JP Morgan Chase &Co

And

Deutsche Bank AG

Summary

JP Morgan Chase & Co and Deutsche Bank AG are representatives of the global financial institutes. However, as was shown in the balance-sheet, income statement, and ratio analyses, differences between them are countless. For example, "P/E" ratio of JP Morgan Chase is equal to 11.4, and "P/E" ratio of Deutsche Bank AG is equal to 23.3, or in other words, investors of first one got more than two times higher earnings in 2014 than of the last for the same price. Of course, the price of JP Morgan Chase & Co could be lower due to higher risks as it is shown by its market β. For example, β of Deutsche Bank AG is equal to 1.22 that is much lower than JP Morgan Chase & Co has - 1.62.

Despite the fact, we think that the next year risks will be higher for Deutsche Bank AG. While the risk from tighter policy of the Federal Reserve System is the same due to U.S. regulator dominance, the access to U.S. dollar liquidity is simpler for U.S. located bank than for the EU bank. Additionally, the reorganization of EU bank market is necessity and its impact will be higher on Deutsche Bank AG. Finally, the Deutsche Bank AG settlement with U.S. Department of Justice was only $2.5 bln. but only in the current year; at the same time, JP Morgan Chase & Co paid their settlement in amount of $13 bln. already in 2013. The markets are not sure at the moment if this settlement will be last for German Bank.

Also, our analysis showed that the best direct relation of share price of both banks is with stock market indexes: S&P 500 Index for JP Morgan Chase & Co and EURO STOXX 50 Index for Deutsche Bank AG (exception was two last year when the euro stock markets continued growing but the bank share price was falling). That was also approved by analysis of technical trends. We think that such relation is highly connected with monetary policy of country or region. EU quantitive easing program, which started in March of this year, pushed at first the prices of Deutsche Bank AG to higher level, but then the company's problems nullified this growth. After all, we think that shares of JP Morgan Chase should be hold at the moment with next year target price on the level of $70 with opportunities to buy if the price falls to $55 – consensus recommendations from Financial Times (2015a) is to buy (27 – buy, 5 – hold) – due to uncertainty from the possible change of U.S. monetary policy. At the same time, we do not think that Deutsche Bank AG is nice opportunity to invest money and we would recommend selling them with next year target price on the level of 30$ – consensus recommendation from Financial Times (2015b) is to hold (11 – buy, 17 – hold, 9 – sell). Actually, our recommendations are more conservative than the recommendations of markets.

Introduction

"What we can predict is that we are going to have tough global competitors," said Jamie Dimon (2014), the boss of JP Morgan Chase & Co (MC), the second-largest bank in the world by value, in a letter to shareholders in 2014. One of the main sources of competition, he went on to explain, would be shadow banks:

> "We really should not call them 'shadow' banks—they do not operate in shadows. They are non-bank financial competitors, and there is a wide set of them. They range from money-market funds and asset managers, mortgage real-estate investment trusts and mortgage servicers and middle-market lending funds to PayPal and clearing houses. Many of these institutions are smart and sophisticated and will benefit as banks move out of certain products and services. Non-bank financial competitors will look at every product we price, and if they can do it cheaper with their set of capital providers, they will."

However, the global competition from "shadow" banking is not the only problem of global financial sectors. At the same time as JP Morgan Chase & Co is highly competitive and successful company with relatively high price of its stock, there is a lot other global banks which are not so successful and have bad performance ratio. Therefore, it is understandable why Jamie Dimon could narrow the problem set of MC and have not accented on other problems; nevertheless, other banks should try more hardly to satisfy its investors through showing better performance and creation of more transparent balance sheet.

For our analysis, we choose JP Morgan Chase & Co as highly competitive global bank and Deutsche Bank AG (DB) which figures is very low and which stock price is more than fourfold less than at its peak in 2007. In first chapter, we will take a look on history of our target banks and identify the main risk of the global banks next year. Chapter 2 will analyze balance sheets and income statements of MC and DB, and will show the comparison of theirs figures with other global financial institutions. Chapter 3 will show the analysis of relation between our target bank figures, stock prices and market stock indexes; and eventually, Chapter 3 will show our recommendations and twelve month price targets on stock prices of JP Morgan Chase & Co and Deutsche Bank AG.

Chapter 1. Overview of global banks' strategies and risks

Deutsche Bank (literally German Bank) is a German global banking and financial services company with headquarter in the Deutsche Bank Twin Towers in Frankfurt. The bank was founded in 1870 as a specialist bank for foreign trade (Gall, 1995) with a banking license from the Prussian government. As of 2014, DB has 98 138 employees in over 70 countries. Its stocks were listed on the New York Stock Exchange (NYSE) from October 2011 – the first NYSE listing after interruption due to 11 Septembers attacks in USA. In 2000s, the bank was exploring the strategy of global expansion through acquiring banks in different countries for the so-called "transformational" mergers: Scudder Investments in USA in 2001; private bank Rued Blass & Cie in Swiss in 2002; investment bank United Financial Group in Russia in 2006; retail bank Berliner Bank, Deutsche Postbank, and Norisbank in Germany.

JP Morgan Chase & Co also explored the strategy of mergers in 2000s; however, it was rather consolidation strategy but not the global expansion strategy through purchasing. In 2000, the Chase Manhattan Corp. merged with J. P. Morgan & Co Incorporated that combined in fact four of the largest and oldest money center banking institutions in New York City: Morgan, Chase, Chemical, and Manufacturers Hanover, into one firm called JP Morgan Chase & Co (JP Morgan, 2008). In 2004, Bank One Corp. merged with JP Morgan Chase & Co keeping the name of the last. Schlosser Julie (2004) said in Fortune Magazine that "the combined bank will be big and strong in a panoply of business", and added that "the deal has been widely lauded" by investments analysts. At the same time, Sorkin (2004) in the New York Times expected that these merger "would realign the competitive landscape for banks" due to possible synergy effect from uniting the investment and commercial banking of JP Morgan Chase & Co with consumer banking of Bank One. Such merger could be possible only due to Gramm-Leach-Biley Act which repeals the restriction on affiliation between banks and securities firms after Glass-Steagall Act (U.S. Banking Act of 1933). The last acquisitions by MC were in 2008 when JP Morgan Chase & Co bought Bear Stearns and Washington Mutual within the program of theirs rescue with the help from the Federal Reserve System. Eventually, JP Morgan Chase & Co is the leading global financial institutions which provides operations in more than 50 countries and has 214 359 employees with headquarter in New York City.

Two beforementioned strategies are not only but the most exploitable strategies by financial institutions before 2007 for spreading its influence through the world, and they also have influence on the future performance of MC and DB. As it was shown, while MC tried to find

synergies from mergers, DB found the bank in different fields which could diversify only its products portfolio on global financial market operations – the question of integration was not primary. That created many issues in crisis time due to obscure structure and obscure risk exposure what in time of confidence loss putted DB in very shaky positions. Of course, MC had also high pressure from investors after the Lehman Brothers collapse but its quick reaction, help from the Federal Reserve System, and more transparent structure allowed restoring of confidence in more profound way.

Currently, the investors' accent on risk types is changed one more time. Of course, the classical risks of financial institutions (interest risk, currency risk, liquidity risk, etc.) are still remained but investors are interested more what global banks will do in accordance to the next possible scenarios (according to authors' assumptions):

I. The Federal Reserve System will start to increase fed fund rate which is in range 0%-0.25% at the moment. This will cause the pressure on net interest income due to rise of interest rates on bank's liabilities. How much flexibility has the bank in increasing of interest rate on assets side of balance sheet?
II. EU will change the regulation of its financial sector. These problem has more impact for European banks; however, the changes on the other continents could also put pressure on U.S. banks due to theirs globalization. At the moment, different aspects of possible changes are considered; however, nobody knows the possible results. Nevertheless, the necessity of EU bank market unification is clear after the financial global crisis of 2008 and the European debt crisis of 2009 (Veron, 2012).
III. Some regulatory agency will start some investigation due to violation of regulatory requirements. How big is a compliance risk of the bank? In general, all the problems with compliance will be finished in settlements with regulatory agencies with high-dollar fines which could hammer net income figures of any banks; however, some banks could even go into "red-zone", or in other words, they could get the loss.
IV. Bank's approachability of consumers will be lowered due to competition with "shadow" banking. Does the bank have the strategy to compete with new consumers' canal to clients? Or another question – how big is potential loss from this competition?

In fact, investors could not get the answers on all these questions because banks' management does not know the answers due to unpredictable future; however, the positions of some banks are more solid and profound than others. And that is the main thing that should interest the investors – how big is the capital and net income cushion of the bank to survive the possible problems in future (liquidity cushion could be found in the central banks).

