisis? (p. 12)

- Liberalization of the exchange rate regime in China led to a strong depreciation of the CNY and—together with weakened economic growth rates—to a crash of stock markets
- Direct consequences for banks include depreciations on Chinese investments whereas indirect effects may lead to higher non-performing loans and losses for industry companies invested in China affecting banks' P&Ls in upcoming quarters

### I. State of the banking industry

#### **Market valuation**

The turmoil in China affected global capital markets massively. Market capitalization of MSCI World fell by -20.9% in the last quarter. The banking sector saw a similar slump with cap. fell by -16.8%.

Fig. 1: Market capitalization of the banking sector (end of quarter, in EUR trillion)



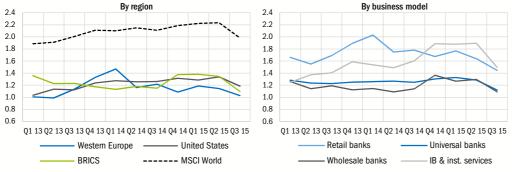
Banks' market cap fell due to turmoil in China and global markets

All banks worldwide according to Bloomberg classification. Global top 100 banks contain largest banks by market capitalization on December 31, 2014. Figures are aggregated in EUR, without adjustments for foreign currency effects.

Source: Bloomberg, zeb.research

- After a steady recovery since 2013, banks' market cap increase for the last year was destroyed within one quarter: market cap of all banks crushed by -16.8% in the third quarter (-0.5% y-o-y) and by -16.4% for global top 100 banks (+2.9% y-o-y)
- However, MSCI World's decline with even -20.9% in Q3 and +3.0% year-over-year turns out to be worse than the banks

Fig. 2: Price-to-book ratio of global top 100 banks and MSCI World



All P/B ratios headed south with investment institutions suffering the most

Retail banks / wholesale banks / investment banking (IB) & institutional services institutions generate at least 2/3 of their earnings in respective business segments (based on stated segment reports); universal banks are all other institutions. Western Europe: Euro area, Denmark, Norway, Sweden, Switzerland, UK. BRICS: Brazil, Russia, India, China, South Africa.

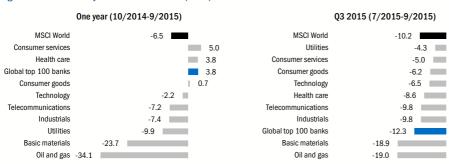
Source: Bloomberg, zeb.research

- In the same way as market cap deterioration, average price-to-book ratios decreased sharply: not surprisingly, banks from BRICS suffered the most from 1.3 to 1.1 (-18.6%), but even European and American banks were affected remarkably
- Regarding business models, unsurprisingly investment banks (1.9 to 1.5, -21.2%), coming from a high level, saw the sharpest P/B decline

### TSR performance

In Q3 2015, total shareholder returns of all industry sectors decreased significantly. Global top 100 banks with a negative TSR of -12.3% were clearly below market average. On a year-over-year basis, banks' value creation is still positive due to the very good performance in recent quarters. Looking at individual banks, especially Chinese banks are suffering the most, but US and Western European institutions suffered on average also very high TSR losses of 9.7% and 10.5% in just one quarter.

Fig. 3: TSR of industry sectors worldwide (in %)



Banking among lowest TSR performers in Q3 2015 but relatively stable y-o-y

Total shareholder return of industry sectors other than banking are based on global sector total return indices, aggregated and provided by Thomson Reuters Datastream. Average total shareholder returns of global top 100 banks are weighted by the market capitalization of each bank.

