

# BANKS AND THE CREDIT CYCLE

## Preparations for Financial Advisory Roundtable

JUNE 7, 2019

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## Questions for FAR

1. What drives the credit cycle? Has the nature of the credit cycle changed since the crisis? How important is the state of the credit cycle for financial stability and for the real economy?
2. Where is the U.S. economy in the credit cycle? Are there particular markets which are overheated relative to fundamentals?
3. Which policy tools, if any, should be used to manage the credit cycle? How?

## My approach: a view on banks and the financial accelerator – is anything different now?

- A view from the trenches at banks
- Comparison to prior recessions
  - More focus on milder recessions (1990/91 and 2001) than financial crisis (2007-09)
- Capital positions
- Commercial credit: signs of fragility
- Consumer: appears robust except for student loans
- Role and impact of stress testing and CCAR
- Possible impact of CECL
- Top risks on the minds of CROs at US banks

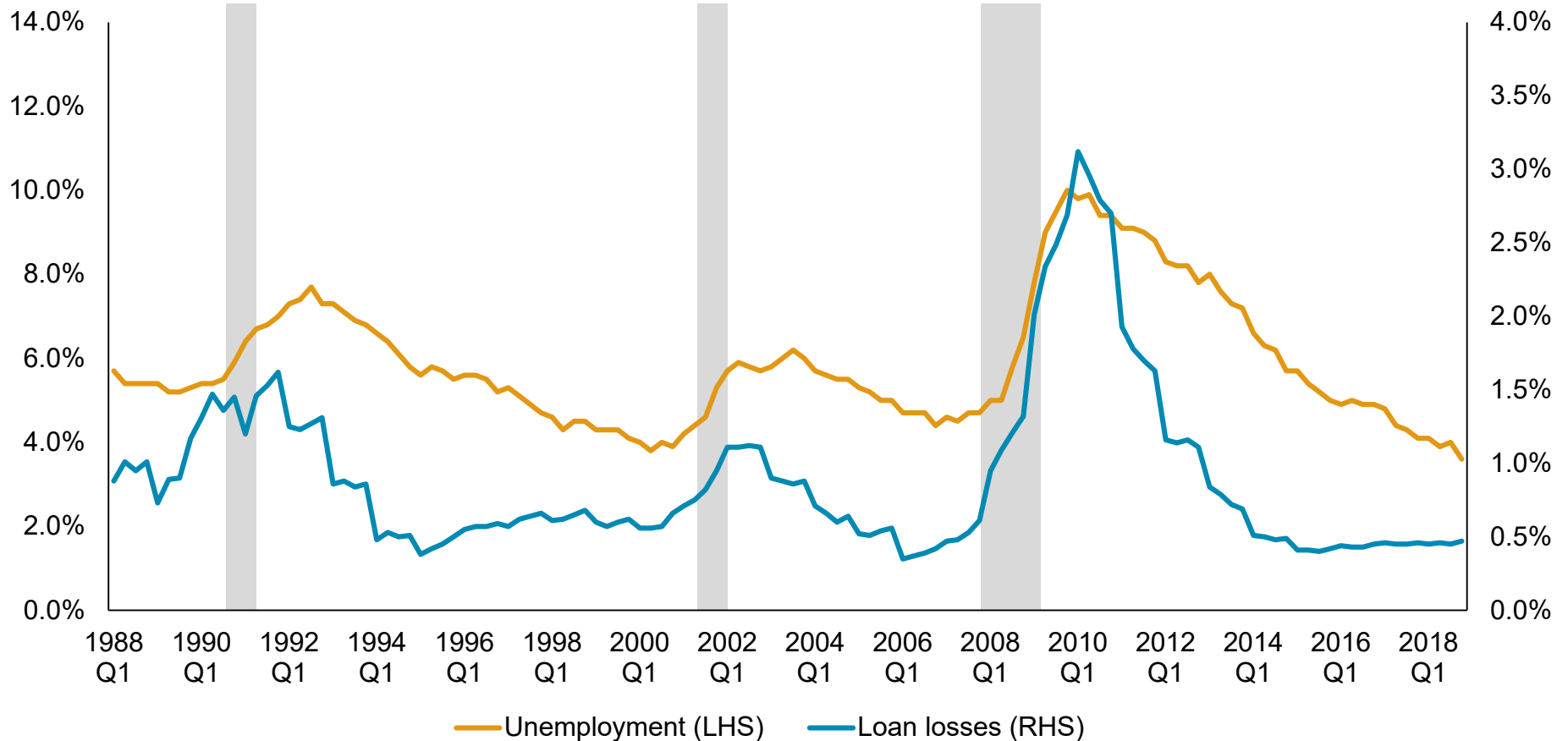
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Will banks intensify or dampen financial accelerator effect in next recession?

