Nasdaq

A Decade Later, Banks Set to Fly-high Again

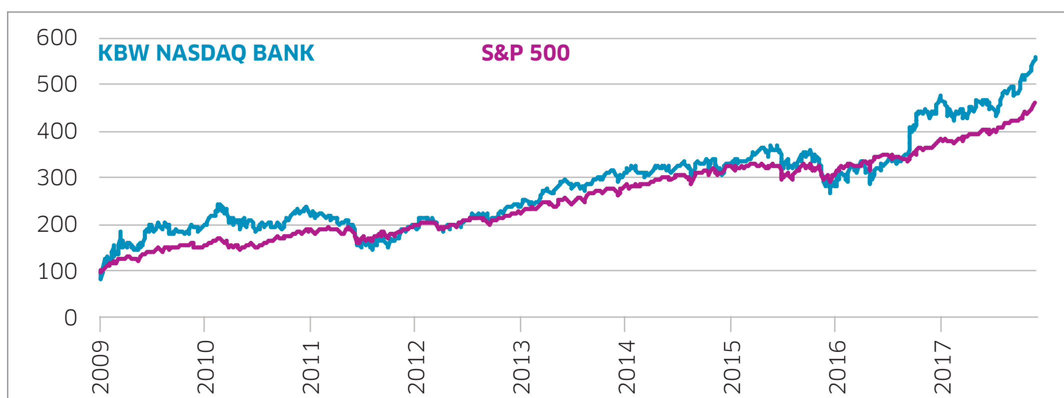
RICHARD LIN, CFA, GLOBAL INFORMATION SERVICES

The Recovery of the Banks

This year marks the 10-year anniversary of the 2008 Great Recession. The primary cause of the crisis was the over-lending of subprime mortgages by the banking sector. By then, the bursting of the US housing bubble had skyrocketed the delinquency ratios. The massive risk-taking activities in Wall Street, helped by the sophisticated and highly leveraged financial engineering products, had triggered a global liquidity crisis. Governments had to step in with dramatic effects to bail out the banks and calm down the market. Nevertheless, "too big to fail" and smaller regional banks were the hardest hit companies during the crisis.

Since the crisis, banks have largely recovered along with the broad equity market, even though the road of recovery was choppy (chart 1). Bank stocks were the last to recover from the financial crisis. In chart 2, we compare how each of the sectors have rebounded and bypassed their pre-crisis peak levels. Bank stocks logged a 76% cumulative loss and took 94 months to recover to pre-crisis levels, much worse than the other sector average of -47% and 36 months. The longer recovery path for financials is the result of government's deleverage and re-regulation procedure. This long procedure has finally come to the end: banks' balance sheets have been largely cleaned up and sufficient capital has been restored. The former Fed chairman Janet Yellen has spoken out that banks are "very much stronger" and another financial crisis is unlikely anytime soon[1]. With all these encouraging developments, financial sector stocks finally recovered back to pre-crisis levels in November 2016. We think that the solid path of recovery actually sets a strong foundation for further future rallies.

Chart 1: Bank stocks rising with the broad equity market but with much higher volatility



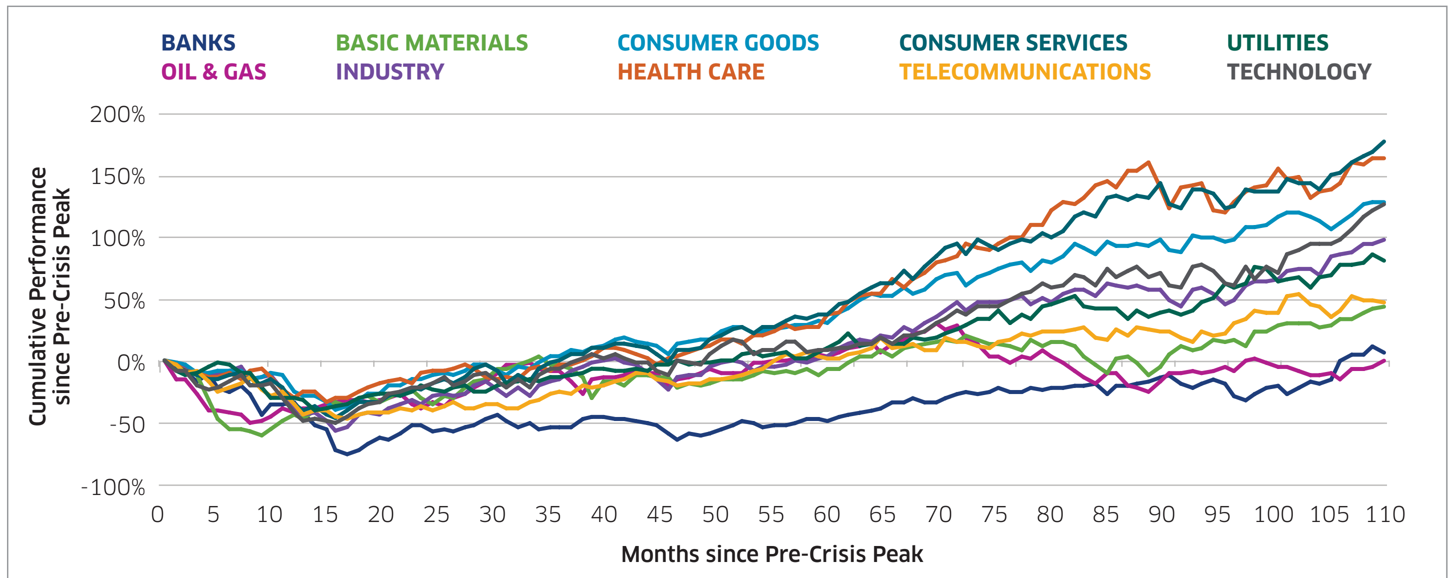
Source: Nasdaq, Bloomberg

Summary

- Banks have recovered from the 2008 Great Recession with a much stronger balance sheet.
- With the help of tax reform, deregulation, a growing economy, advanced technology and favorable monetary policies, banks are set to fly-high again.
- For investors bullish on the broad financial industry, the KBW Nasdaq indexes offer the purest targeted exposures to each individual financial sector: banking, asset management, broker/dealer, insurance, equity REITs and mortgage finance.