Chapter 2. Balance sheet & Income statement analysis

2.1 Analysis of JP Morgan Chase & Co balance sheet and income statement

Important statements in JP Morgan Chase & Co's assets are "Loans net of allowance for loan losses", "Deposits with banks", and "Trading assets" with 29%, 23%, and 15% share of assets in 2014 accordingly (Fig 2.1.1). Statement "other assets" includes follows sub-statements: "Cash and due from banks", "Federal funds sold and securities purchased under resale agreements", and "Securities borrowed". Structure of assets was quite stable for the last eight years that is shown on Fig. 2.1.2. Exception was in statement "Deposits with banks" due to limitation of repo-market[1] after the financial global crisis of 2008. In 2008, this statement held 6.4% share; during last eight years, this statement held 6.5% in average; however, in 2014, it increased to 18.8%.

Source: JP Morgan Chase & Co annual report (investor.shareholder.com/jpmorganchase).

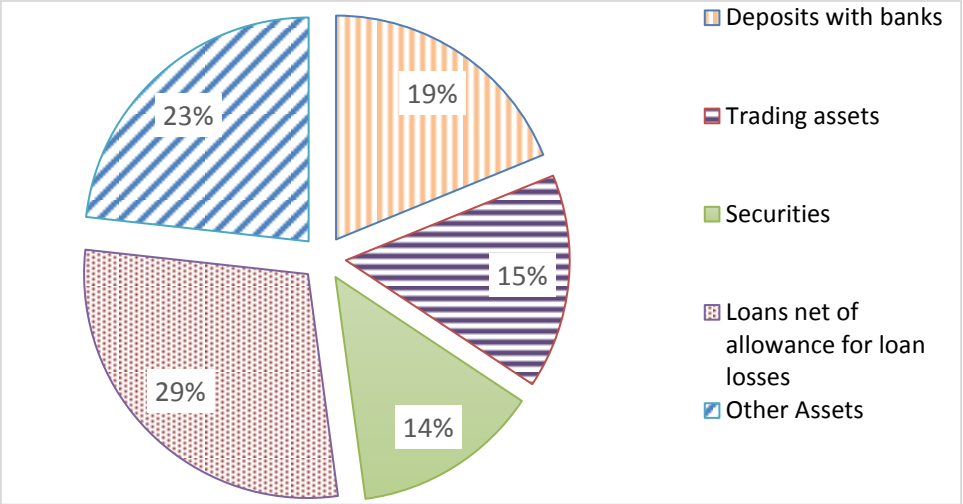

Fig. 2.1.1 Structure of JP Morgan Chase & Co assets in 2014

During last eight years, balance volume of MC was quite stable; the same as was its balance structure (Fig. 2.1.2). The only huge surge of balance was in 2008 when it increased by 39% comparing to 2007. This growth was mostly a result of significant increase in "Loans net of allowance for loan losses" statement by 41% or $211 bln. due to acquisitions in 2008. The only decline of balance for the last eight years was exactly after significant growth in 2008 due to after-crisis cleaning - total assets decreased by 6.5% or $143 bln. After that decline, MC balance rose by 4.85% in average for the last five years.

[1] Repo-market is the market on which the operation of commercial-paper sale is closed together with an agreement to buy back this paper from the buyer by seller at the future date. This market ceased almost its functioning in USA after the Lehman Brothers collapse.

Source: JP Morgan Chase & Co annual report (investor.shareholder.com/jpmorganchase).

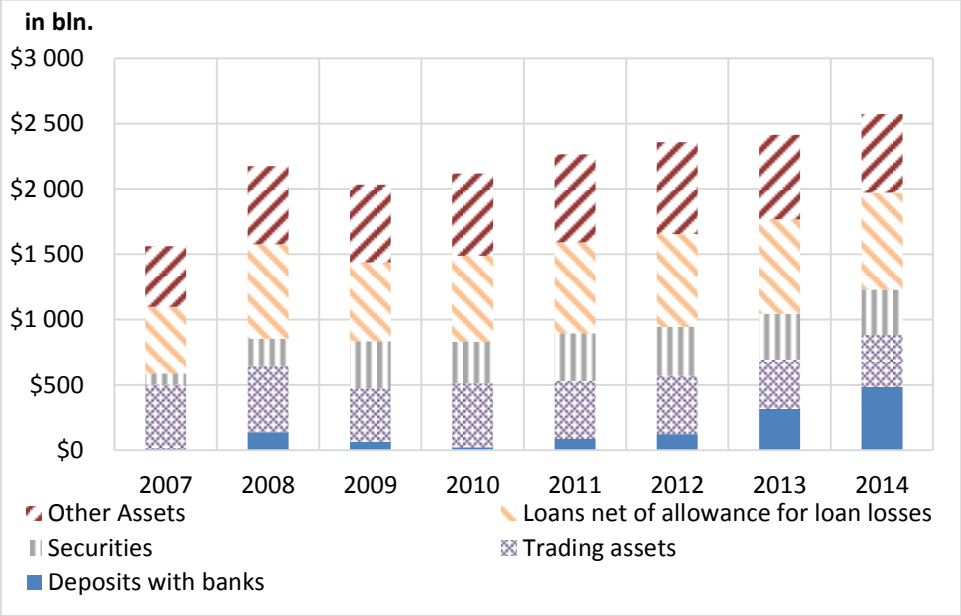

Fig. 2.1.2 Historical tendencies in JP Morgan Chase & Co assets structure

Main statement of MC liabilities are only one, "Deposits", which held 53% share of all liabilities (including equity) as of 2014 (Fig. 2.1.3). Other important liabilities statements held much less share of liabilities. Statements "Accounts payable and other liabilities", "Long-term debt", and "Total stockholders' equity" held together only 29% share of all liabilities. Other liabilities held 19% share and consists of statements "Other borrowed funds", "Trading liabilities", and "Beneficial interests issued by consolidated variable interest entities".

Source: JP Morgan Chase & Co annual report (investor.shareholder.com/jpmorganchase).

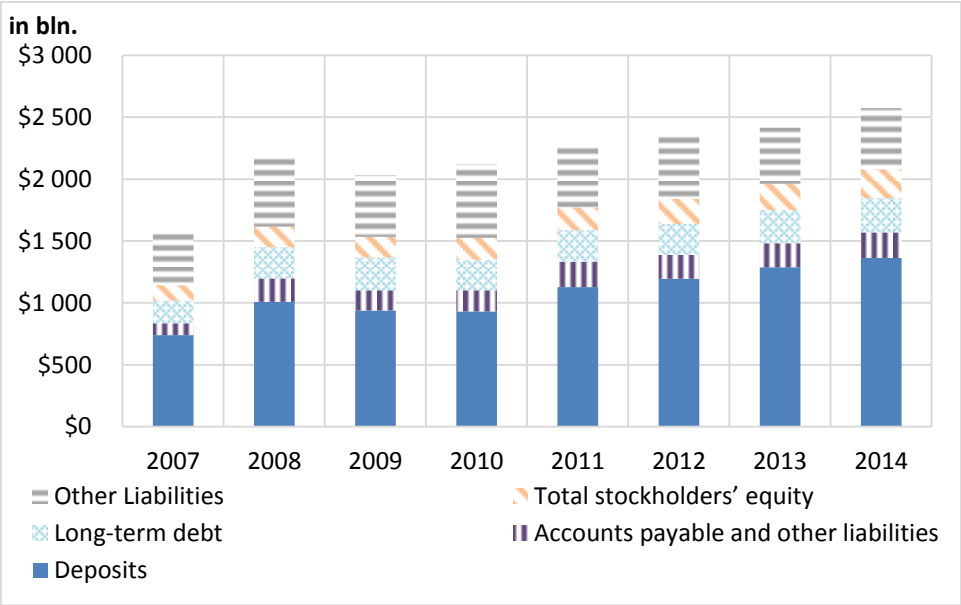

Fig. 2.1.3 Historical tendencies in JP Morgan Chase & Co liabilities structure

Structure of liabilities was stable last eight years. The same as for assets, only significant change of balance volume and structure was in 2008, when total liabilities increased due to growth of "Deposits" statement (on 36% or $268 bln. comparing with 2007), similar to increase of "Loans net of allowance for loan losses". Statement "Deposits" held 50% in structure of liabilities in average for the last 5 years – almost the same as of 2014 (Fig 2.1.3). Also, statement "Accounts payable and other liabilities" changed its influence after the Lehman Brothers collapse. It increased significantly in 2008 by 99% or $93 bln., but it held only 8% share of liabilities in average for the last 5 years.

Source: JP Morgan Chase & Co annual report (investor.shareholder.com/jpmorganchase).