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The business and credit cycle is long in the tooth, and bank loan losses have been very low for nearly 5 years

## US unemployment rate and total US bank loan losses<sup>1</sup>

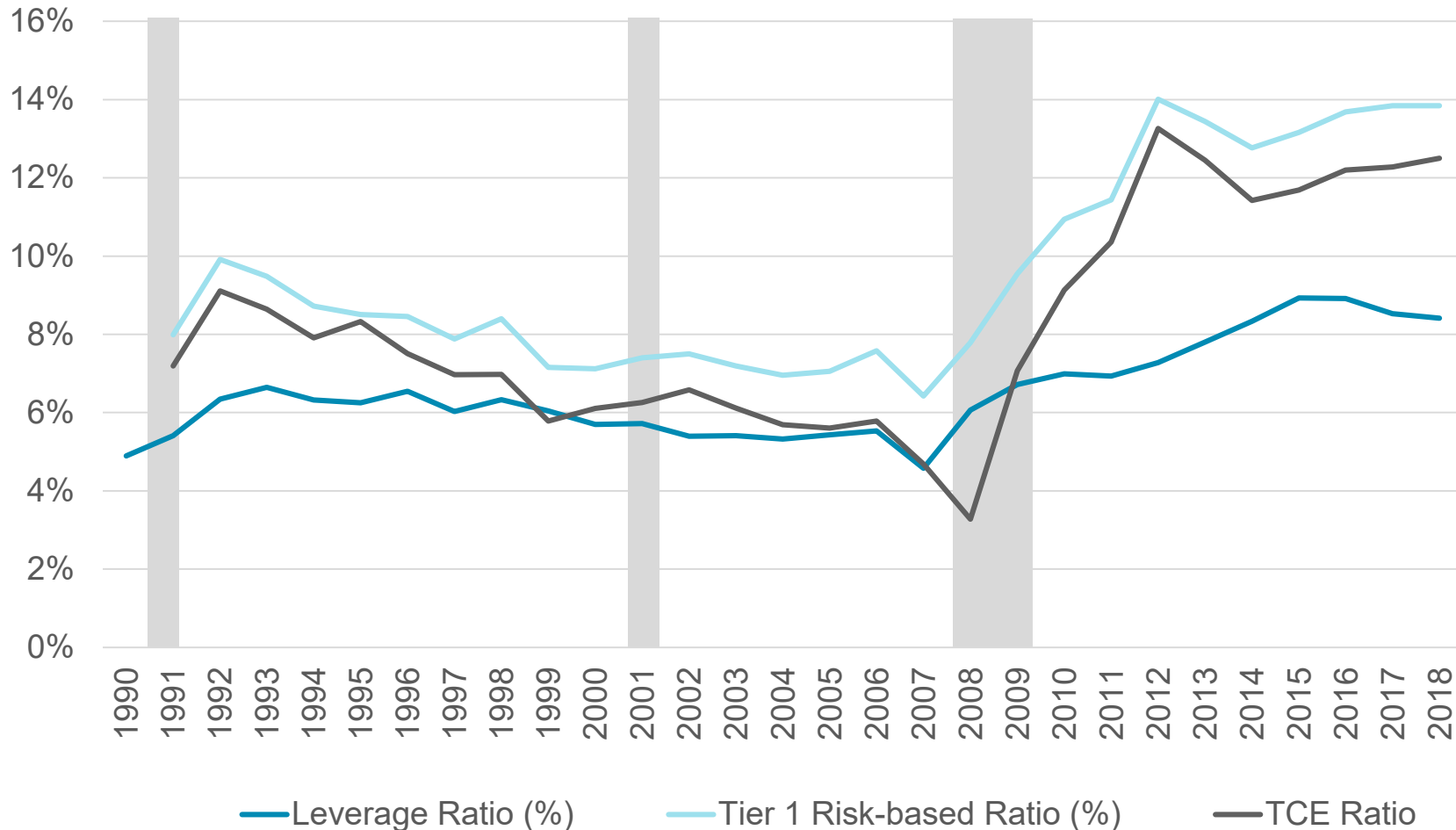


1. Total Net Loan Charge-offs to Total Loans for Banks – not seasonally adjusted (quarterly time series as sourced from FRED); NBER recessions shaded