[1] Global Economic discussion with Lord Nicholas Stern, president of the British Academy, London, June 27, 2017.

Chart 2: Banks took the worst hit and was the last to recover



Banks – KBW Nasdaq Banks Total Return Index;

Other Sectors – Nasdaq US Benchmark Industry Total Return Indexes.

The chart is created by aligning every sector index at the pre-crisis peak to the starting point of zero, in order to compare the length and depth of their recovery paths and the further cumulative growth after the emergence. Detailed statistics are listed below:

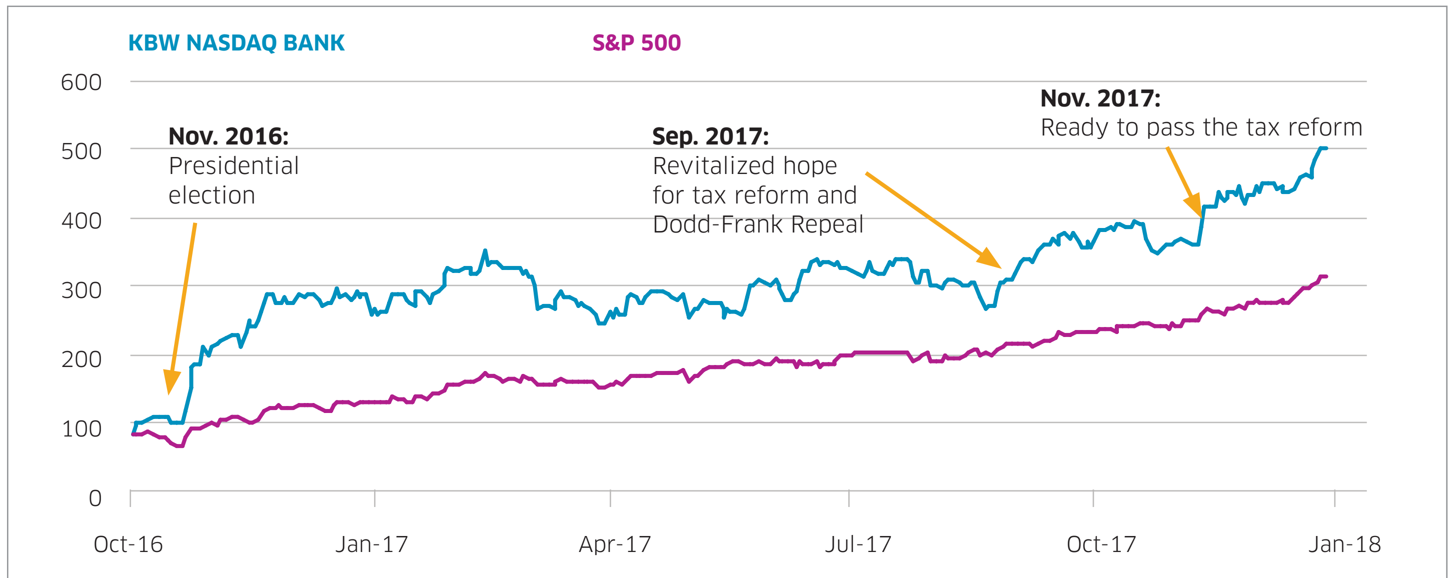
Table 1: Statistical Summary for Sector Performance since 2008 Crisis

ICB Sector	Pre-Crisis Peak	Bottom	Max. Loss	Recover Since	Months Last	Cum. Gain	Remark
Banks	Sep-07	Feb-09	-76%	Jan-17	94	38%	
Oil & Gas	Jun-08	Feb-09	-50%	May-13	50	32%	Topped at Jun-14
Basic Materials	May-08	Feb-09	-60%	Dec-13	57	51%	
Industry	Oct-07	Feb-09	-56%	Jan-13	46	131%	
Consumer Goods	Oct-07	Feb-09	-39%	Dec-10	21	147%	
Health Care	Nov-07	Feb-09	-33%	Apr-11	25	196%	
Consumer Services	Oct-07	Feb-09	-46%	Jan-11	22	207%	
Telecommunications	Sep-07	Feb-09	-47%	Aug-12	41	55%	Topped at Jul-16
Utilities	Dec-07	Feb-09	-40%	Jun-12	39	100%	
Technology	Oct-07	Feb-09	-50%	Mar-11	24	172%	
Average			-47%		36	121%	Banks excluded

Source: Nasdaq as of Jan. 29, 2018.

The most recent bank rally started in November 2016 when the market predicted that President Trump's election would encourage deregulation in the financial industry. Since the end of November 2017, the banking sector's upward momentum stayed intact with the revitalized hope that tax cuts and financial reform could boost bank earnings upfront and that a solidified economic recovery would encourage more business activities to benefit the banking sector in the long run.

Chart 3: The Bank rally strengthened in the last 13 months



Source: Nasdaq, Bloomberg

The Bank Business Models Explained

Banks, especially large banks, have a diversified revenue model. Let's take JPMorgan Chase's business lines as the example:

CONSUMER AND COMMUNITY BANKING (CCB)

Also known as retail banking or personal banking, CCB has the vital function to provide banks with important sources of funding by gathering customer deposits. In addition, CCB also provides a wide variety of products and services such as: credit cards, mortgage, auto finance, small business and merchant services, etc.

CORPORATE AND INVESTMENT BANKING (CIB)

CIB services include treasury and cash management, custody & fund services, global investment banking and capital markets, etc. CIB is usually the largest source of revenue and also risk for banks.

COMMERCIAL BANKING (CB)

Commercial banking's client target sits between the CCB and CIB and represents a revenue size between $20mm and $2B. It includes middle market banking (MMBSI), corporate client banking (CCBSI) and commercial real estate (CRE). Similar to CIB, CB's business also includes treasury services, lending and capital markets.

