

AS OF JULY 2014

STATE OF SMALL BUSINESS LENDING:

CREDIT ACCESS DURING THE RECOVERY AND HOW TECHNOLOGY MAY CHANGE THE GAME

Karen Gordon Mills

Senior Fellow, Harvard Business School and Harvard Kennedy School
and Former Administrator of the U.S. Small Business Administration

Brayden McCarthy

MBA Candidate and Research Associate

This chart deck accompanies a Harvard Business School Working Paper of the same name, which can be accessed [here](#).



H A R V A R D | B U S I N E S S | S C H O O L

KEY ARGUMENTS IN WORKING PAPER

- I. **STATE OF SMALL BUSINESS ECONOMY:** Small firms were hit harder than large businesses during the '08 crisis, losing 40 percent more jobs. Small firms are back to creating 2 out of every 3 net new jobs in America, but they have been slow to recover.
- II. **THE CREDIT-LESS RECOVERY:** Is there a gap in small business access to credit? Banks say they are lending, but most major surveys of small business owners points to constrained credit markets. There is evidence that access to bank credit for small firms was in steady decline prior to the crisis, hit hard during the crisis, and has continued to decline in the recovery.
- III. **PROBLEMS IMPEDING BANK LENDING:** During the '08 crisis, small businesses were less able to secure bank credit because of a 'perfect storm' of falling sales, weakened collateral, and risk aversion among lenders. There are some lingering factors from the crisis that still limit access to bank credit for small firms. And, there are deeper, structural barriers at play that impede bank lending to small firms, including consolidation of banking industry, high search costs and transaction costs of small dollar lending, and regulatory overhang.
- IV. **EMERGING TECHNOLOGY MAY CHANGE THE GAME:** Online platforms are emerging which are bringing small business lending into the 21st century by changing how small loans are decisioned and evaluated, and opening up entirely new pools of capital access in the process.