# Large banks are much better capitalized than before the financial crisis -- by several measures

## Capital ratios for top 10 BHCs<sup>1</sup>

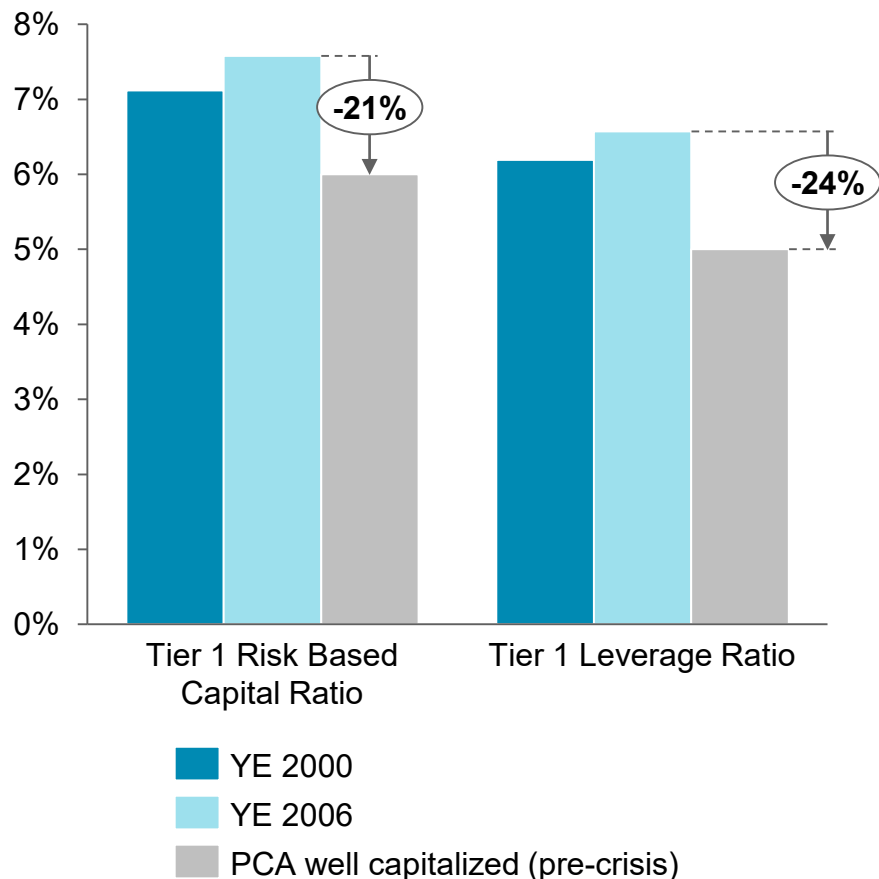
Top 10 (by assets) in that year



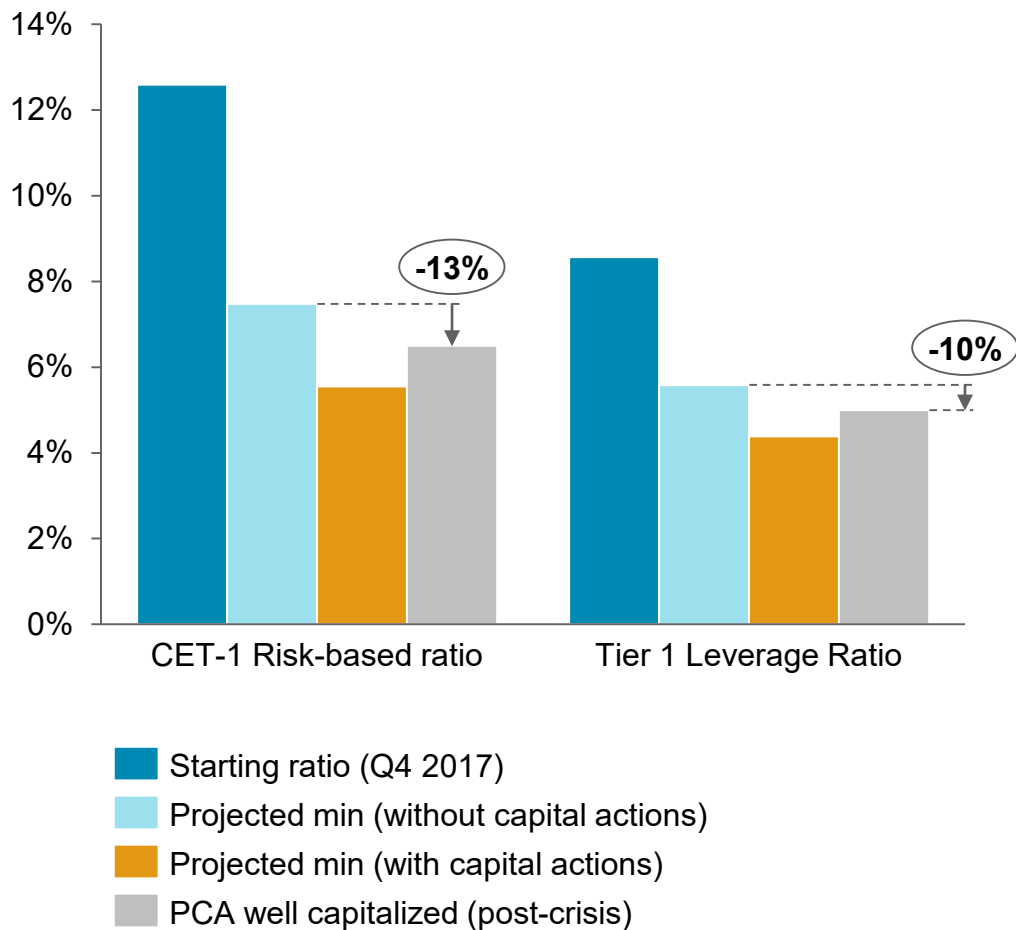
1. FR Y-9C reports; NBER recessions shaded