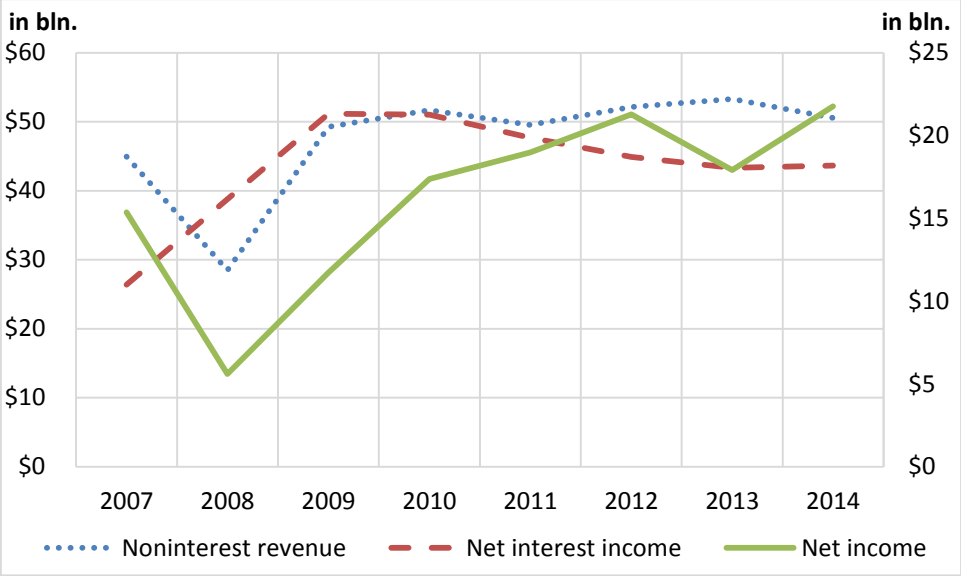

Fig. 2.1.4 Main statement of JP Morgan Chase & Co income statement in 2014

Income statement of MC showed rather stable dynamic for the last eight years (Fig. 2.1.4). All the changes were mostly matched with world economic crisis. Net income of MC decreased on 63% or $9 bln. in 2008, and it restored to pre-crisis values only in 2010, when it increased to $15.7 bln. Average net income of MC during last five years was $19.4 bln. with 15% average growth rate, even after $13 bln. settlement with the Justice Department on November 19, 2013 (Department of Justice, 2013). In fact, economic crisis affected "Provision for credit losses" statement, which has the main negative impact on net profit. The statement increased by 205% to $21 bln. in 2008. Only in 2011, it decreased to $7.5 bln what was the level close to 2007 year, $6.9 bln. Fig. 2.1.5 shows dynamics of main sources of income during last eight years. In general, interest and non-interest incomes distributed equally, but noninterest revenue fall in 2008, and it does not show the decreasing dynamic after 2010 unlike net interest income.

Source: Deutsche bank AG annual report (https://www.db.com/ir/index_e.htm).

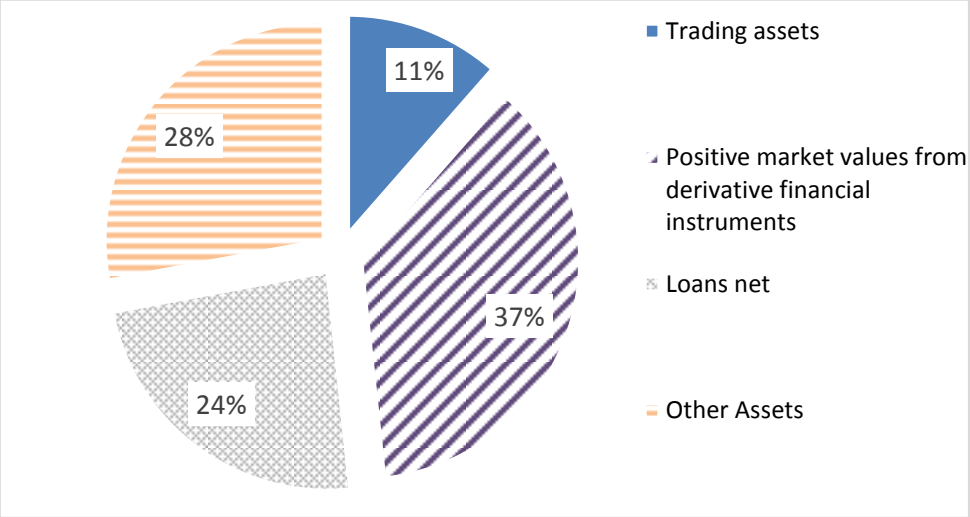

Fig. 2.2.1 Structure of Deutsche bank AG assets in 2014

2.2 Analysis of Deutsche Bank AG balance sheet and income statement

Assets of DB mostly consist of statements "Trading assets", "Positive market values from derivative financial instruments", and "Loans net". Division between assets statements is shown on Fig. 2.2.1. All other assets are insignificant and is included in statement "Other assets" which consist of "Cash and due from banks", "Interest-earning deposits with banks", "Central bank funds sold and securities purchased under resale agreements", "Securities borrowed", "Trading assets", "Financial assets designated at fair value through profit or loss", and "Financial assets available for sale".

Source: Deutsche bank AG annual report (https://www.db.com/ir/index_e.htm).

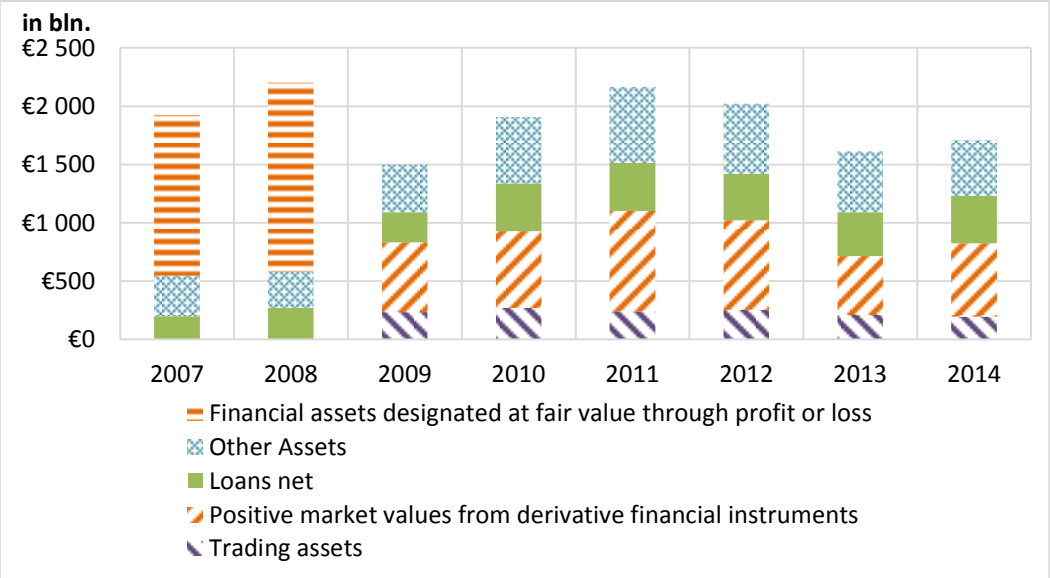

Fig. 2.2.2 Historical tendencies in Deutsche Bank AG assets structure

Balance volume of Deutsche bank (DB) was too volatile in comparison with MC. Some of adjustments were a result of world economic crisis; others were result of financial instruments decrease in volume. Significant decrease of DB balance value was in 2009 by 32% comparing to 2008 (Fig. 2.2.2), next one in 2013 – fall on 20% comparing to 2012. Growth rate of DB balance was 4% in average for the last five years.

Structure of DB assets was moderately stable during last eight years, only significant change was in "Financial assets designated at fair value through profit or loss" statement, which was restructured into statement "Negative market values from derivative financial instruments" after 2008 due changes in regulations. From 2008 till 2014, the volume of this statement dropped by 42% or €680 bln.; nevertheless, it still holds 55% share of assets (it was 74% in 2008). "Loans net" held 21% share of assets in average during last five years; at the same time, it held 13% in average during crisis years. It shows that DB was not oriented on credit business before crisis.

Significant statements in liabilities of DB are only "Deposits" and "Negative market values from derivative financial instruments". In 2014, these statements held 78% share of liabilities in sum. Statement "Long-term debt" is rather moderately important, but it does not have impact on liabilities structure in general (around 10%). Statement "Other liabilities" includes the follows statements: "Central bank funds purchased and securities sold under repurchase agreements", "Securities loaned", "Trading liabilities", "Financial liabilities designated at fair value through profit or loss", and "Investment contract liabilities".

Source: Deutsche bank AG annual report (https://www.db.com/ir/index_e.htm).