Source: Bloomberg, Thomson Reuters Datastream, zeb.research

- All industry sectors showed negative total shareholder returns in Q3 2015 with basic materials and oil/gas companies clearly losing the most (especially on a yearly basis) due to a collapse of global commodity prices
- Banks showed a clearly below average market performance in the last quarter but achieved a slightly positive TSR year-over-year clearly

Fig. 4: TSR of global top 100 banks by regions and business models (7/2015-9/2015, in %)



Chinese and Brazilian banks with strongest TSR losses in 03 2015

Average total shareholder returns are weighted by the market capitalization of each bank. Source: Bloomberg, zeb.research

- BRICS institutions showed the worst average shareholder return (-18.8%) in Q3, as especially banks from China (-20.6% in Q3) and Brazil (-21.2%) suffer from recent turmoil
- As the largest Chinese and Brazilian players are retail banks, the TSR of this business model showed the weakest performance

Fig. 5: Top/low TSR performers among global top 100 banks (7/2015-9/2015, in %)

#### Globa

Top performers	Country	TSR	Low performers	Country	TSR
Can. Imperial B. of. Commerce	Canada	5.4	Haitong Securities	China	-40.8
Sberbank	Russia	4.1	Standard Chartered	UK	-36.4
Bankia	Spain	3.5	Banco do Brasil	Brazil	-35.9
Danske Bank	Denmark	2.4	Bank of China	China	-33.9
HDFC Bank	India	0.9	Bank of Communications	China	-33.5
		Wester	n Europe		
Top performers	Country	TSR	Low performers	Country	TSR
Bankia	Spain	3.5	Standard Chartered	UK	-36.4
Danske Bank	Denmark	2.4	Banco Santander	Spain	-23.7
Sv. Handelsbanken	Sweden	-0.9	Natixis	France	-23.5
Intesa SanPaolo	Italy	-3.0	Crédit Agricole	France	-23.1
BNP Paribas	France	-3.1	Commerzbank	Germany	-18.3

Source: Bloomberg, zeb.research

- Among top 100 global banks, only six institutions achieved a positive TSR in Q3 2015 with low performers either coming directly from China, strongly exposed to China and Asia (Standard Chartered) or located in Brazil, where the economy is strongly connected to China through extensive trade relations
- In Western Europe, the situation is two-fold: many institutions reported very good P&L results for the first half of 2015 (see fig. 8) but due to overall market developments total shareholder returns also dropped significantly leaving just two (out of 27) Western European institutions with positive TSRs in Q3

Chinese banks and institutions with strong relations to Asia dominate global low performers

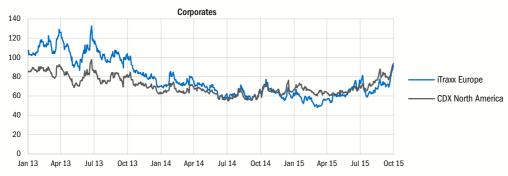
### **Debt perspective**

Average CDS spreads of BRICS institutions jumped up in Q3 2015. In Western Europe and the US, especially corporate sectors' CDS spreads increased significantly, while banking spreads also rose but to a lesser extent. As a result, corporate CDS spreads in the US are above the banking average for the first time in years and in Western Europe, the gap between corporates and banks declined clearly. Looking at fundamental credit quality, the number of rating changes decreased, not yet reflecting the current market developments.

Fig. 6: CDS spreads of global top 100 banks and corporates (avg. 5-year CDS spreads, in bp)



CDS spreads increased as Chinese market turmoil heated up



Global top 100 banks' 5-year CDS spreads are calculated as unweighted average of CDS spreads of each bank. Source: Thomson Reuters Datastream, zeb.research

- After CDS spreads of BRICS banks clearly recovered from the Russian crisis, Q3 2015 brought a spread jump to 220bp (+31bp)
- In Western Europe, average CDS spreads firstly declined significantly after the situation in Greece calmed down, but increased again due to the turmoil in China to 130bp—the highest value since April 2014
- In comparison to corporates' CDS spreads, the spreads for banks remained relatively stable—the gap between banks and corporate CDS spread in Europe reduced further to 39bp (48bp at the end of Q2 2015)