# While banks are better capitalized post-crisis, their perceived capital “headroom” above the well capitalized standard has shrunk

**Available headroom: Year-end 2000 / 2006 vs. PCA**  
Top 10 banks by total assets that year



**Available headroom: CCAR 2018 vs. PCA (revised)**  
Weighted average of FRB projections for US G-SIBs



# Corporate lending (1/2)

## Corporations are less resilient and less reliant on banks for financing

### US Credit Fundamentals of BBBs: 2018 vs. 2007

(Percent / ratio / basis points / number / percentile rank)

Credit Fundamentals	Level		Percentile Signal	
	2007	2018	2007	2018
Size (as a percentage of IG outstanding)	34.6	49.3	●	●
Gross Leverage (times)	2.4	3.0	●	●
Net Leverage (times)	2.1	2.6	●	●
Share of Companies with > 4x Leverage (percent)	16	23	●	●
Interest Coverage (times)*	7.3	7.9	●	●
EBITDA Margin (percent)*	19	21	●	●
Gross Margin (percent)*	35	40	●	●
Spread (basis points)	198	121	●	●

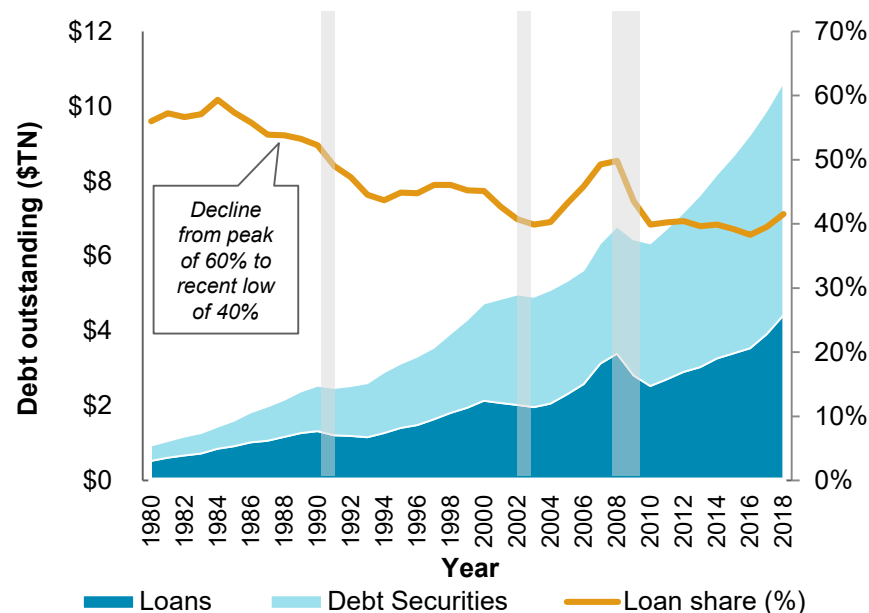
\* = Icons are reversed

● ● ● ●  
 0% 100%

Note: Percentile ranks of quarterly data from 1997:Q1 through 2018:Q4

### Non-financial corporate funding

#### Loans vs. debt securities



- **Corporates are generally more leveraged now** than before the global financial crisis (gross leverage for IG borrowers has risen to 6.4, the 99<sup>th</sup> percentile for observations since 1980)
- In particular, the volume of BBB-rated bonds has quadrupled since the crisis and while debt service capacity of issuers has improved slightly, **both gross and net leverage has risen**

- Market-based finance has **expanded faster than bank lending** to the corporate sector
- **Investment funds (including ETFs)** holdings of corporate bonds have more than doubled since 2009 (20% in 2018); foreign investors have also increased their share
- **Insurers and pensions funds** still represent a large share of the investor base – but typically have **credit rating restrictions**