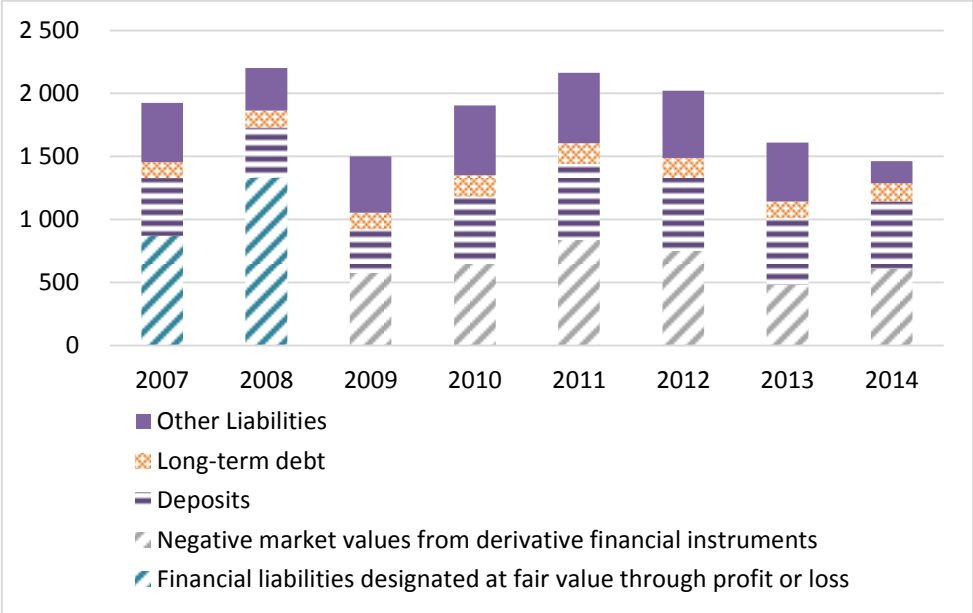

Fig. 2.2.3 Historical tendencies in Deutsche Bank AG liabilities structure

As it could be seen on Fig. 2.2.3, structural changes in liabilities of DB are similar to assets - most of them were during financial crisis, as it was with assets. After 2008, DB restructured in annual reports statement "Financial assets designated at fair value through profit or loss" between follows statements: "Trading assets" and "Positive market values from derivative financial instruments". These statements reflect operations with financial instruments on interbank market from side of liabilities. As it was abovementioned, bank decreased amount of these operations after crisis; they held 60% in 2008, but then it decreased to 40% in 2014. At the same time, share of deposits in liabilities increased from 18% in 2008 to 31% in 2014. So structure of liabilities has changed in line with assets, and it shows that DB has already started expansion into traditional banking business.

Income statement reflects changes in balance during and after world economic crisis (Fig. 2.2.4). Before crisis, DB relied on income from statements "Commissions and fee income" and "Net gains (losses) on financial assets/liabilities at fair value through profit or loss", in other words interbank operations and non-interest income were significant in structure unlike after crisis time. In 2008, DB got loss from market operations in amount of €9.9 bln. (profit was €7.1 bln. in 2007). After crisis, profits from these operations dropped to €3.9 bln. in average for the last five years (€4.2 bln. in 2014). At the same time, "Net interest income" showed growth from €8.8 bln. in 2007 to €14.2 bln. in 2014. In addition, statement "Compensation and benefits" in 2007 was €13.1 bln., decreased to €9.6 bln or by 26.7% in 2008, and then began slow growth to €12.5 bln. in 2014. This change reflects the trying of bypassing the EU regulators limitations on the employment payment, which makes the salaries of bank sectors non-competitive.

Source: Deutsche bank AG annual report (https://www.db.com/ir/index_e.htm).

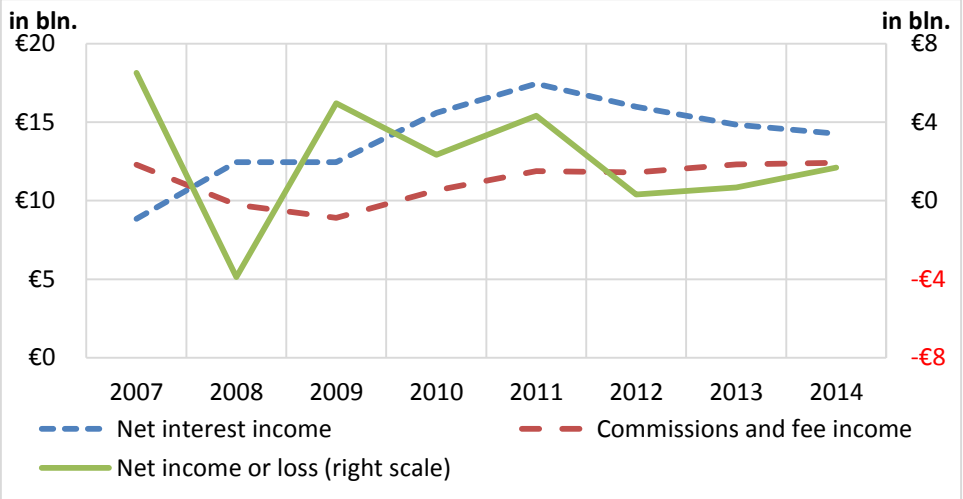

Fig. 2.2.4 Main statement of Deutsche Bank AG income statement in 2014

2.3 Ratio analysis and comparing with competitors

As was shown in this chapter before, balances of MC and DB have similarities after 2007. Both banks suffered significant loss after the Lehman Brothers collapse and wholesale markets ceasing to exist. Then they began transformation process focused on declining risky market operations in favor of traditional banking credit-deposit activity. However, the MC way was more solid and more coherent due to better starting positions.

In 2007, expenses on staff in DB were excessive and were cut by 26% in 2008, but MC did not have such problems and in 2009 even increased noninterest expenses. Additionally, market operations held 74% of DB asset share in 2008 (statement "Financial assets designated at fair value through profit or loss"); same index for MC was only 39% (statements "Securities borrowed", "Trading assets", and "Securities") what was too significant difference for not to be mentioned. Finally, important role for the fate of these banks during crisis played government and central bank support and dependence on low interest rate deposits from consumers. FED lower interest rate to zero with very high speed and started quantitive easing program already in 2008, at the same time, there were no similar steps in EU. Eventually, MC net income restored in 2009 to 76% of 2007 level and exceeded this level already in 2010. BD net income also restored in 2009 to 76% of 2007 year level; nevertheless, it dropped almost by two times in 2010. The whole picture shows us that MC has better restoration speed comparing to DB. Average net income of MC in 2012-2014 was twice more than in 2007-2009, at the same time DB showed more than two times decrease. Also, such huge differences are tightly concerned with dividend policy. Average payout ratio of MC during last seven years was 20.4%. For DB, this index is equal to 86.3%; moreover, in 2013 it exceeded 100% level and in 2012 even 300% level.

Table 2.3.1 shows main figures for both MC and BD comparing to their competitors (additional information about ratios is presented in Appendix I) – other huge international banks. MC has best income indexes such as ROA, ROE and Net margin; moreover, its figures exceed similar figures of DB. From the perspective of market data, MC also has a distinct advantage: highest earnings per share among competitors, highest earnings per share, and dividend yield at normal level. Ultimately, price to earnings ratio of MC was almost two times lower than DB in 2014, or in other words, MC new investors paid almost two times lower price for the same earnings. Also, other bank which has low price to earnings ratio is HSBC could be interesting for investors; however, enormous dividend yield, high other

liabilities share, and scandals around its CEO create a threat to stability of HSBC profits in future.

Table 2.3.1

Comparison analysis of JP Morgan Chase, Deutsche Bank, and theirs competitors as of 2014

Ratio/ Bank	JP Morgan Chase & Co	Deutsche Bank AG	UBS Group AG	Bank of America	Bank of New York Mellon Corp.	HSBC Holdings PLC.
Assets, in bln.	$2 590	€1 710	CHF 1 060	$2 110	$385	£1 690
Investments to Assets	60%	61%	55%	40%	46%	45%
Loans to Assets	28%	27%	31%	41%	15%	38%
Deposits to Assets	53%	31%	39%	53%	69%	51%
Debt to Assets	24%	14%	23%	23%	14%	9%
Equity to Assets	9.0%	4.0%	5.1%	11.5%	10.0%	7.6%
Investments to Debt ratio	252%	424%	242%	176%	333%	522%
Deposits to Loans ratio	185%	114%	125%	129%	451%	136%
ROA	0.8%	0.1%	0.3%	0.2%	0.7%	0.5%
ROE	9.6%	2.7%	7.0%	2.0%	6.7%	7.2%
Net Margin	21.8%	3.5%	9.5%	4.9%	16.7%	14.9%
Earnings per share	$5.49	$1.47	$0.96	$0.69	$2.27	$3.62
Dividend yield	2.56%	2.45%	2.67%	1.28%	1.62%	8.38%
Stock price as of April 24, 2015	$62.62	$34.26	$20.22	$15.62	$42.14	$47.8
Market capitalization in bln.	$232.5	$43.6	$72.3	$164.5	$48.0	$184.1
P/E	11.4	23.3	21.1	22.6	18.6	13.2

Source: Market Watch (marketwatch.com); Bloomberg.

Chapter 3. Stocks price analysis

3.1 Relation between quality figures of banks and stock prices

Despite the huge number of methods which could be used to estimate the price of stocks (discounted cashflow model or constant growth model), we think that the most important is not estimation of price but establishing of relations between financial figures of company or banks with the price of stocks. The beforementioned models analyze income of investors from the holding of stocks with different assumptions. However, there is also more simple method which does not understate the importance of those models, but magnify its results. The classical methods assume that investors think only about profits from stock holding. It is right in general; however, investors sometimes could take a look also on others figures, i.e. stock indexes dynamics or capital adequacy level. In this part, we analyze which bank or market figures show the most direct relation in 2007-14.

Financial strength of bank is shown by Tier 1 capital adequacy, and should be treated by investors as a key indicator. However, Fig. 3.1.1 shows that there is actually no direct relation between MC stock price and Tier 1 adequacy; in particular, the data for the last 5 years show complete discrepancy. This result proves that investors do not rely on Tier 1 capital adequacy when they think about the decision "to buy or not to buy stocks of MC".