ASSET & WEALTH MANAGEMENT (AWM)

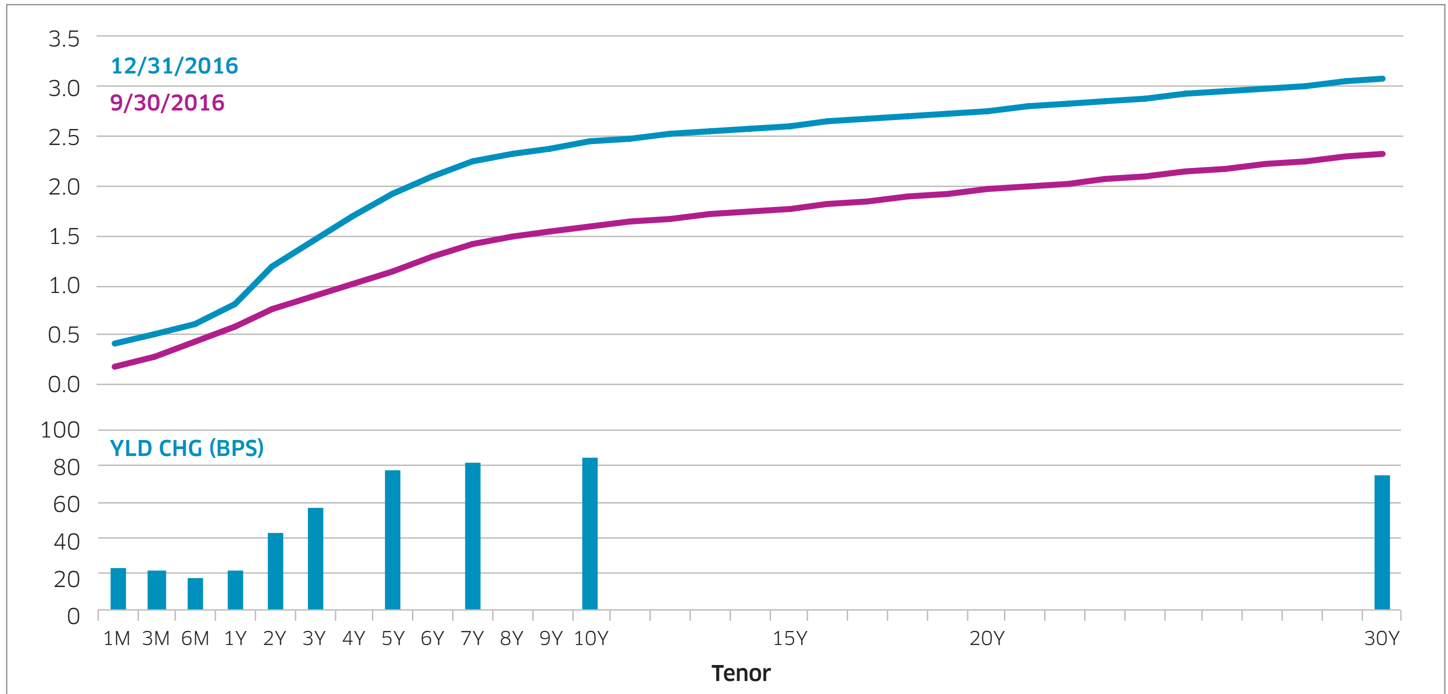
JPMorgan asset management operates a diversified mutual fund business including ETF products. Its wealth management business involves financial and investment advices, accounting and tax services, retirement planning and legal or estate planning for high level professional services.

A Simple Bank Valuation Model

Traditionally, the majority of banks' revenues came from lending, which made their earnings inevitably very sensitive to the broad economy outlook because of changes in credit conditions. Many macro traders therefore simply model the banking sector's short-term performance using the slope of the treasury yield curve. They believe that when short-term rates rises, banks need to pay more for deposits, causing revenue to go down. On the far end of the curve, when long-term rates go up, banks can charge more for loans, causing revenue to go up.

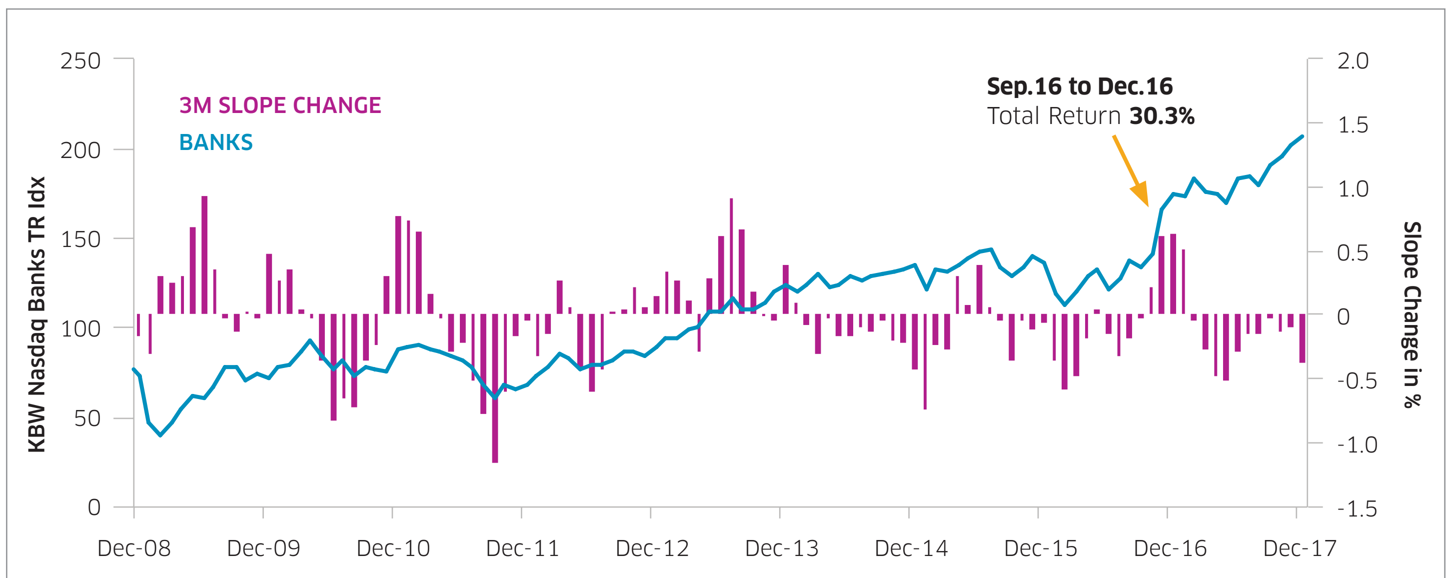
Let's take a look at a real world example of how the rising yield curve slope impacted banking sector performance during the last quarter of 2016. Traders observed that the 1Y10Y slope rose from 1.01% in September 2016 to 1.63% in December 2016 with a gain of 62 bps in three months. They explain their bullish view of the banking sector such that: the 85 bps rise of 10-year yield suggests that new loans will be more profitable; and the 23 bps rise of the 1-year rate suggests that deposit costs will only increase moderately. The overall Net Interest Margin (NIM) is improving which will encourage banks to lend more with contained costs. The KBW Nasdaq Bank Total Return Index (BKXTR) returned over 30% during that period.