Source: International Monetary Fund. 2019. Global Financial Stability Report: Vulnerabilities in a Maturing Credit Cycle. Washington, DC, April; FRED

## Corporate lending (2/2)

# Leveraged loans pose a significant risk – however, banks have limited exposure

### US Leveraged Loan Characteristics: 2018 versus 2007 (Percent / ratio / basis points / number / percentile rank)

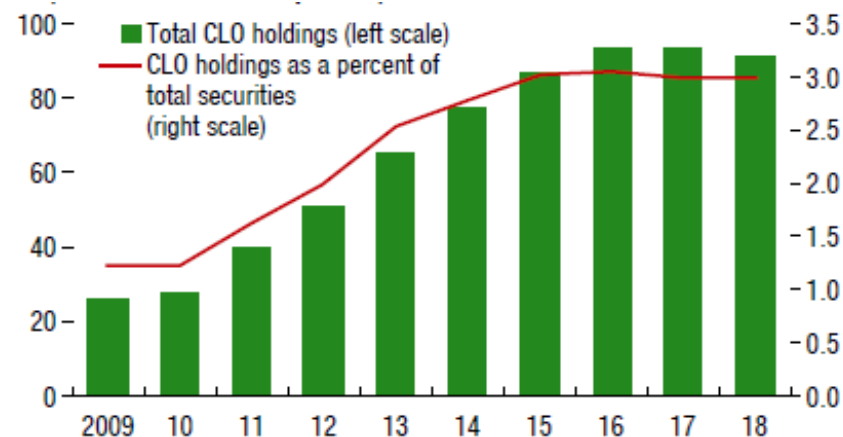
US Leveraged Loan Market Characteristics	Level		Percentile Signal	
	2007	2018	2007	2018
Outstanding Leveraged Loans (\$ billions)	554	1,147	●	●
US Issuance (percent of global issuance)	66.9	75.8	●	●
Covenant Quality Index	2.6	4.1	●	●
Covenant-Lite Share (percent of new issuance)	29.2	84.7	●	●
B-Rated (percent of new issuance)	22.6	58.0	●	●
Total Debt/EBITDA (times)	4.9	5.3	●	●
First Lien Debt/EBITDA (times)	3.5	4.3	●	●
Other Debt/EBITDA (times)	1.4	1.0	●	●
Deals with EBITDA Add-Backs (percent of new issuance)	8.4	27.1	●	●

● 0%    ●    ●    ● 100%

*Note: Percentile ranks of quarterly data from 1997:Q1 through 2018:Q4*

- The **US leveraged loan market has grown rapidly** (approaching the size of the high-yield bond market)
- In addition to the increased volume, there is **increased leverage, limited liquidity, and reduced investor protections** (covenant light shares reaching 84.7%)

### US Bank holdings of Collateralized Loan Obligations \$BN; Percent



- **Banks play a smaller role in the market**
  - US bank CLO holdings are only 3% of the total market and are largely in senior tranches (AAA)
  - Loans originated and retained on banks' balance sheets account for only 2.5 percent of total tangible bank equity
- **Warehouse lines** to collateralized loan obligation managers **remain modest**, estimated at about \$20 billion currently versus more than \$200 billion in 2008