Source: JP Morgan Chase & Co annual report, Nasdaq.

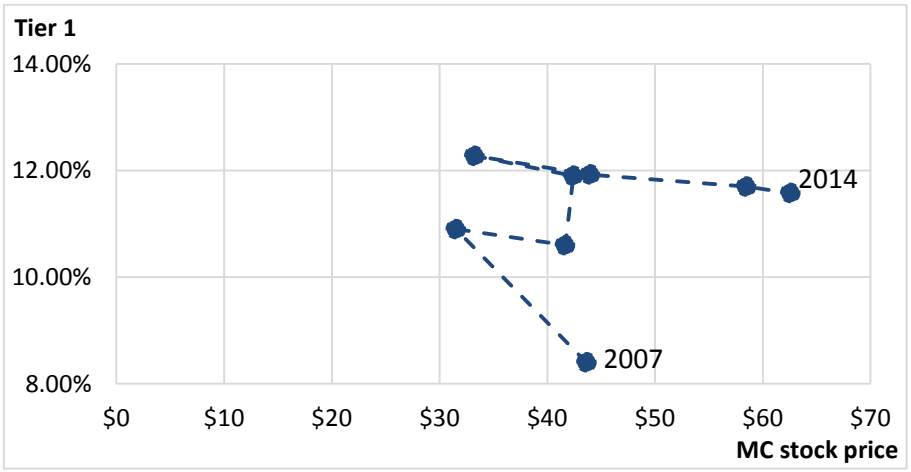

Fig. 3.1.1 Relation between Tier 1 adequacy ratio and stock price of JP Morgan Chase & Co

Global bank such as MC is strongly affected by economic situation in world and in US, including monetary policy which could hammer bank's profitability. That is why figures which reflect current global situation should influence the investors' decisions. However, Fig. 3.1.2 shows that it is not so all the time. Before and during financial global crisis of 2008,

connection between MC stock price and domestic stock market index (S&P 500 Index) was not obvious, but after 2011, the huge connection between them was appeared. That proves that investors of MC were interested mostly with market situation when think about the suitable current price, but not with real improvement of bank figures. This thesis is also supported by other graphs which are presented in Appendix II). Additional analysis showed that such figures, as return on equity, level of liquidity, or even dividends per share, did not relate with stock price in whole in 2007-14.

Source: JP Morgan Chase & Co annual report, Nasdaq.

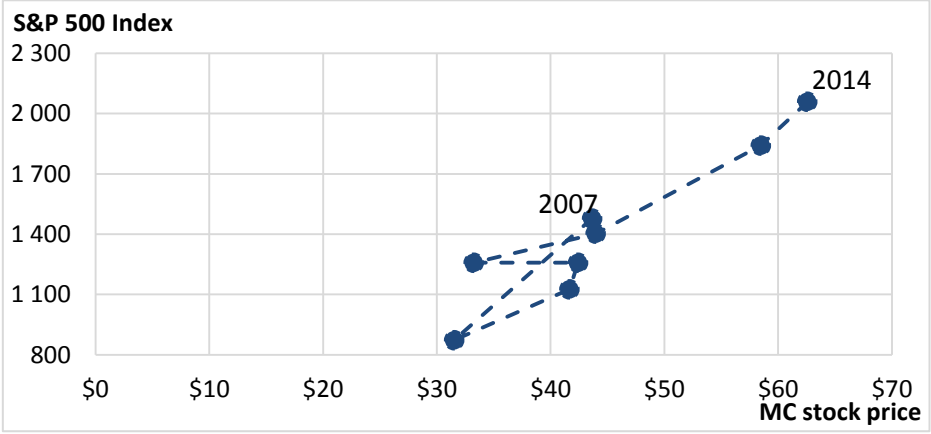

Fig. 3.1.2 Relation between S&P 500 Index and stock price of JP Morgan Chase & Co

Relation between Tier 1 capital adequacy and stock price is also not supported for DB by actual data (Fig. 3.1.3). As it shows, before crisis in 2007 price was quite high despite the fact that Tier 1 capital was minimal by the sectorial standards (). In 2014 and 2009-11, index was on the same level but stock price was significantly different. It seems that situation changed a little after 2011, but in general, Tier 1 capital adequacy is not relevant figure for investors, when they are making decision about the DB stocks.

Source: Deutsche bank AG annual report, Nasdaq.

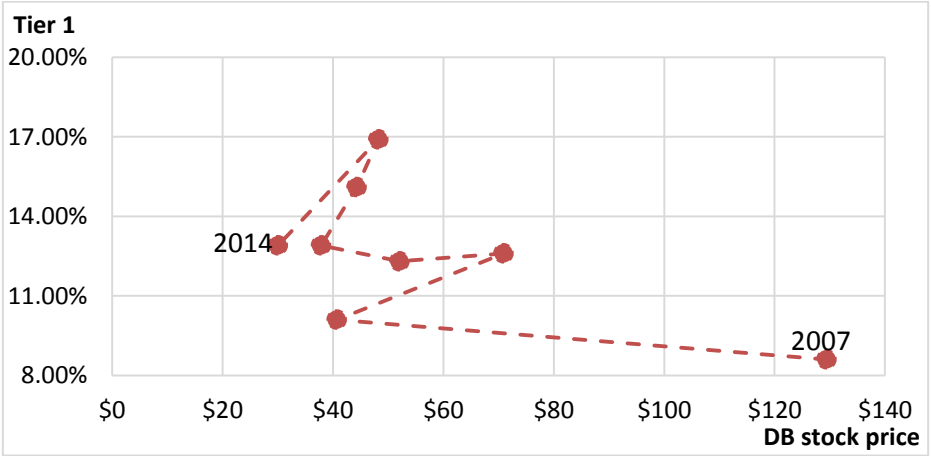

Fig. 3.1.3 Relation between Tier 1 adequacy ratio and stock price of Deutsche Bank AG

For DB, as market stock index was used EURO STOXX 50 Index because it reflects the European stock markets in the best way through the price of significant companies in region. Stock price of DB do not show any significant relation to market trend from 2013 (Fig. 3.1.4); however, it show the same dynamic as MC earlier. Other DB figures: return on equity, level of liquidity, and dividends paid per share, did not show also any relation to share market price (Appendix III), the same as for MC.

Source: Deutsche bank AG annual report, Nasdaq.

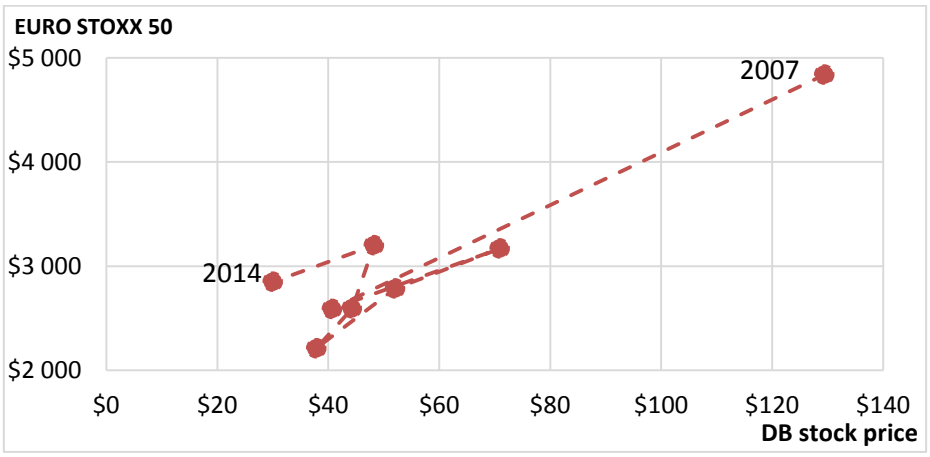

Fig. 3.1.4 Relation between EURO STOXX 50 Index and stock price of Deutsche Bank AG

As we think, the dominant relation between banks stock prices and stock indexes was created due to high dependence of banks on market confidence and monetary policy of central banks in theirs regions. Nevertheless, the bad performance of DB, fall in Tier 1 capital adequacy ratio, obscure situations with DB regulatory fitness, and obscure regulatory and monetary policy of the European zone in whole ceased this relation to exist for DB. After start of quantitive easing in EU, the relation between DB stock prices and EURO STOXX 50 Index could be recovered; however, the growth of DB stocks in 2015 could be due to another factors and it is not so univocal due to fine in the amount of $2.5 bln. (Freifeld and Ridley, 2015).

3.2 Goals of banks' stock prices from investors' perspective

The historical trend of MC in 2007-15 could be divided into three parts (Fig. 3.2.1): slow fall from 2007 till the end of 2008, period of slow growth from middle of 2012, and period of uncertainty between them. As it was beforementioned, these three periods are matched with similar dynamic in S&P 500 Index (correlation between them is equal 89.4%). The growth in the third part was due to quantitive easing program of the Federal Reserve System according to some experts (Kassen, 2013) which have come to end. Therefore, it is not right to expect

stock market growth in the next year without some additional economic surge. Therefore, we do not expect also growth of MC stock -the price will fluctuate in the range from $55 to $65 per share. Its actual price in the next year will be highly correlated with the Federal Reserve System decisions about monetary policy, including decisions about interest rate growth that is expected in the second half of 2014.