Chart 4: Yield curve steepened in December 2016



Source: Bloomberg

Chart 5: Bank performance and yield curve slope movements



Banks – KBW Nasdaq Banks Total Return Index;

Slopes – USGG10YR Index - USGG12M Index.

Source: Bloomberg, Nasdaq calculation.

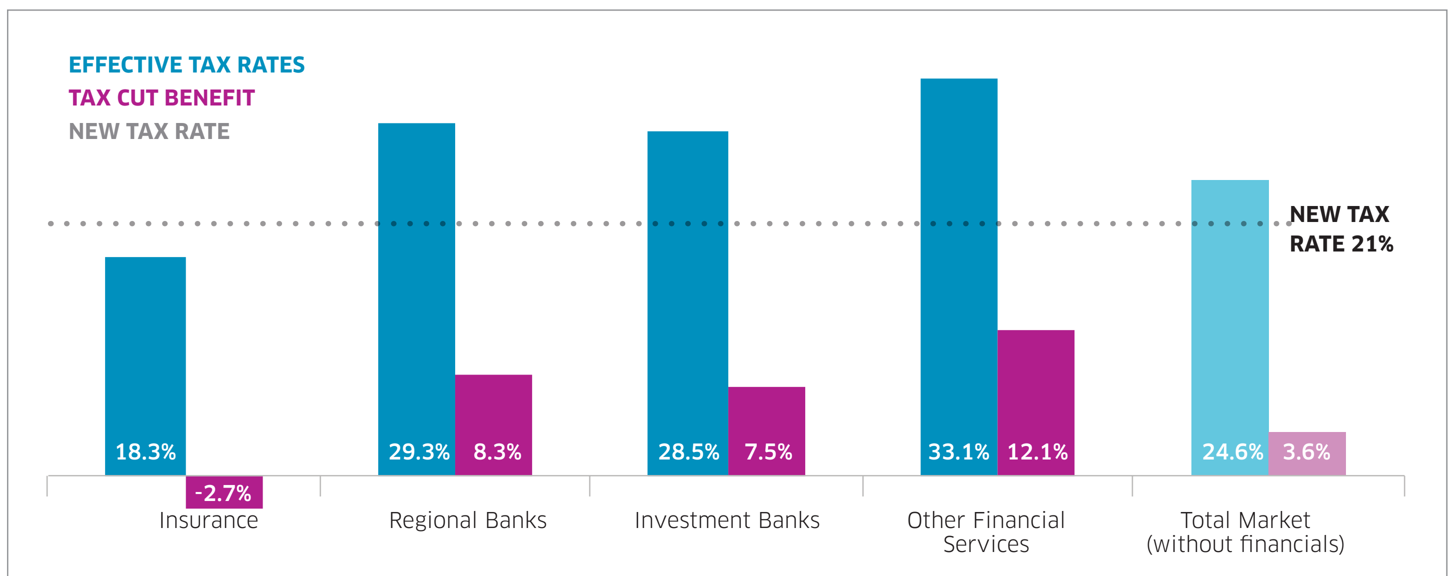
Fundamental Drivers

The short-term slope model worked less effectively last year with bank stocks continuously reaching new highs despite a flattening yield curve. This is because other long-term fundamental drivers, such as tax reform, deregulation, a growing economy and advancing technology, all started to contribute to the valuation of the bank stocks. Below is a detailed look at each of the fundamental drivers.

Tax Reform

It is believed that banks will be one of the big winners of the new tax code. The newly passed Tax Cuts and Jobs Act will lower the banks' corporate tax rate from nearly 30% to a flat rate of 21%[2]. Moreover, the preferable tax treatment for pass-through companies will benefit the smaller community banks more than the large Wall Street banks[3]. Despite the unexpected side effect of the one-time write-off due to the reduction of tax-deferred assets, most banks nevertheless see great current and long-term benefits from the new tax savings and vow to direct the benefits towards shareholders as well as "strengthen the capital generation capabilities going forward"[4].

Chart 6: Effective Tax Rates* and Tax Cut Benefits



*Average effective tax rates across only money-making companies.

Source: NYU, updated by January 2018.

The Financial Wealth Spillover Effect

In addition to the direct earnings boost from the tax cut, banks should also benefit indirectly from the large corporations and wealthy investors because of the spillover effect. Tax reform is a broad market event that has positive impacts on every corner of the US economy. Large corporations who gained from the direct tax cut and overseas cash repatriation are more likely to spend their extra cash to strengthen their balance sheet, invest in future growth and reward their shareholders. American investors are clearly long-term winners from this wave of revival of "animal spirits"[5] and are more likely to increase their needs for asset and wealth management advice. Smaller high-tech and startup companies will also become favored M&A targets for those giant growth hunters and this should boost IPO and investment banking activities.