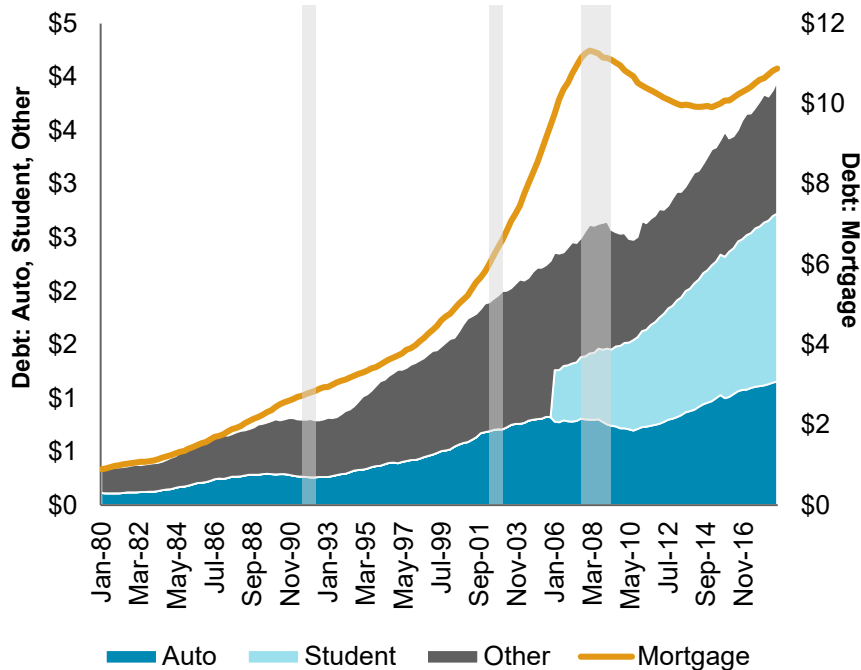


# Consumer lending (1/2)

## Build-up of student debt could have indirect impact on banks

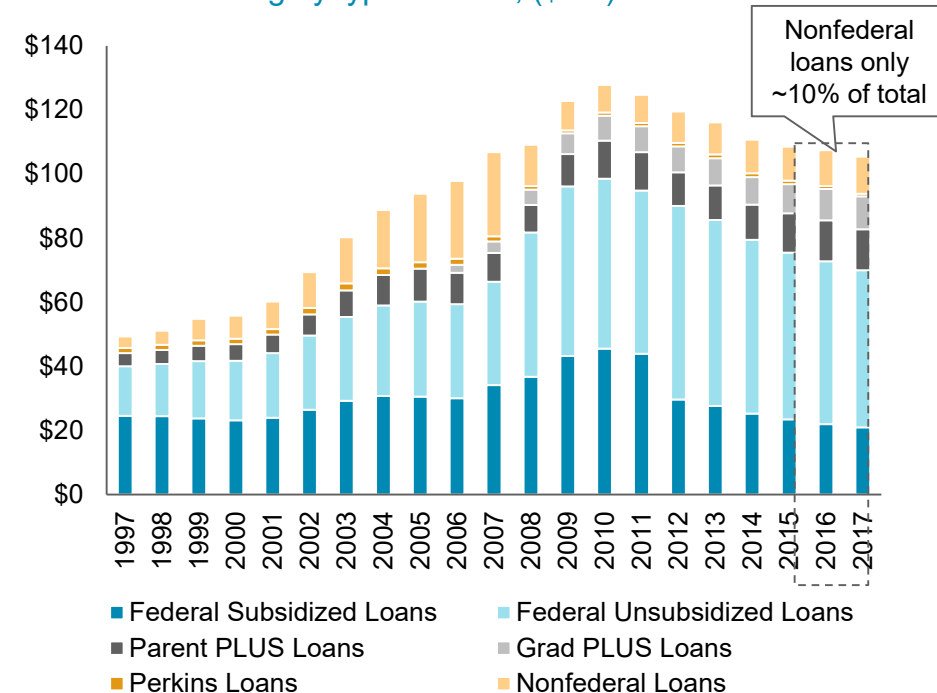
### US Consumer Credit

Owned and Securitized, Outstanding, (\$TN)



### Total Federal and Non-Federal Loans in 2017 Dollars

Net new borrowing by type of Loan, (\$BN)



- Student debt has grown from 20% to 40% of consumer credit (excluding mortgages) since 2006
- From 1989 to 2016, the percentage of families with educational debt has increased from ~9% to 22% (all families) and ~17% to 45% (head of household under 35)

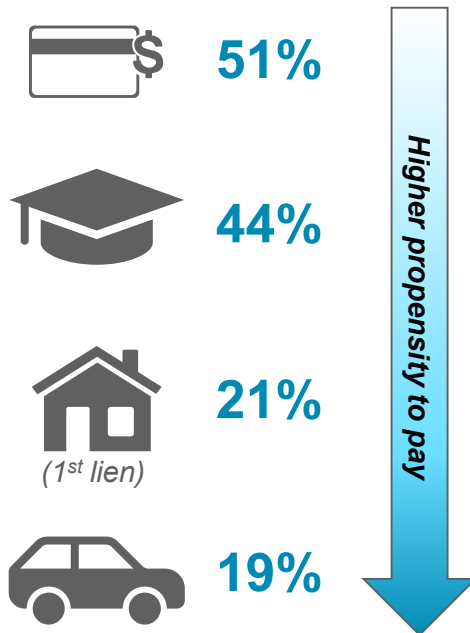
- Student loans are largely federally owned limiting the direct impact of a rise in defaults on banks
- However, student loans may indirectly impact banks as distressed borrowers default on other debt to which banks have more significant exposure

Sources: Total Consumer Credit Owned and Securitized, Outstanding, Mortgage Debt Outstanding by Type of Property: One- to Four-Family Residences, retrieved from FRED, Federal Reserve Bank of St. Louis; May 28, 2019