Source: Nasdaq (nasdaq.com); authors' assumptions.

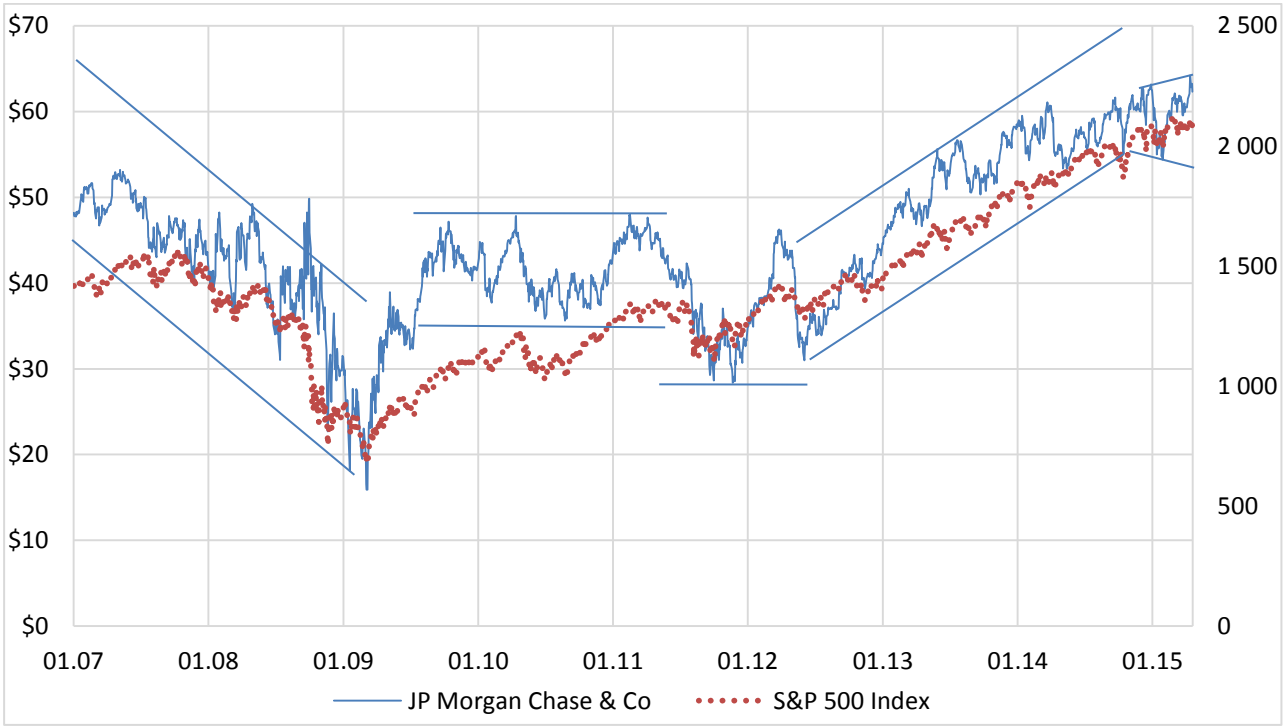

Fig. 3.2.1 Stock prices and trends of JP Morgan Chase & Co

The quality of investment in JP Morgan Chase & Co is also supported by performance indicators:

- Return on equity was 9.75% in 2014 (almost the same as for the last five years). Management (Marianne, 2015) declared the goals in amount of 15% only on Return on average tangible common shareholder's equity which was 13% in 2014. However, it is the sign that management do not expect decrease of profitability.
- Dividend grew by 9.7% in 2014, after two year growth in amount of 20%.
- Dividend yield was 2.56% in 2014 with the goal on level 3.5% from management. That numbers are higher at the moment than the interest rate on the U.S. government bonds for 10 years which is only possible risk-free interest rate estimate.
- Dividend payout ratio was only 29.9% in 2014. At the same time, the management declared the goal in range 55%-75%. If the payout ratio was the same for 2014 than dividend yield would be higher than 5%.

- The earnings in first-quarter of 2015 grew by 13.3% to $1.45 per share comparing with first quarter in a year earlier rebound in fixed-income trading (Nasr, 2015).

All in all, the current price is justifiable and we do not think that it is possible to expect some huge change of it in the next year ceteris paribus; therefore our recommendations is to hold with the price target $70. If price goes to $55 then it could be the signal of additional buying. The precise calculations of target price according to constant growth model could not be done due to high dependence of MC price on actual market situation and monetary policy decisions already this summer but some calculations is presented in Appendix IV.

Source: Nasdaq (nasdaq.com); authors' assumptions.

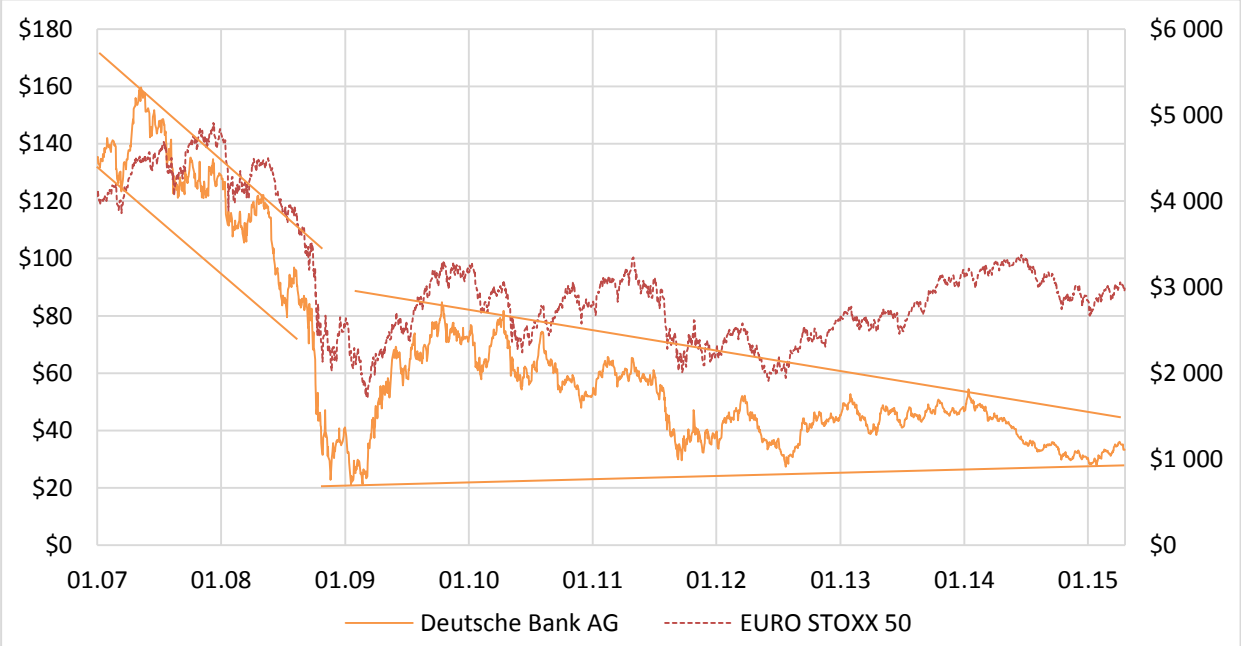

Fig. 3.2.2 Stock prices and trends of Deutsche Bank AG

At the same time, the only recommendation for the stocks of Deutsche Bank AG is to sell. Our target price on its stocks is $30 per share (dividend growth model could not satisfy this price, Appendix IV). As it could be seen on Fig. 3.2.2, DB stock price have shown steady decrease already from the middle of 2009. The current price is higher than the bottom in the end of 2008 and beginning of 2009; however the main argument for buying this stock is the quantitive easing in EU which started in March, but the decrease of profit in first quarter (Logutenkowa and Strowmatt, 2015) means that it is better to utilize EU quantitive easing program through other EU stocks (EURO STOXX 50 Index grew already on 17.97% this year). Also we should not forget that the equity share in liabilities is only 4.0% whereas Tier 1 Capital adequacy ratio is 12.9% - such huge difference is very risky due to possible problems with complying regulatory standards.

Conclusion

The global financial institutions are different in almost all things that could be different at all. At first, the strategies for global expansion were different. For example, Deutsche Bank AG used strategy of global expansion through acquiring banks in different countries for the so-called "transformational" mergers before crisis. At the same time, JP Morgan Chase was using strategy of consolidation on local markets and expansion through market operations. Additionally, JP Morgan Chase & Co is located in USA and is used the "loose" monetary policy of the Federal Reserve System for solid and profound reorganization of business. At the same time, the monetary policy in European Union is tighter and it was harder for Deutsche Bank AG to reorganize from investment to more customers' oriented banking. Finally, the quantitive easing program stimulated growth of stock markets and restored markets confidence in USA. In such environment, the capital injection is easier. In EU, the environment was totally different. Eventually, Deutsche Bank AG did not cut down the portfolio of financial instruments as it wished, did not get enough equity cushion from the perspective of leverage ratio (without risk-weighting), and did not create loan portfolio in amount enough for supporting net interest income growth.