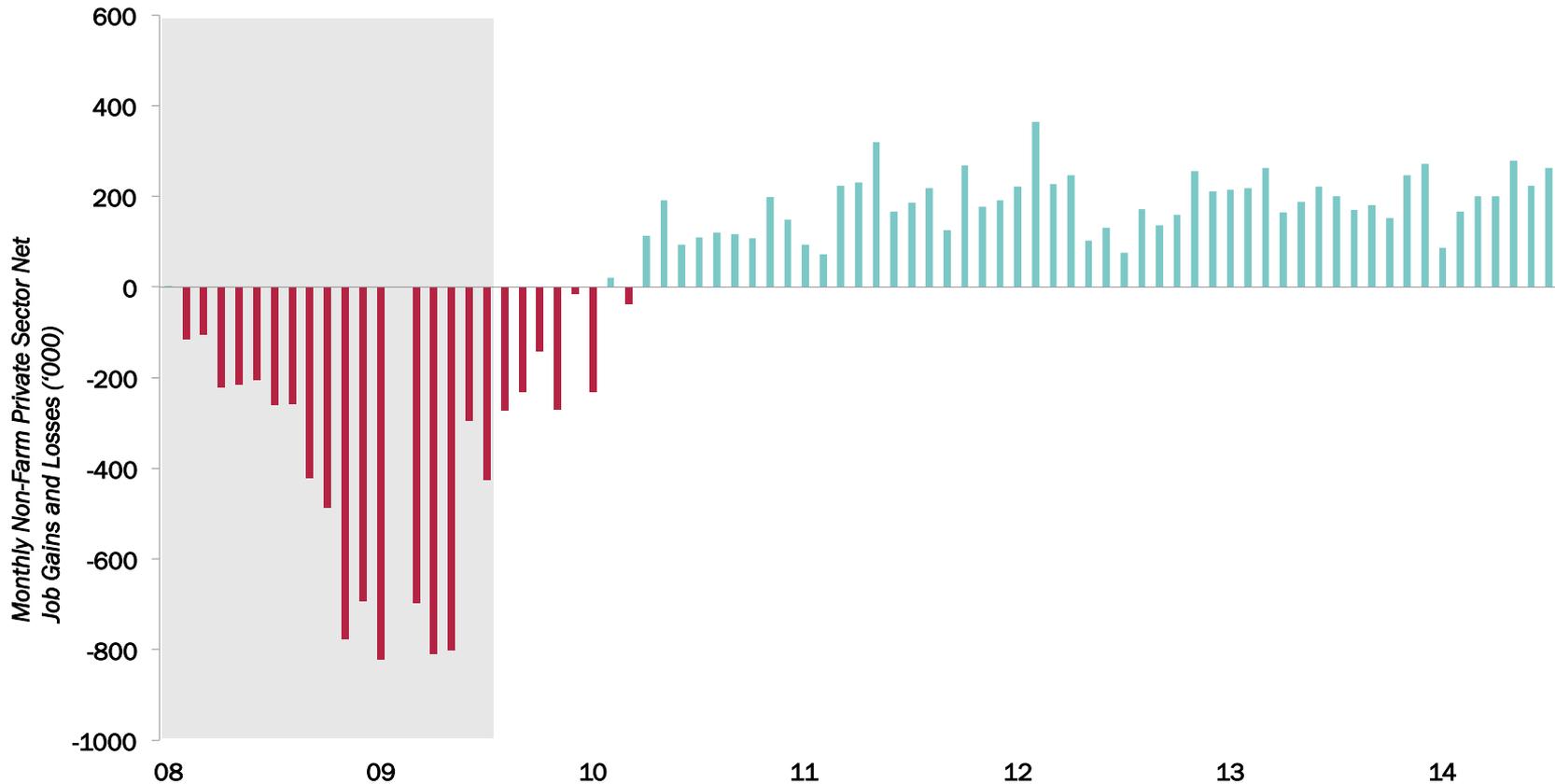
STATE OF THE SMALL BUSINESS ECONOMY

Slow Recovery from the Financial Crisis of 2008



MONTHLY PRIVATE SECTOR JOB CREATION HAS BEEN WEAK

- Private sector has consistently created jobs since '10, totaling over 9M jobs

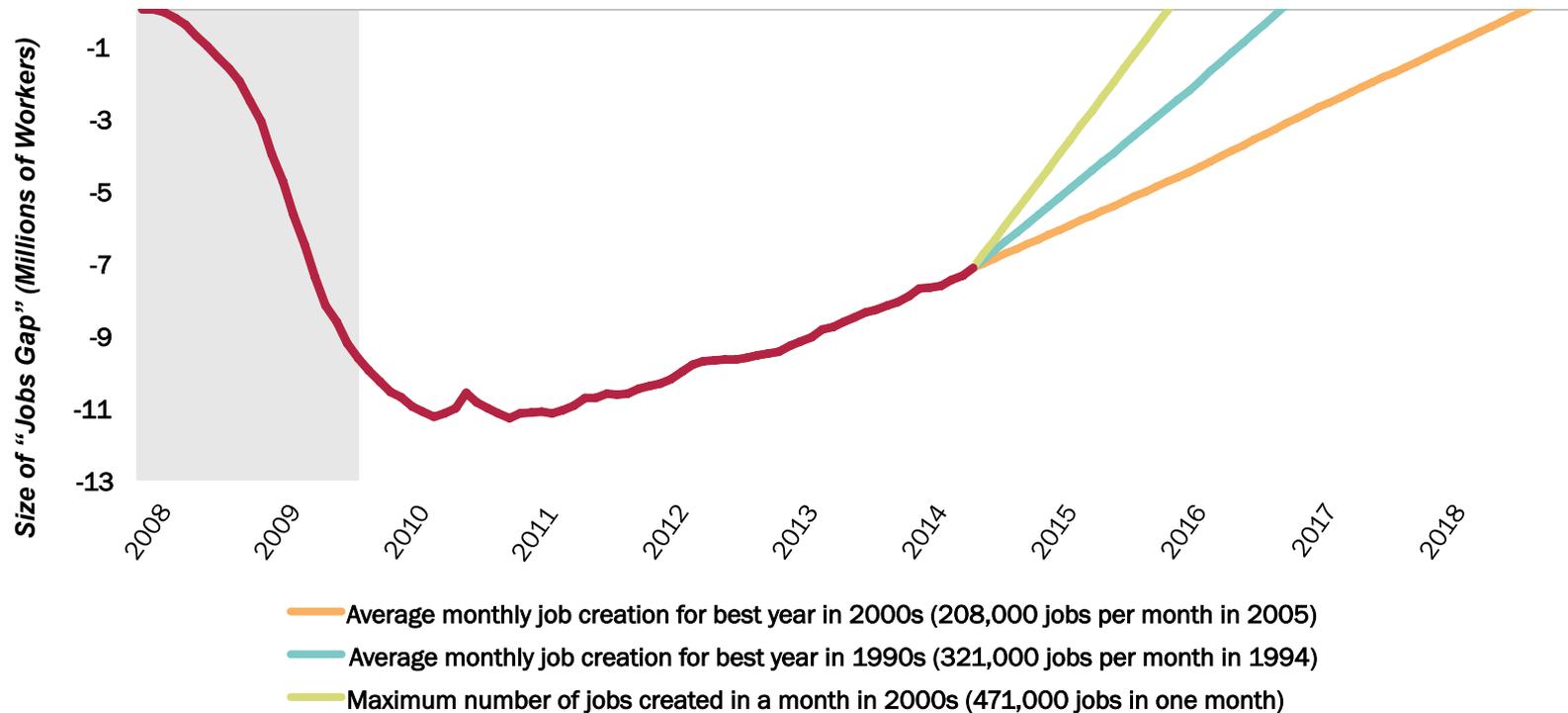


Source: Bureau of Labor Statistics as of June 2014.

STATE OF THE SMALL BUSINESS ECONOMY

AT CURRENT RATE YAWNING JOBS GAP WILL TAKE 5 YEARS TO CLOSE

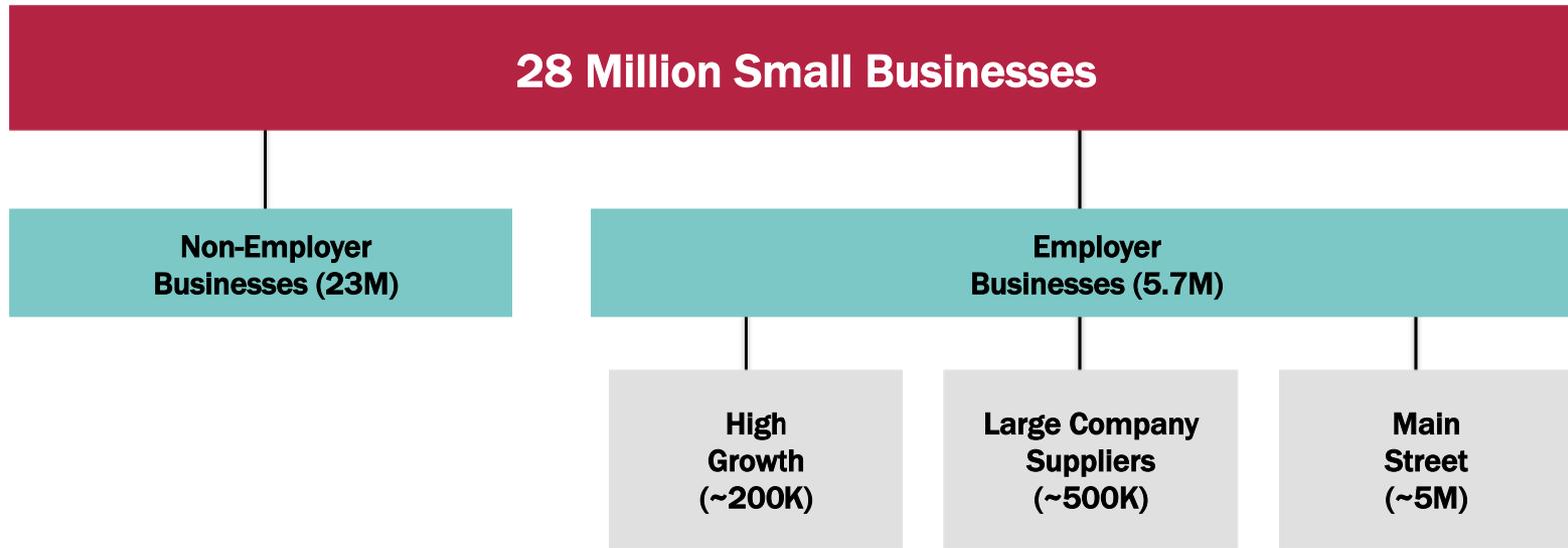
- While job growth has picked up steam in the last few months, recent monthly job creation of 200K per month would still not be nearly enough to bring unemployment down to pre-recession levels



Source: The Hamilton Project, Brookings Institute. "Jobs gap" represents the number of jobs the economy needs to create in order to return to pre-recession employment rates, while also absorbing the people who enter the labor force each month. Data as of May 2014.