## Consumer lending (2/2)

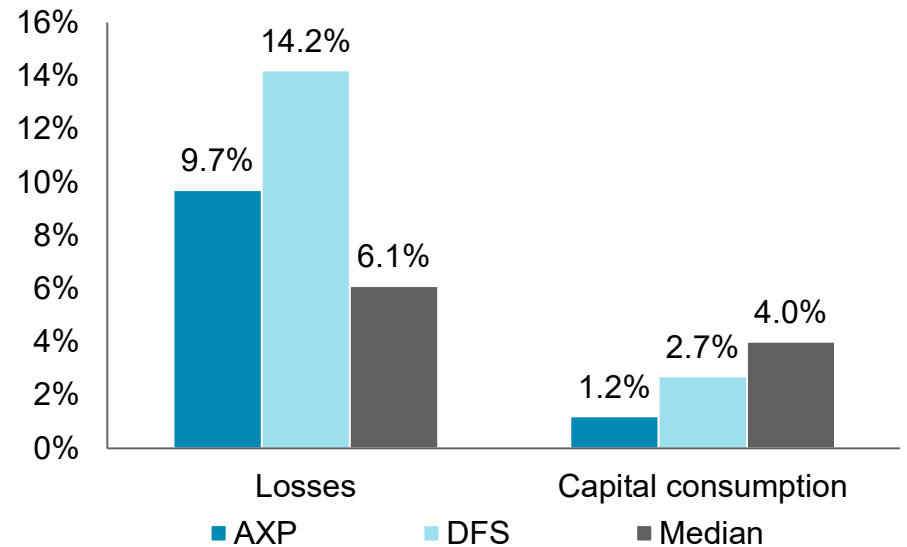
Payment hierarchy will likely reduce the impact on banks – however, recourse actions may have “spillover” effects

When customers do not pay, which products do they not pay?



- Customers with multiple loan products are most likely to default on credit cards followed by student loans prior to mortgages or auto loans
- Will this behavior be the same next time?

Card specialist loss vs. capital consumption  
Based on CCAR 2018 results, FRB projections



- Card specialists are expected to have high losses but low capital consumption under stress scenarios due to robust profitability (even under stress)

Sources: Experian, “Where do your accounts fit in the consumer’s payment hierarchy?”, percentages shown are based on 2015 Experian data; Federal Reserve, DFAST and CCAR results publications 2018

## CCAR has improved data, risk identification, modelling, control processes

- After nearly a decade of annual stress testing, banks have significantly improved their core risk capabilities
  - Better data: cleaner, longer time series, more accessible
  - Improved risk identification and vulnerability assessment
  - Formal models for a wide range of behaviors to assess impact of real and financial shocks on bank financials
  - Better control around data, systems, models; better governance
- Banks are both more resilient to shocks and better informed about their vulnerabilities
- Formal linkages of systematic risk factors to bank financials (“beta”) now influence risk limits, strategic planning, performance assessment – so much more than just capital adequacy
- Provisioning / reserving is next with CECL: Current Expected Credit Loss

# CECL presents a fundamental change in how lenders estimate the reserves they have to hold and at which point the reserve is built up

In 2020, SEC filers have to adopt CECL standards to estimate losses for ALLL calculations<sup>1</sup>

In context of the credit cycle, there are three key properties of CECL to consider

**Current standard for ALLL: Incurred loss methodology**

- Reserves are built when a loan impairment incurs, reserves equal the impairment
- Loans are recognized as impaired when there is no longer an assumption that future cash flows will be collected in full under the originally contracted terms



**Future accounting standard for ALLL: CECL model**

- Reserves are built to the extent of the estimate of expected credit losses
- Financial institutions are required to use historical information, current conditions, and reasonable and supportable forecasts to estimate the **expected loss over the life of the loan**

	Key property	Implications
1	Losses are estimated over the lifetime of a loan	Higher reserves
2	Reserves have to be accounted for when the loan is issued, i.e., before an impairment occurs	Changed relative profitability of products through cycle
3	Losses have to include macroeconomic forecasts	Dependence on forecasting ability and idiosyncratic outlook



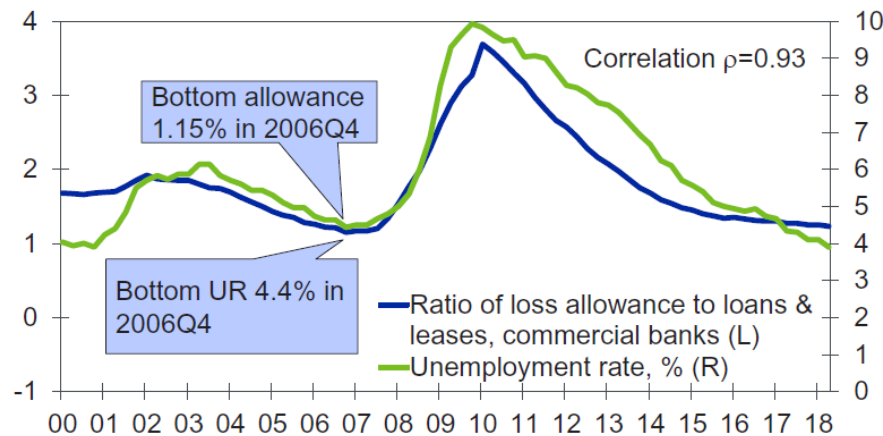
**Will this approach make reserving more or less pro-cyclical?**