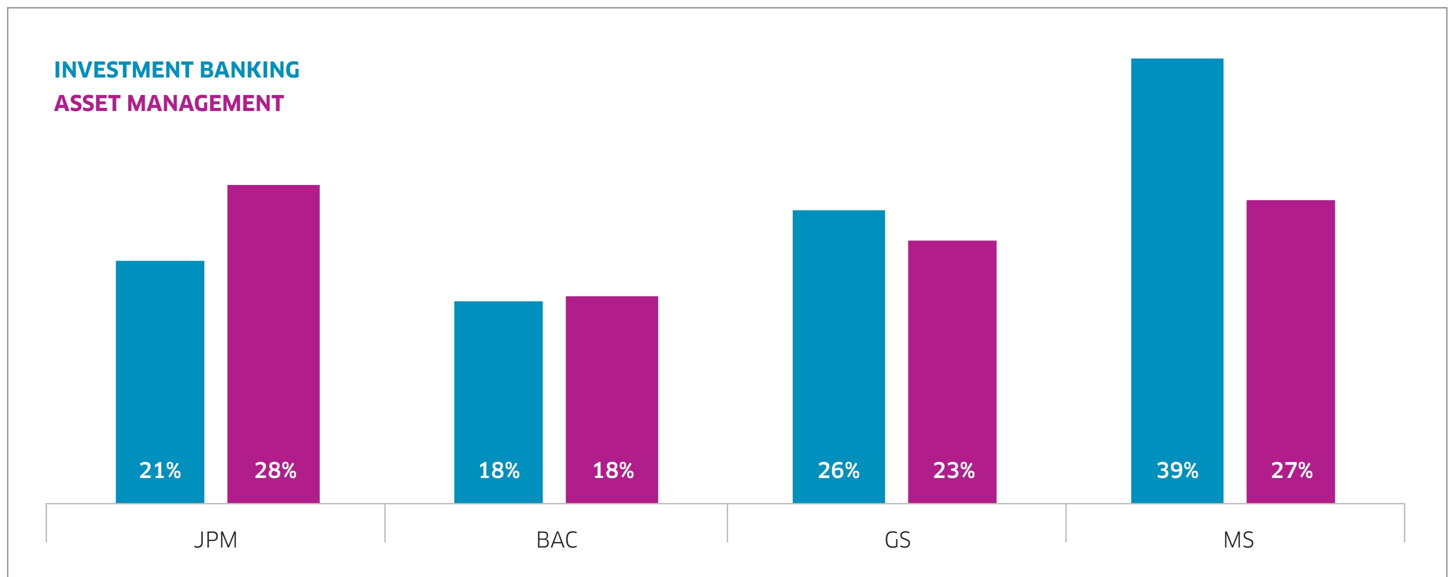
2 NYU Tax Rate data

3 Business owners who take their income in the form of profit distribution are known as pass-through companies and taxed at personal income rates. The first 20% of personal income is tax-free under the tax plan.

4 Citigroup CEO Commentary on 4th Quarter Results

5 An economic term first used by John Maynard Keynes in his 1936 book "The General Theory of Employment, Interest and Money" to describe the human emotion that drives consumer confidence.

Chart 7: 2016 to 2019 Growth Rate for Investment Banking and Asset Management



Source: FactSet, Quarterly Release & Analysts' Estimates

Deregulation

Since the financial crisis, regulators have passed stricter financial rules to help stabilize the financial system. The most comprehensive legislation among those is the 2010 Dodd-Frank Wall Street Reform and the Consumer Protection Act (Dodd-Frank Act). The Dodd-Frank Act created the Financial Stability Oversight Council (FSOC) to monitor the financial stability of those "too big to fail" financial institutions and the Volcker Rule to require financial institutions to separate their investment and commercial functions. Although the proponents of the regulation believe the act stabilized the financial system and prevented the economy from experiencing another financial crisis like 2008, opponents criticize that it forced U.S. banks to hold much higher levels of capital and make it difficult for them to compete with foreign counterparts.

A decade later, with the current administration promoting a pro-growth, pro-business environment, financial regulators are rolling back or loosening those constraints on banks. The effect is larger gains for big banks. Christopher Lee, a portfolio manager at Fidelity, said in a research note that "Estimates are that big banks with more than $50 billion in assets, which have seen a disproportionate share of the incremental regulations, could be among the biggest beneficiaries, with an estimated 5% to 15% boost in earnings. Regional banks, which have tried not to exceed the onerous $50 billion threshold, could become more interested in mergers and acquisitions (M&A), and investment banks could benefit from increased trading activity."[6]