Fig. 7: Rating changes and average ratings of global top 100 banks



	Q4 13	Q4 14	Q3 15
Global top 100	A-	A-	A-
Western Europe	A-	A-	A-
United States	A-	A-	A-
BRICS	BBB	BBB	BBB
Retail banks	A-	A-	A-
Universal banks	A-	A-	A-
Wholesale banks	BBB	BBB+	BBB+
IB & inst. services	Α	Α	Α

Lower number of rating changes—more downgrades than upgrades

Rating changes consider the number of upward and downward revisions of the long-term rating of global top 100 banks as provided by Standard & Poor's, Moody's, Fitch Ratings. Outlook revisions are excluded. The up-to-downgrade ratio (right-hand axis) is a harmonized index calculated as (number of upgrades – number of downgrades) ÷ sum of upgrades and downgrades. Average ratings are calculated by zeb.

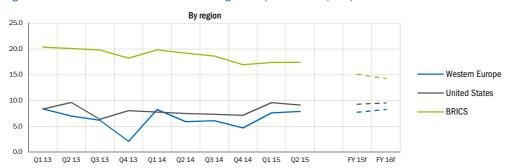
Source: Standard & Poor's, Moody's, Fitch Ratings, zeb.research

- After a surprisingly high number of rating changes (16 downgrades, 18 upgrades) in Q2 2015, due to a review of the bank rating methodology and assumed decreasing government support (revision was provoked by the "too-big-to-fail" issues and the recovery and resolution regulation), the overall number decreased to 13 (8 downgrades, 5 upgrades) in the last quarter
- Due to the high dependence on the Chinese market and the very difficult situation in the Brazilian
  economy with strongly negative GDP growth rates (see. fig. 9), three major Brazilian banks were
  downgraded by Moody's and S&P by one notch each: Itau Unibanco was downgraded by
  Moody's from Baa3 to Ba1 and by S&P from BBB- to BB+ and both Bradesco and Banco do
  Brazil went down at Moody's from Baa2 to Baa3 and at S&P from BBB- to BB+
- Noticeable upgrades include Svenska Handelsbanken (Aa3 to Aa2 by Moody's) due to their very good capitalization and steadily high profitability over recent years

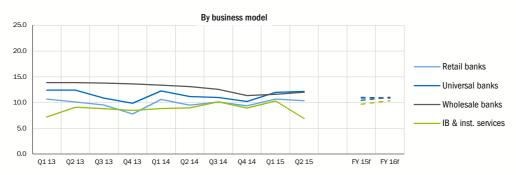
### **Banking profitability**

After some weak quarters, especially in mid/end 2014, profitability of global top 100 banks stabilized at a relatively high level in the first half of 2015. However, it is expected that full year results will be slightly below the current level due to a weakened economic outlook. Especially the crisis in China and the connected developments will have negative consequences on banks' P&Ls in upcoming quarters.

Fig. 8: RoE after tax and annual RoE forecasts of global top 100 banks (in %)



Stabilizing profitability in most regions but investment banks with a sharp drop



Historical data according to quarterly reports from Bankscope. Q3 2015 data not yet available at the time of writing. Forecasts calculated as equity-weighted averages of analysts' consensus forecasts from Bloomberg.

Source: Bankscope, Bloomberg, zeb.research

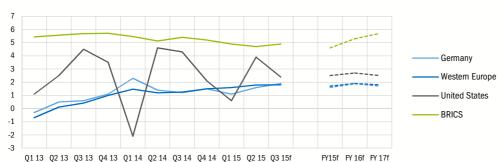
- Among others, Svenska Handelsbanken—which reported its best quarter in its 143 year history—beat analysts' expectations by a large scale catapulting them to our list of TSR top performers (see fig. 5)
- In the US, profitability decreased slightly in Q2 due to lower results of some investment banks (Goldman Sachs' Return on Equity decline from 13.3% in Q1 2015 to 4.7% in Q2) but remained in total in the range of approx. 10% at least
- Nonetheless, current profits are the result of some better market conditions and special effects (lower loan loss provisions, quantitative easing in the euro area, capital market performance) and, thus, not expected to be sustainable

### II. Key banking drivers

#### **Economic perspectives**

Global economies showed very different developments in the last quarter. The US' GDP shrank clearly while the inflation rate rose again. In Western Europe, incl. Germany, the GDP improved slightly to 1.8% and 1.9% but the inflation rate decreased close to zero. BRICS' growth rates improved slightly but Chinese GDP growth of 6.8% was below the target of 7% for the first time.