1. ALLL: Allowance for Loan and Lease Losses. The purpose of the ALLL is to reflect estimated credit losses within a bank's portfolio of loans and leases, i.e., a credit loss reserve. ALLL is presented on the balance sheet as a contra-asset account that reduces the amount of the loan portfolio reported on the balance sheet. Changes in the reserve are obtained through changes to earnings in the income statement.

# The incurred loss method is procyclical – and CECL is designed to be less so

## Incurred Loss Method Highly Procyclical

Comparison of loss allowance ratio to unemployment rate

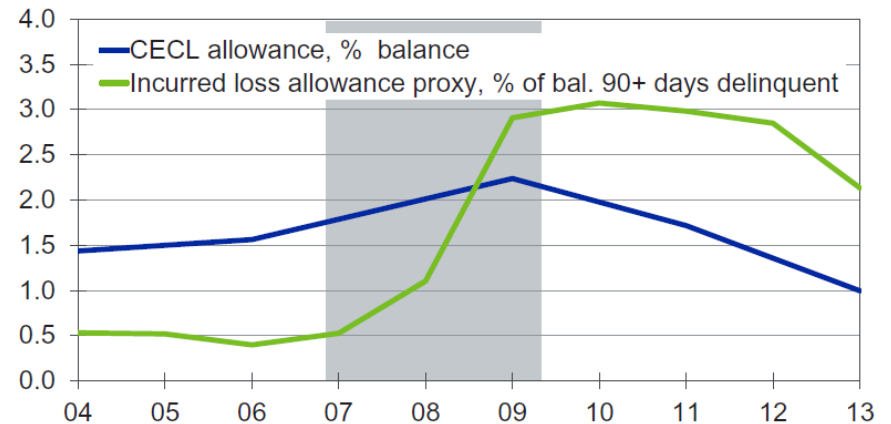


Sources: FDIC, BLS, Moody's Analytics

- ILM reserving is quite volatile, slow to adjust and procyclical
- Motivated the development of CECL by FASB

## CECL Is Less Procyclical

Credit loss rate, % balance



Source: Moody's Analytics

- CECL is designed to be forward looking by using macroeconomic forecasts to estimate expected lifetime losses
- ILM reserves too low in boom, catch up late and then overshoot

Source: Moody's Analytics, "Gauging CECL Cyclicity". Dec. 2018. Right hand chart based on loan-level analysis of mortgages

# Banks and the financial accelerator

## The case for dampening

- Banks are much better capitalized
- Through CCAR, banks have a better understanding of
  - Their risks & vulnerabilities
  - The impact of and their resilience to stresses in economy and markets
  - .... which should prepare them better for any eventual downturn

# Banks and the financial accelerator

## The case for amplifying

- It's not the absolute but the relative/marginal amount of capital that matters
  - Given less perceived headroom, banks and market may have lower tolerance for modest capital impact due to losses
- Share of nonbank financial sector is larger, and this sector is more sensitive to shocks
  - Expect nonbanks to play amplifying financial accelerator role
  - We will depend relatively more on banks to play their shock absorbing role

# Top risks on the minds of CROs at US banks

## Dominance of nonfinancial risks

- Cyber
- Technology and operational resilience
- Compliance: AFC, KYC, AML, data privacy & ownership
- Conduct and culture
- Advanced analytics: AI, ML, big data
- People risk: getting and keeping talent (brain drain to tech and investment management)
- Recession readiness (*recent entry*)



## Questions to debate

- Is the banks' focus on nonfinancial risks misplaced – or exactly right?
- On balance, which case is stronger with respect to banks and the financial accelerator?
  - Dampen
  - Amplify
- Possible policy alternative: CCyB vs. stress scenario
  - Both CCyB and stress scenario are “lean against the wind” tools
    - CCyB
      - + simple, uniform, possibly easier to reduce (once on) as cycle turns
      - does not reflect different vulnerabilities across banks
    - Stress scenario
      - + more nuanced ability to pick up vulnerabilities and countercyclical lean
      - more complex; not always obvious what the risks are, how big, how and how hard to “lean”

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