SMALL BUSINESSES ARE AMERICA'S JOB CREATORS...

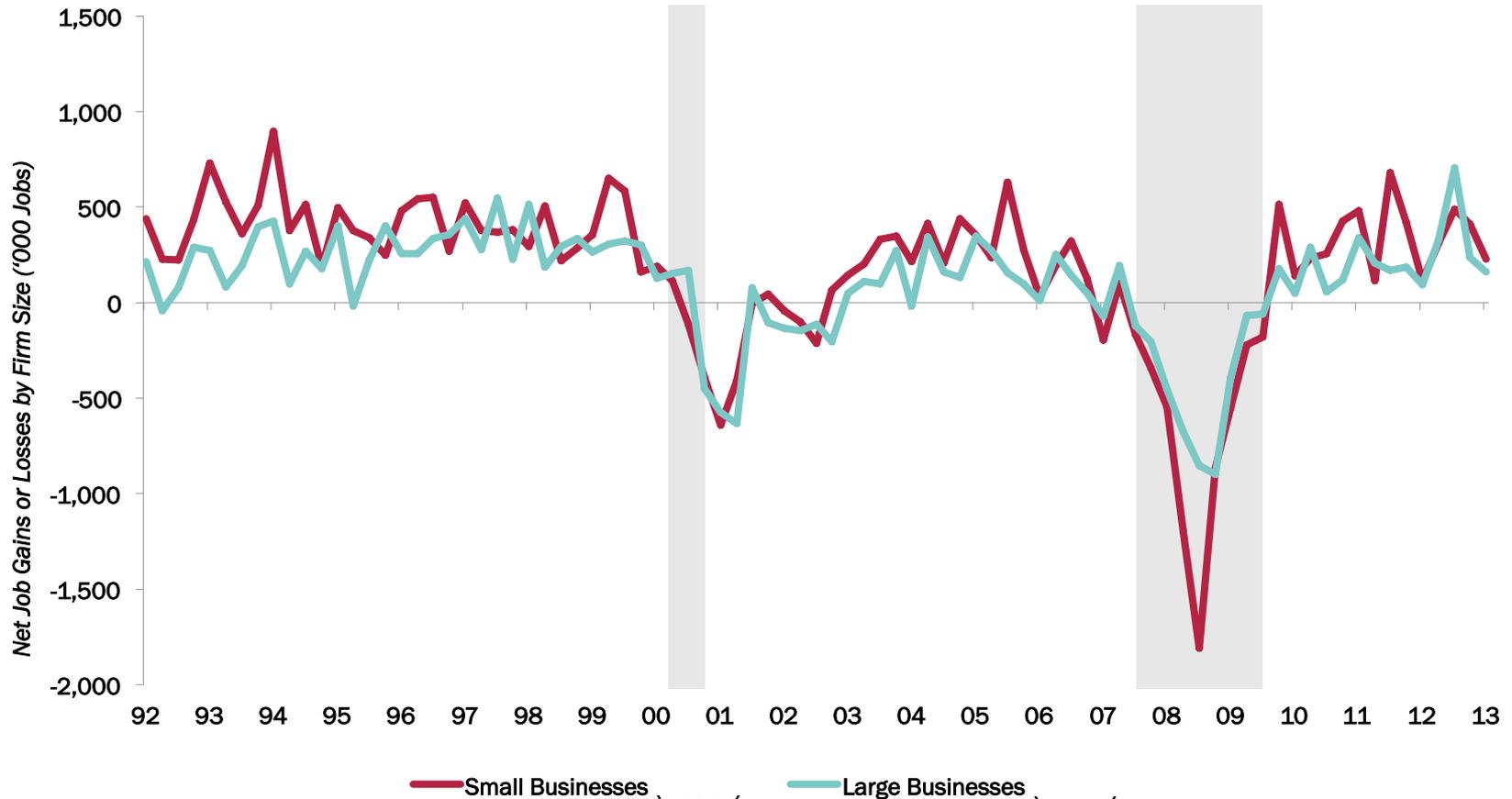
- Small business is defined as a business with fewer than 500 employees, a definition adopted by Census Bureau, Bureau of Labor Statistics, Federal Reserve, and Small Business Administration
- Small and new firms punch above their weight, creating 2 of every 3 net new jobs in past 15 years
- Employ about half of the private sector payroll
- Produce about half of private sector GDP
- Contribute about one-third of exporting value



Source: U.S. Census Bureau (2011) and authors' analysis.