Fig. 9: GDP growth and forecasts (real GDP, year-over-year growth rates, in %)

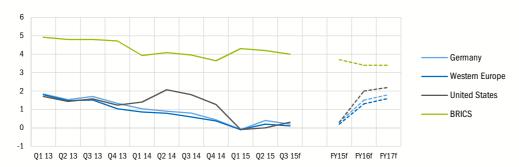


US' GDP growth dropped but Western Europe remained stable

Source: Thomson Reuters Datastream, zeb.research

- After a strong increase in the last quarter, US GDP growth fell to 2.4% in Q3 2015 inter alia due to lower oil and commodity prices
- GDP in BRICS grew by nearly 5% despite the recent turmoils but there are also clear differences:
   Brazilian and Russian GDP fell by -2.9% and even -4.3% in Q3, whereas India and China achieved growth rates of 7.4% and 6.8%
- Both Germany's and Western Europe's GDPs continue their positive trend in this quarter, but forcecasts show a slight decrease of the Western European and German economy in 2017.

Fig. 10: Inflation rates and forecasts (annual change of average consumer prices, in %)



Western Europe, incl.
Germany, close to deflation
again

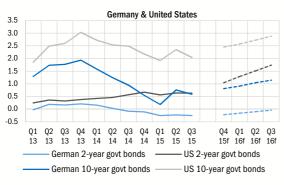
Source: Thomson Reuters Datastream, zeb.research

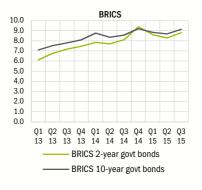
- Western European (incl. Germany) and US inflation rates are still at very low levels. After stronger increasing consumer prices in Q2, Western European's inflation rate decreased again
- In BRICS, the inflation rate also decreased slightly to 4.0% in the third quarter mainly due to a lower Indian inflation rate which dropped from 5.9% in Q2 to 4.1% in Q3

#### Interest rates

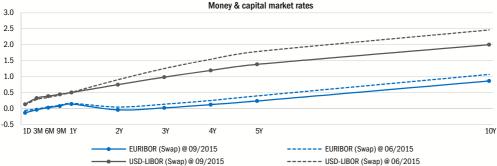
After long-term interest rates in the US and Germany increased strongly in the last quarter, the interest rates decreased again in the third quarter of 2015. Looking at short-term yields, 2-year German and US government bond rates remained stable at -0.25% and 0.63% respectively. BRICS interest rates increased clearly in Q3 2014 as especially Brazilian yields rose.

Fig. 11: Government bond yields (in %) and money and capital market rates









BRICS bond yields calculated as unweighted average, no forecast data available for BRICS countries, insufficient data to build adequate BRICS basket for money and capital market rates.

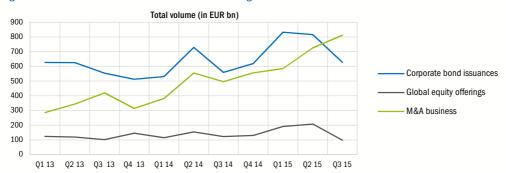
Source: Bloomberg, zeb.research

- Regarding long-term US and German government bond yields, the increase in the last quarter turned out to be a one-time effect as both rates dropped in Q3 2015, somehow reflecting the postponement of the interest rate turnaround in the US
- Yields of German 2-year government bonds are now negative for the fifth time in a row and even the forecasts for 2016 are negative
- Overall, US and German yield curves clearly flattened in the last quarter destroying banks' glimpse of hope for a steeper yield curve and higher results from maturity transformation
- The increasing interest rates of the BRICS states are mostly affected by the Brazil bonds, as 2-year yields rose from 13.7% to 15.8% and the 10-year yield rose from 12.6% to 15.4%—Brazil continues with an inverse yield curve