From the perspective of the risks from Chapter 1, the Deutsche Bank AG is in more complicated situation than JP Morgan Chase. At first, the influence for harder monetary policy of the FED is problem for both; however, the JP Morgan Chase & Co access to U.S. dollars liquidity is simple due to its location. At the same time, the influence of EU bank market reorganization will not influence the US banks at all. Finally, last fine of JP Morgan Chase & Co was in 2013, but the fight with regulatory agencies for Deutsche Bank AG is only started in our opinion and fine in the amount of $2.5 bln was only first settlement. The competition with the "shadow" banking is the same and very remote because main clients of these banks are the huge corporate clients which are interested at first in special services which they can get from such huge global financial corporations.

In summary, the ratio analysis showed that JP Morgan Chase & Co is better investments from the set of competitors. However, the Deutsche bank ratios are mostly unsatisfied. Based on analyze of historical trends, analyze of ratios relation with stock price, calculations of constant growth model with different assumption, we think that the shares of JP Morgan Chase should be hold at the moment and of Deutsche Bank AG should be sold.

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Appendix I

"Assets" is a ratio that shows the comparative advantage of financial institutions. The similar indicator for real sector company could be inventories because the assets are the tool of financial institutes to generate profit through interest rate or fee charging. In general, there is the next cause-effect relation: higher the assets of the bank cause higher the possible profits of bank.

"Investments to Assets" is a ratio that describes the share of the bank assets that is used for non-core business, or in other words, the share of the bank that is invested in other business through direct investments or in long-term commercial paper that is not associated with the lending business.

"Loans to Assets" is a ratio that shows the share of assets that is used for core business of commercial banks – lending business. The stability of net interest income is highly influenced from quality and quantity figures of credit portfolio.

"Deposits to Assets" is a ratio of bank's dependence on customers' deposits. This source of funds is more stable than other sources of funds and could produce lower interest rates through influencing on weighted average cost of capital.

"Debt to Assets" is a ratio that shows the share of assets that is financed through debt issuance, or in other words, the dependence on wholesale markets.

"Equity to Assets" is a share of shareholders on the bank assets. Equity is the most expensive sources of funds for financial institutes, but is needed to satisfy regulatory standards like Basel II or III. Also could be interpreted as stability of financial institutes because is inverted to the leverage figure.

"Investments to Debt ratio" is the ratio that shows how much wholesale operation is used to non-core operations of the bank. This ratio could also be used for determination of relatedness between commercial and investment banks.

"Deposits to Loans ratio" is the ratio that shows how much money of costumers is used on lending to business (core business) and how much is used on non-core businesses or special assets that are used on fulfilling of regulatory requirements.

"ROA" is return on assets and shows how profitable usage of the bank's assets in average is.

"ROE" is return on equity and shows how good bank performance is, or in other words, how much profit could expect investors in bank in future.

"Net Margin" shows the profitability of bank revenues.

Earnings per share show how much money is generated for one share by bank.

“Dividend yield” is the ratio that shows shareholder income from cash dividends payment.

“Stock price” shows the price which investors should pay to get dividends from the bank in future.

“Market capitalization” is the ratio that could be compared in influence with “Assets”. However, “Market capitalization” shows the comparative advantage on markets and on investors unlike “Assets” that shows the comparative advantage on regulators and bank sector.

“P/E” is price to earnings ratio that shows how many years should wait investors until the bank earn the earnings for one share that is equal to current share price of bank. In general, lower ratio is better; however, it also could show that current earnings are too high or too risky, or in other words, the shares of the bank are not underpriced. High ratio is signal that shares are overpriced or that company has very huge perspectives which, of course, could be not fulfilled.

Appendix II

Source: JP Morgan Chase & Co annual report, Nasdaq.

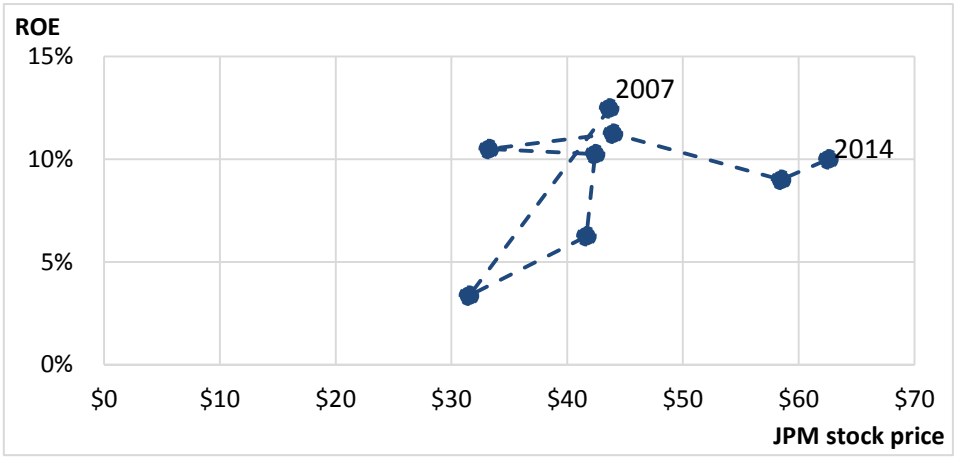

Fig. II.1 Relation between ROE and stock price of JP Morgan Chase & Co

Source: JP Morgan Chase & Co annual report, Nasdaq.

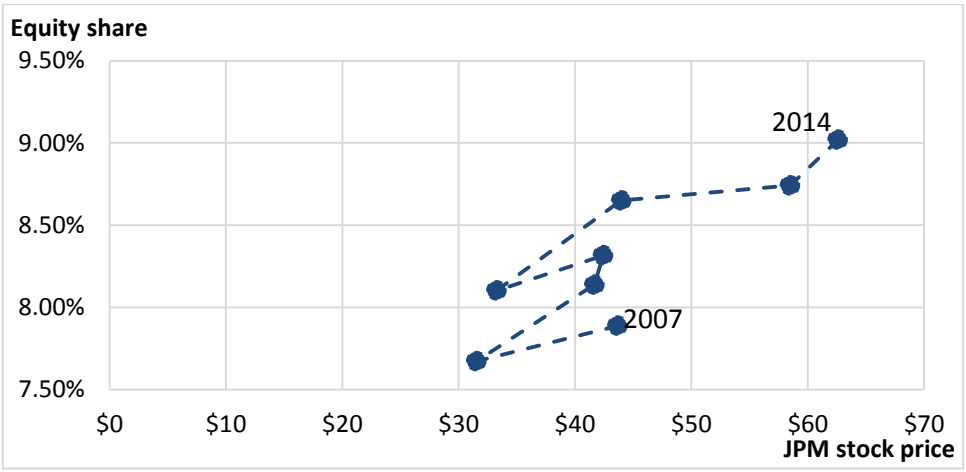

Fig. II.2 Relation between equity share and stock price of JP Morgan Chase & Co

Source: JP Morgan Chase & Co annual report, Nasdaq.

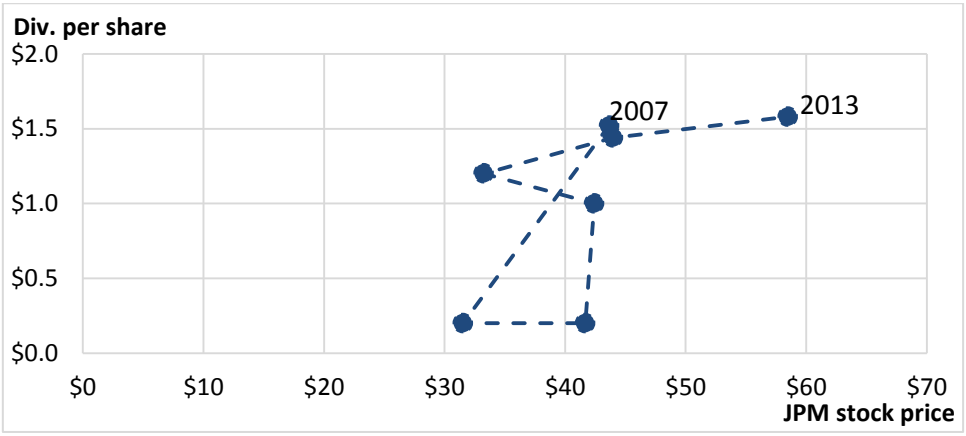

Fig. II.3 Relation between dividend per share and stock price of JP Morgan Chase & Co

Appendix III

Source: Deutsche bank AG annual report, Nasdaq.