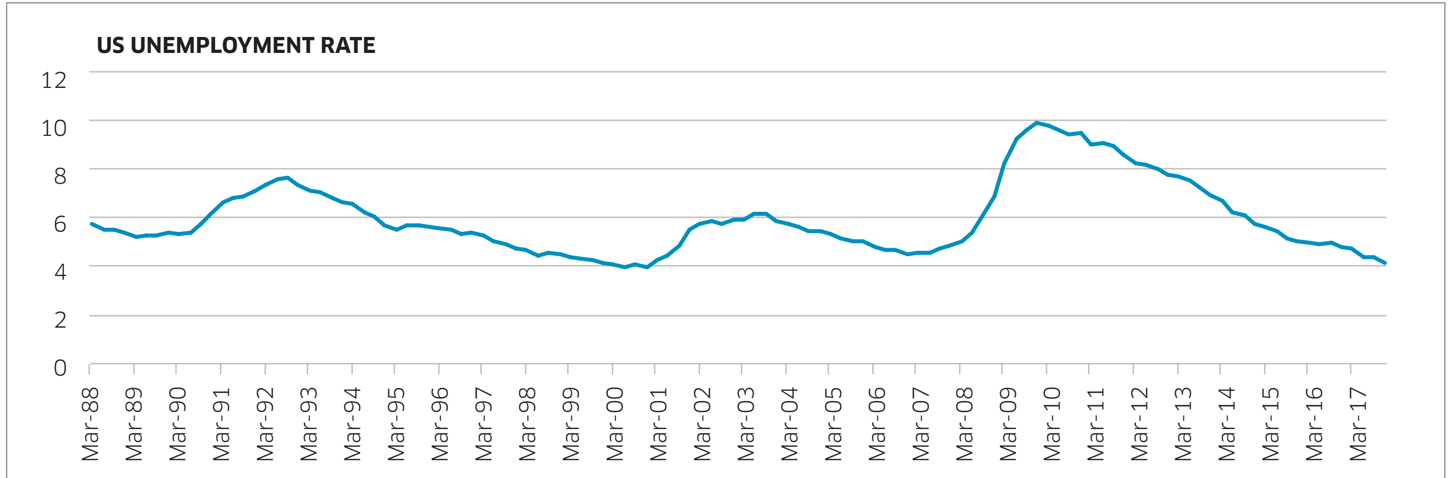
Growing Economy

While signs of significant inflation are still lacking, thus compressing long-term yields until the end of last year, the IMF recently upgraded the US GDP growth rate to 2.7% in 2018 and 2.5% in 2019, with the assumption that fiscal stimulus will lead to higher growth. The US unemployment rate is also at a post-crisis historical low of 4.1%. What is even more amazing is that US consumers are at the most secure stage of their credit cycle: the average of household debt service payments are just north of 10%, the lowest (most affordable) level in more than three decades. Many economists may be concerned about the historical low saving rate, but strengthened consumer confidence and the extraordinary equity bull market can well explain the dilemma. Overall, improving economic conditions and tight employment have increased household incomes at a steady pace. The banking sector deregulation and a favorable household credit structure will encourage US consumers to increase spending again on credit cards, auto financing and home mortgages.

6 Fidelity 2018 Outlook: Financials

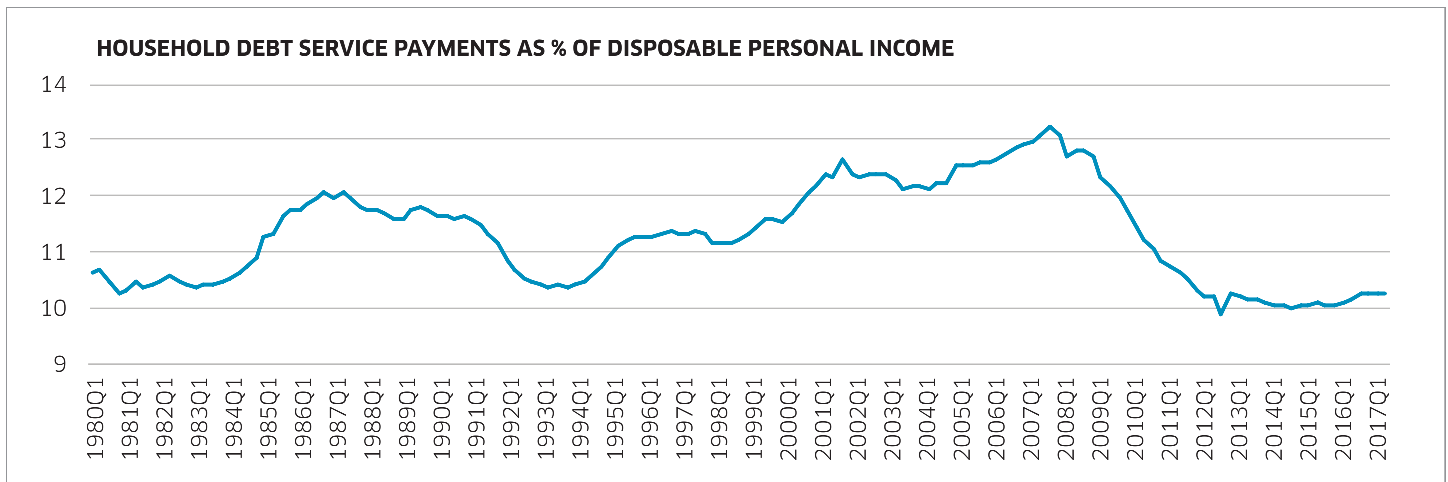
7 IMF World Economic Outlook Update (January 2018)