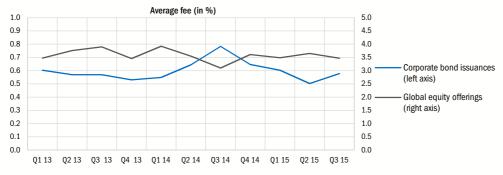
### Capital market environment

Global equity offerings and bond issuances decreased massively in the last quarter putting additional pressure on the results of investment, wholesale and universal banks. Moreover, average fees in the equity business decreased also slightly leading to a clearly smaller revenue pool. However over the same period, M&A deal volume increased further, thereby compensating some of the losses in the other investment banking segments.

Fig. 12: Global issuance business and deal volume of global M&A business



Deal volumes in equity and bond decreased strongly



All M&A transactions classified by announcement date. No fee rates available for M&A transactions. Source: Bloomberg, zeb.research

- In Q3 2015, especially the deal volume of bond issuance business dropped significantly by -23.0%, but increasing average fees to 0.6% limited the overall negative effects to around -11%
- Several equity offerings were postponed leading to a decline of equity offerings by more than 50% in the third quarter—with also declining average fees, a huge impact on investment banking results is expected
- In contrast, M&A deals in Q3 2015 exceeded the volume of the last quarter again and went beyond EUR 800 bn
- The most noticeable deals in the financial sector included the sale of General Electric's health care lending business to Capital One Financial and the acquisition of the retail banking business of Danske Bank in Latvia and Lithuania by Swedbank

### III. Special topic

#### Is China causing the next financial crisis?

With the objective to be included in the official reserve currency basket by the International Monetary Fund, Beijing liberated its exchange rate regime in August. The fixing is not set daily anymore by the central bank, but is now oriented to the closing rate of the day before. Thus, the exchange rate is now somehow determined by the market. As the yuan has artificially been appreciated over the last 5 years, the market has claimed depreciation and put the yuan under heavy pressure.

Fig. 13: Long-term and short-term development of the CNY-USD exchange rate



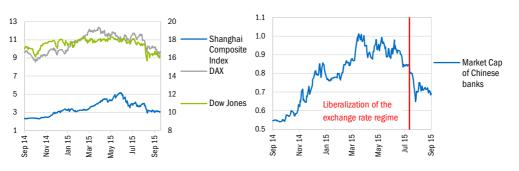


Depreciation of CNY due to change of exchange rate regime

Source: Thomson Reuters Datastream, zeb.research

As shown in the diagram, the yuan has appreciated strongly until 2014 and with the partial liberalisation of the exchange rate, the yuan has depreciated by more than 3% in just a few days. Additionally, the government of China has also announced that the economic growth of China will weaken to "only" 6.5% to 7.0% in 2015. Despite heavy interventions by the Chinese central bank, trying to back the exchange rate and prop up the stock market, irritations were caused in the markets regarding the economic prosperity of China and the control of Beijing over its economy.

Fig. 14: Development of the main stock exchange indices (in thousand points) and the market capitalization of the top 5 Chinese banks (in EUR trillion) in the last 12 months as well as on specific dates in August



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Institution	Market Cap August 10, 2015	Market Cap August 14, 2015	Delta (abs.)	Delta (%)
Industrial & Commercial Bank of China	EUR 248 bn	EUR 233 bn	EUR -14.77 bn	-5.95%
China Construction Bank	EUR 187 bn	EUR 181 bn	EUR -6.65 bn	-3.54%
Agricultural Bank of China	EUR 163 bn	EUR 153 bn	EUR -9.42 bn	-5.77%
Bank of China	EUR 179 bn	EUR 169 bn	EUR -10.41 bn	-5.80%
China Merchants Bank	EUR 61 bn	EUR 56 bn	EUR -4.41 bn	-7.20%