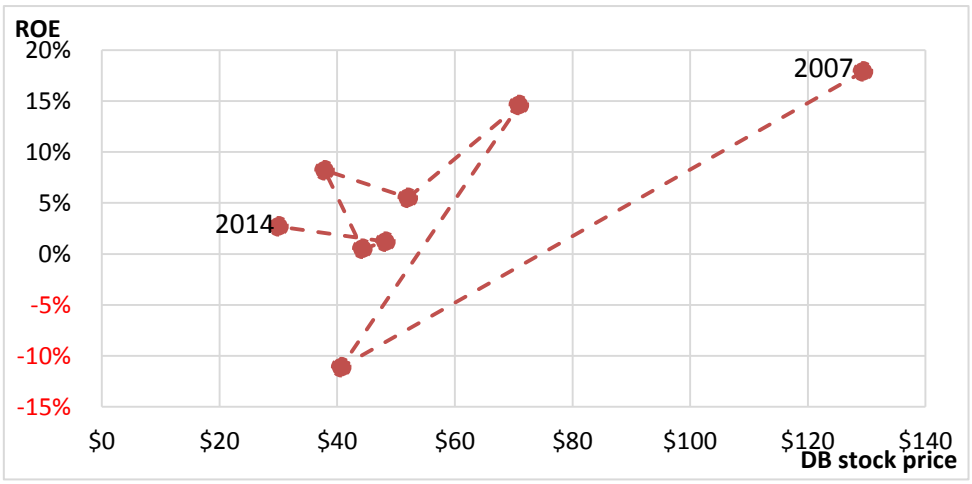

Fig. III.1 Relation between ROE and stock price of Deutsche bank AG

Source: Deutsche bank AG annual report, Nasdaq.

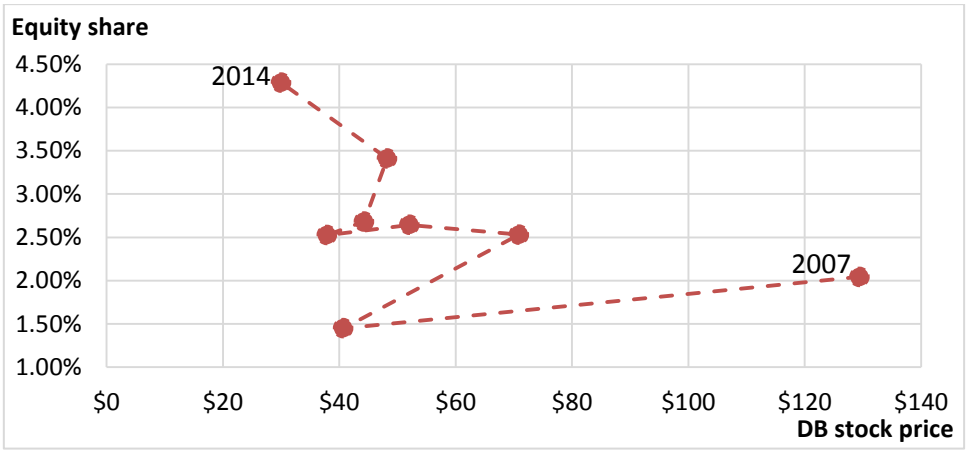

Fig. III.2 Relation between equity share and stock price of Deutsche bank AG

Source: Deutsche bank AG annual report, Nasdaq.

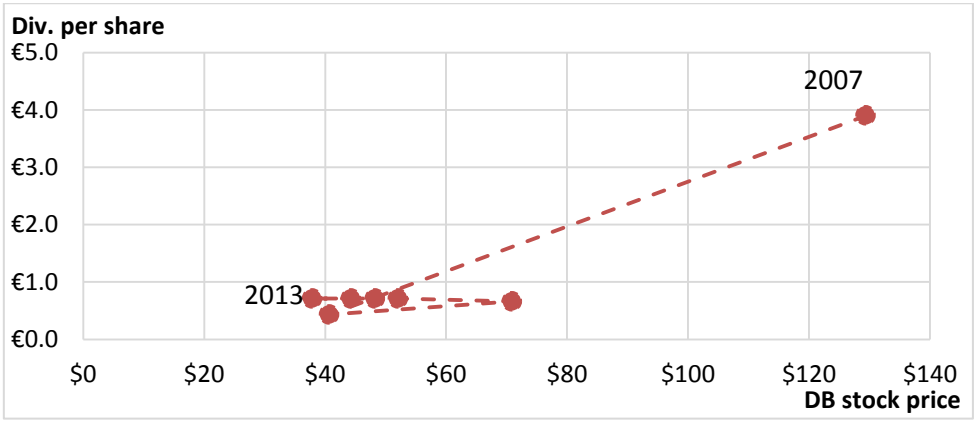

Fig. III.3 Relation between dividend per share and stock price of Deutsche bank AG

Appendix IV

I.1 Estimation of required interest rate from investors for both banks

$$r_{equity}^{Morgan\ Chase} = r_{risk-free} + \beta * \left(r_{market} - r_{risk-free}\right) = 0.9\% + 1.62 * (17.1\% - 0.9\%) = 27.1\%$$

$$r_{equity}^{Deutsche\ bank} = r_{risk-free} + \beta * \left(r_{market} - r_{risk-free}\right) = 0.9\% + 1.22 * (17.1\% - 0.9\%) = 16.9\%$$

As risk free rate, we took interest rate on U.S. government bonds with 3-year maturity as of April 28, 2015; market interest rate is equal to average growth of S&P 500 Index for the last three year (also as of April 28, 2015). We used the interest rates of U.S. government bonds and U.S. stock market because both stocks are traded on U.S. stock markets.

In fact, such high return could not be reached currently: JP Morgan Chase stock price grew by 15.67% in average for last three years and Deutsche Bank AG fell by 6.31%. Therefore, we also calculated the rate of return for higher horizon (15 year horizon), and got the next figures:

$$r_{equity}^{Morgan\ Chase} = r_{risk-free} + \beta * \left(r_{market} - r_{risk-free}\right) = 2.21\% + 1.62 * (4.52\% - 2.21\%) = 5.95\%$$

$$r_{equity}^{Deutsche\ bank} = r_{risk-free} + \beta * \left(r_{market} - r_{risk-free}\right) = 2.21\% + 1.22 * (4.52\% - 2.21\%) = 4.04\%$$

These figures look more adequate from the long-term perspectives, and we have decided to use them in later calculations.

I.2 Price according to constant growth model for both banks

The current dividend of JP Morgan Chase & Co is equal to $1.58; at the same time, the current dividend of Deutsche Bank AG is equal to €0.71. In 2007, the dividends of JP Morgan Chase & Co were $1.52 and of Deutsche Bank AG was €3.9. Considering that Deutsche Bank AG dividends did not grew the last four years and its high paid out ratio, we do not assume growth rate of Deutsche bank AG dividends in near future. But JP Morgan Chase interest rate grew on 0.65% in average after 2007. Than we get next prices:

$$P^{Morgan\ Chase} = \frac{D_1^{Morgan\ Chase}}{r_{equity}^{Morgan\ Chase} - dividend\ growth^{Morgan\ Chase}} = \frac{\$1.58 * 1.0065}{5.95\% - 0.0065\%} = \$26.76$$

$$P^{Deutsche\ Bank} = \frac{D_1^{Deutsche\ Bank}}{r_{equity}^{Deutsche\ Bank} - dividend\ growth^{Deutsche\ Bank}} = \frac{€0.71}{4.04\% - 0\%} = €17.57 = \$19.33$$

As it could be seen these prices is lower comparing with actual. What assumption could investors use to make the estimation equal to current price? At first, we will analyze JP Morgan Chase & Co. Its dividends grew by 16.3% in average the last three year; its return on equity grew 10.08% and payout ratio was only 30% for the same period of time. The goal for

payout ratio, as was mentioned before, is in the range between 55% and 75%. Therefore, the dividends will grow even if the earnings do not change. Therefore, the ratio near 10% is suitable for our calculations. However, this number is bigger than rate of return for Morgan Chase and constant growth model will give us the negative result which is not correct. Therefore we want to solve reverse task and calculate the rate of return and dividends growth rate which could satisfy current price:

$$r_{equity}^{Morgan\ Chase} = \frac{D_1^{Morgan\ Chase}}{P^{Morgan\ Chase}} + dividend\ growth^{Morgan\ Chase} = \frac{\$1.58*1.1}{\$63.22} + 10\% = 12.75\%.$$

We think that this rate of return is very good for investors in time when the rate on the U.S. government bonds on 30 year is equal to 2.68%. Therefore, our target for next year is equal to 10% growth of share price (the same as of dividends) which is rounded up.

At the same time, the target price of Deutsche Bank AG in amount of $30 would be satisfied if the current dividends were equal to €1.11 or growth in one and half time. We think that markets are expecting such growth sooner or later. An additional argument to this is that the lowest price of Deutsche Bank AG in amount of $21.27 was achieved at the beginning of 2009 when dividends was equal to €0.43 (40% lower than currently); however this price could be only satisfied with the dividends near current level and very low expected growth rate (three time lower than for JP Morgan Chase & Co). Therefore, we expecting the growth of dividends of Deutsche Bank AG to the level of €1.11 in future, but this growth will not be stable and constant. Therefore, the price $30 is only first target, and we could see the fall to the level of $20 if the things go badly for Deutsche Bank AG.