Chart 8: US Unemployment Rate is close to Historical Low after Financial Crisis



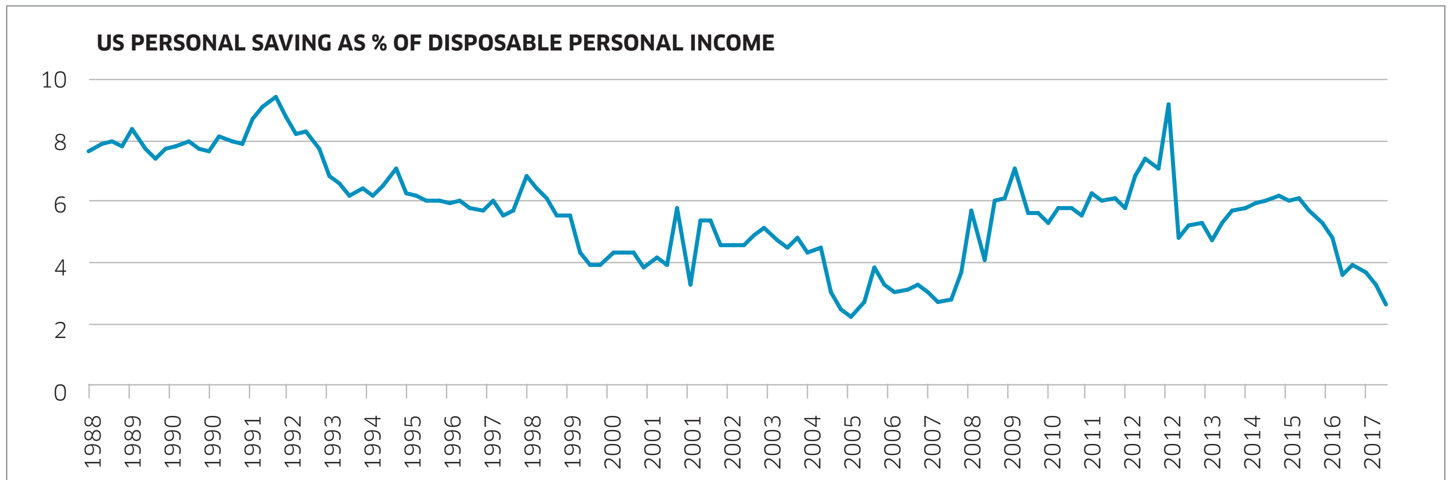
Source: Bloomberg

Chart 9: US Household Credit is close to the Most Affordable Level



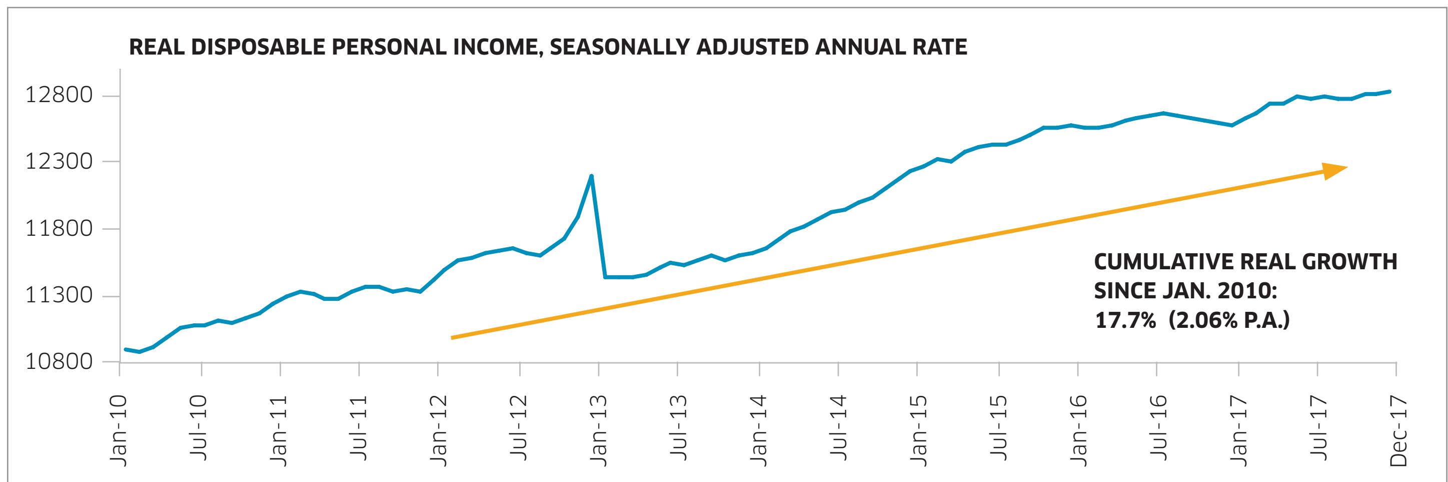
Source: Federal Reserve

Chart 10: US Personal Saving Rate is Low



Source: Bloomberg

Chart 11: US Household Income is Steadily Increasing[8]



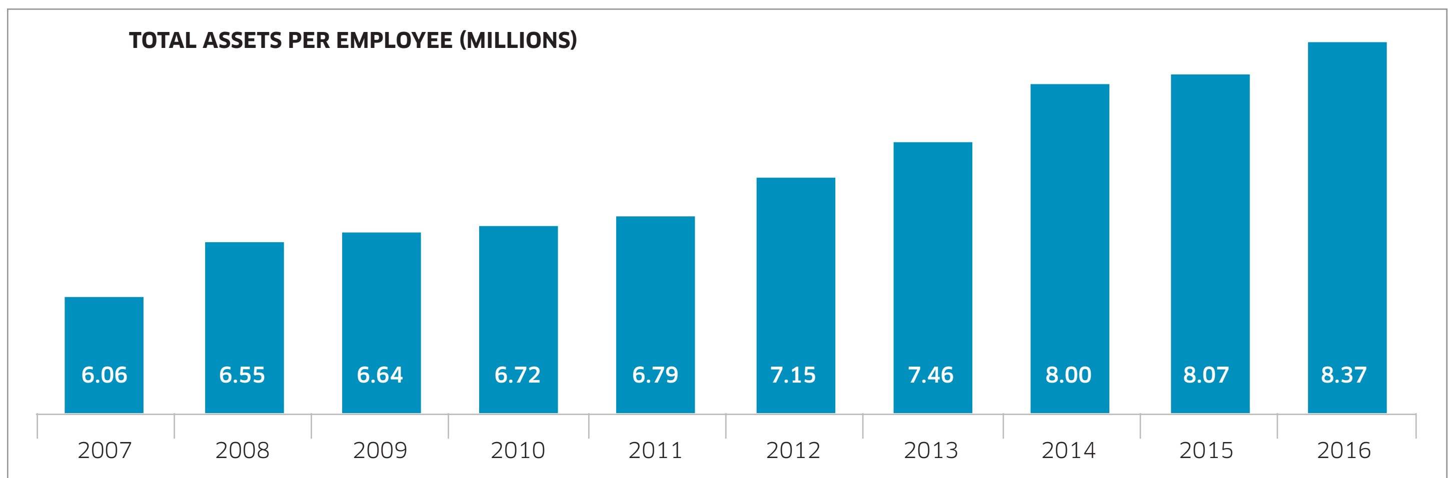
Source: Federal Reserve

Advancing Technology

Since the financial crisis, despite the shrinking of capital market trading activities due to regulatory requirements such as the Volcker Rule, a large part of trading job elimination was due to the rise of automated trading algorithms that replaced the expensive human traders.

This technology-triggered restructuring has happened everywhere across the banking sector over the past ten years. Robotic Process Automation backed algorism has already taken over a lot of trading and sales jobs in equity, FX and derivatives[9]. Other traditional bank functions such as tellers and personal bankers are also challenged by disruptive financial technologies such as Mobile Payments and the Robo Advisor. With the help of new technologies, banks are able to manage assets more efficiently today than a decade ago without adding too many headcounts. Our research shows that bank employees, on average, are managing $8.37 million assets per capita, a significant increase from the 2007 figure of $6.06 million.