Source: Thomson Reuters Datastream, zeb.research

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In a first reaction, the Shanghai Composite Index lost approx. 11%, while the other international markets lost approx. 8% in August. Accordingly, the market capitalization of the top 5 Chinese banks slipped by more than 20% in August, destroying around EUR 172 billion of capital in August—alone EUR 45 billion of that was lost within one week (see table in figure 14). The cool down of the Chinese economy and the corresponding irritations are the results of mainly two different factors. Firstly, the Chinese economy is in the middle of a transformation process. It is politically intended to reduce the industrial sector in favor of the service sector. After the boom in the last years, this transformation goes along with overcapacities and losses within the industrial sector while the service sector is not yet strong enough to compensate such losses. Secondly, in the opinion of several analysts, Beijing has invested inefficiently. With investment ratios of more than 50% of the GDP, the growth rates of China had to be much higher in recent years, which in turn would have led to a stronger economy in general.

To increase the competitiveness of its economy, the Chinese government could depreciate the yuan further in order to offer products relatively cheaper on the world market and thus boost sales. However, by devaluating the yuan further, China takes the risk of provoking a competitive devaluation with the industrial economies. On the other hand, using the foreign exchange reserves to slow down the devaluation takes liquidity out of the Chinese market, thereby putting further pressure on the already tense credit situation. Thus, Beijing is in a dilemma.

All in all, the situation in China is multifaceted and thus unclear. It is difficult to estimate the consequences for Europe or the USA. Apart from the first reactions, the question is how the European and American banks will be affected by the Chinese turmoil. There are two types of consequences: direct and indirect ones.

The direct consequences are depreciations on investments in China. Due to a reduced growth outlook in China and increasing non-performing loan ratios of Chinese banks (around 1.4% of the balance sheet on average), some European or US banks may have to consider significant depreciations on their Chinese investments. British banks have especially invested heavily into China in recent years.

The indirect consequences are much more complex. On the one hand, the market conditions for foreign companies are heavily impacted—especially the German construction and mechanical engineering sectors as well as car manufacturers—due to the reduced prosperity of the Chinese economy. Additionally, the competitiveness of foreign companies will be further reduced due to the devaluation of the Chinese yuan. Some analysts even speak of competitive devaluation ("currency war") of the Chinese government. Anyhow, the outlook for foreign companies darkened, which in turn may have consequences for their credit situation in their home countries.

On the other hand, the prices for commodities have already significantly decreased (e.g. less than USD 40 per barrel of crude oil), which appears to be a big investment program for the industrial economies. Furthermore, many Chinese products are becoming relatively cheap due to the devaluation of the Chinese yuan. These price drops of products create deflationary tendencies that are transferred to the industrial economies, increasing the already high deflationary pressure. So if the deflationary tendencies are further transferred, the industrial economies may be forced to continue or even expand their quantitative easing programs against deflation. That in turn would lead to further liquidity floods in the market—increasing the risks of price bubbles. The possible consequences of such price bubbles are obvious.

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In summary, to be well prepared for any effects originating from the developments in China, banks have to be able to simulate the "second round effects" (e.g. price bubbles). Therefore, the relevant parameters for various scenarios regarding interest rate or economic development have to be considered. Furthermore, integrated simulation capabilities are needed to identify major implications for credit institutions. Ideally, these holistic simulations are included into stress testing and other risk related planning.

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#### About zeb.market.flash

zeb.market.flash is a quarterly compilation of market data, putting the total shareholder return (TSR) performance of the global banking industry, economic fundamentals and key value drivers into perspective. It is published by zeb. All data and calculations of this issue are based on the date of October 1, 2015. The global top 100 banks cluster contains the largest banks by market capitalization on December 31, 2014 and is updated on an annual basis. Data is subject to ongoing quality assessment. As a consequence, minor adjustments could be applied to historical data as well as forecasts shown in previous issues of zeb.market.flash.

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