Chart 12: Banks employees are managing more assets



* Included all banks from BKX index except CFG and FRC due to missing data.

Source: FactSet, Nasdaq.

8 One must notice that income climbed steeply at the end of 2012 before falling dramatically in January 2013. A FRED blog (Cliffhanger: Personal income in 2012) explained it as the fiscal cliff effect: A series of temporary income tax cuts were set to expire on December 31, 2012, increasing the tax rate on personal income for many people in potentially significant ways. Taxpayers adjusted their various income streams by trying to shift income from the beginning of 2013 to the end of 2012. This shift applies primarily to capital income.

9 Bloomberg: Robots Are Coming for These Wall Street Jobs

The following table gives a summary of all the major macroeconomic themes we think that are happening. These fundamental drivers will simultaneously impact the bank sector valuation but we believe that those associated with policy changes, such as tax reform and financial deregulations, will play a more significant role in setting other inputs such as GDP growth, inflation and interest rates, and hence should be paid with more attentions by investors.

Table 2: Major Macroeconomic Themes and Impacts to Bank Business Divisions

Theme	Briefing	Corporate Division	Personal Loans	Commercial Loans	Investment Banking	Capital Markets	Wealth Management
Tax Cut	Effective tax rate lower to 21%	+ +			+		+
Deregulation	Repeal Dodd-Frank Act		+ +	+ +	+		
Growing Economy	Encourage consumer lending		+	+			
Technology	Improve productivity		+			+	+
Inflation	Long term rate rise		+	+			
Fed	Short term rate rise		-	-			

* Double signs are super factors

Table 3: Banks Fundamental Matrix have improved

Matrix	JPMorgan Chase & Co.			Bank of America Corporation			Goldman Sachs Group, Inc.			Citigroup Inc.		
	2017A	2018E	2019E	2017A	2018E	2019E	2017A	2018E	2019E	2017A	2018E	2019E
Growth	6.8	8.7	9.6	1.6	2.5	2.8	9.0	21.3	23.7	5.4	6.4	7.4
Valuation	15.6	12.3	11.1	18.9	11.9	10.4	28.3	11.9	10.7	13.8	11.7	10.1
Profitability	12.7	16.4	17.1	9.7	14.1	15.1	11.4	12.0	12.6	(4.4)	10.0	11.2
Credit	13.9	12.4	12.5	13.4	12.9	12.5	10.9	12.8	13.2	14.0	13.1	12.5
Efficiency	59.0	56.5	55.9	62.0	58.0	56.3	65.3	65.3	64.7	58.0	56.9	55.8

Matrix	Morgan Stanley			Wells Fargo & Company			PNC Financial Services Group, Inc.			U.S. Bancorp		
	2017A	2018E	2019E	2017A	2018E	2019E	2017A	2018E	2019E	2017A	2018E	2019E
Growth	3.1	4.5	5.0	4.1	4.8	5.4	10.4	10.5	11.5	3.5	4.1	4.4
Valuation	17.0	11.7	10.5	14.8	12.6	11.3	13.9	13.8	12.5	15.3	13.2	12.2
Profitability	10.9	13.2	13.8	14.9	14.9	15.7	12.6	14.0	14.6	17.3	18.9	18.7
Credit	18.9	18.3	18.2	13.5	12.5	12.6	11.6	11.4	11.3	10.8	11.0	10.9
Efficiency	73.0	72.0	71.6	66.2	60.1	57.8	64.0	59.0	57.8	58.8	55.3	54.9

Matrix	Factor	Definition	Better Direction
Growth	EPS	Earning Per Share	Higher
Valuation	P/E	Price / EPS	Lower
Profitability	ROTE	Return on Tangible Common Equity	Higher
Credit	Tier 1	Tier 1 Capital / RWA	Lower (more lending)
Efficiency	Efficiency Ratio	Operating Expense / Revenue	Lower

Source: FactSet

Conclusion

Banks took the most severe hit and were the last sector to emerge from the 2008 Great Recession. With a much stronger balance sheet catalyzed by tax reform, deregulation, a growing economy, advanced technology and favorable monetary policies, banks are set to fly-high again. Almost every dimension of banks' fundamental matrix shows some improvements in the making due to the above mentioned five drivers.

For investors bullish on the broad financial industry, the KBW Nasdaq indexes offer the purest targeted exposure to each individual financial sector. These include: banking, asset management, broker/dealer, insurance, equity REITs and mortgage finance.

- KBW Nasdaq Bank Index (BKX)
- KBW Nasdaq Regional Banking Index (KRX)
- KBW Nasdaq Capital Markets Index (KSX)
- KBW Nasdaq Insurance Index (KIX)
- KBW Nasdaq Property & Casualty Index (KPX)
- KBW Nasdaq Premium Yield Eq. REIT Index (KYX)
- KBW Nasdaq Financial Sector Dividend Yield Index (KDX)
- KBW Nasdaq Global Financials (ex-U.S.) Index (KGX)
- KBW Nasdaq Mortgage Finance Index (MFX)
- KBW Nasdaq Global Bank Index (GBKX)
- KBW Nasdaq Financial Technology Index (KFTX)

The KBW indexes are currently the basis for five ETFs offering investors access to key financial sub-sectors, including:

Fund Name	Index Name	ETF Ticker
Invesco KBW Bank ETF	KBW Nasdaq Bank Index	KBWB
Invesco KBW Regional Banking ETF	KBW Nasdaq Regional Banking Index	KBWR
Invesco KBW Property & Casualty Insurance ETF	KBW Nasdaq Property & Casualty Index	KBWP
Invesco KBW High Dividend Yield Financial ETF	KBW Nasdaq Financial Sector Dividend Yield Index	KBWD
Invesco KBW Premium Yield Equity REIT ETF	KBW Nasdaq Premium Yield Eq. REIT Index	KBWY

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