STATE OF THE SMALL BUSINESS ECONOMY

SMALL FIRMS HIT HARDER IN CRISIS, REPRESENTING 40% OF JOB LOSSES



Source: Bureau of Labor Statistics, Business Dynamics Statistics (latest as of 3Q13). Chart shows the change in the number of charges by firm size, specifically “small businesses (firms with fewer than 500 employees) and large businesses (firms with more than 500 employees). Small business is defined as a business with fewer than 500 employees, a definition adopted by Census Bureau, the Bureau of Labor Statistics, Federal Reserve, and the Small Business Administration.

THE CREDIT-LESS RECOVERY?

That Depends on Who You Ask, But the Data is Troubling

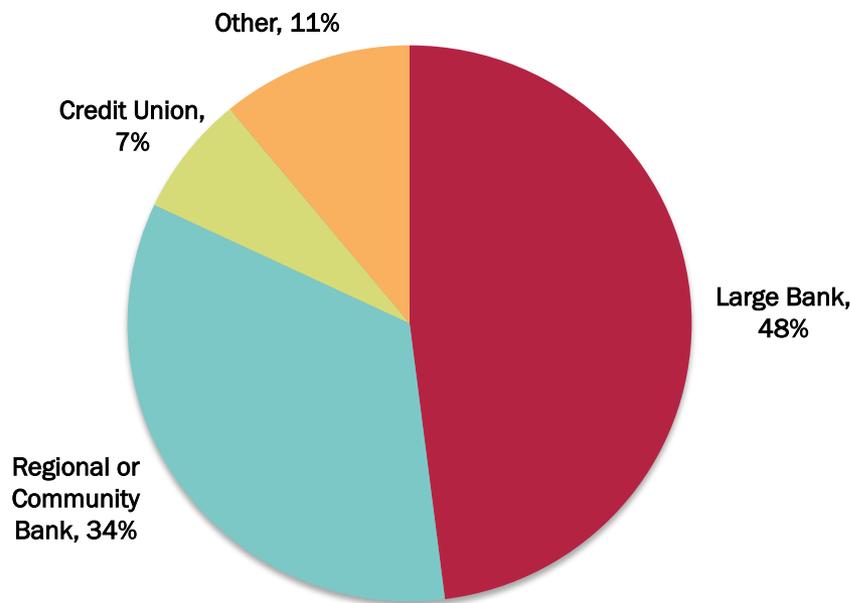


THE CREDIT-LESS RECOVERY?

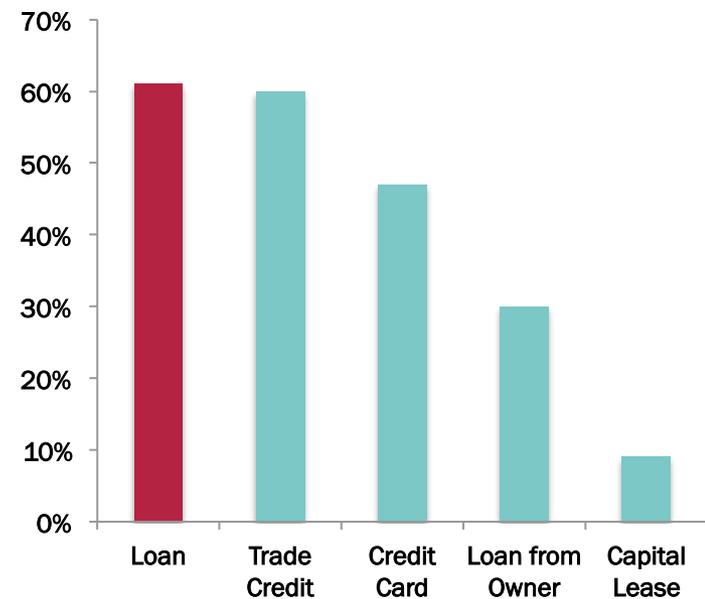
BANK LOANS ARE A MAJOR SOURCE OF CAPITAL FOR SMALL FIRMS

- Small firms lack access to debt and equity capital markets and the greater variability of small firm profits makes retained earnings a much less reliable source of capital

PRIMARY FINANCIAL INSTITUTION FOR SMALL BUSINESSES



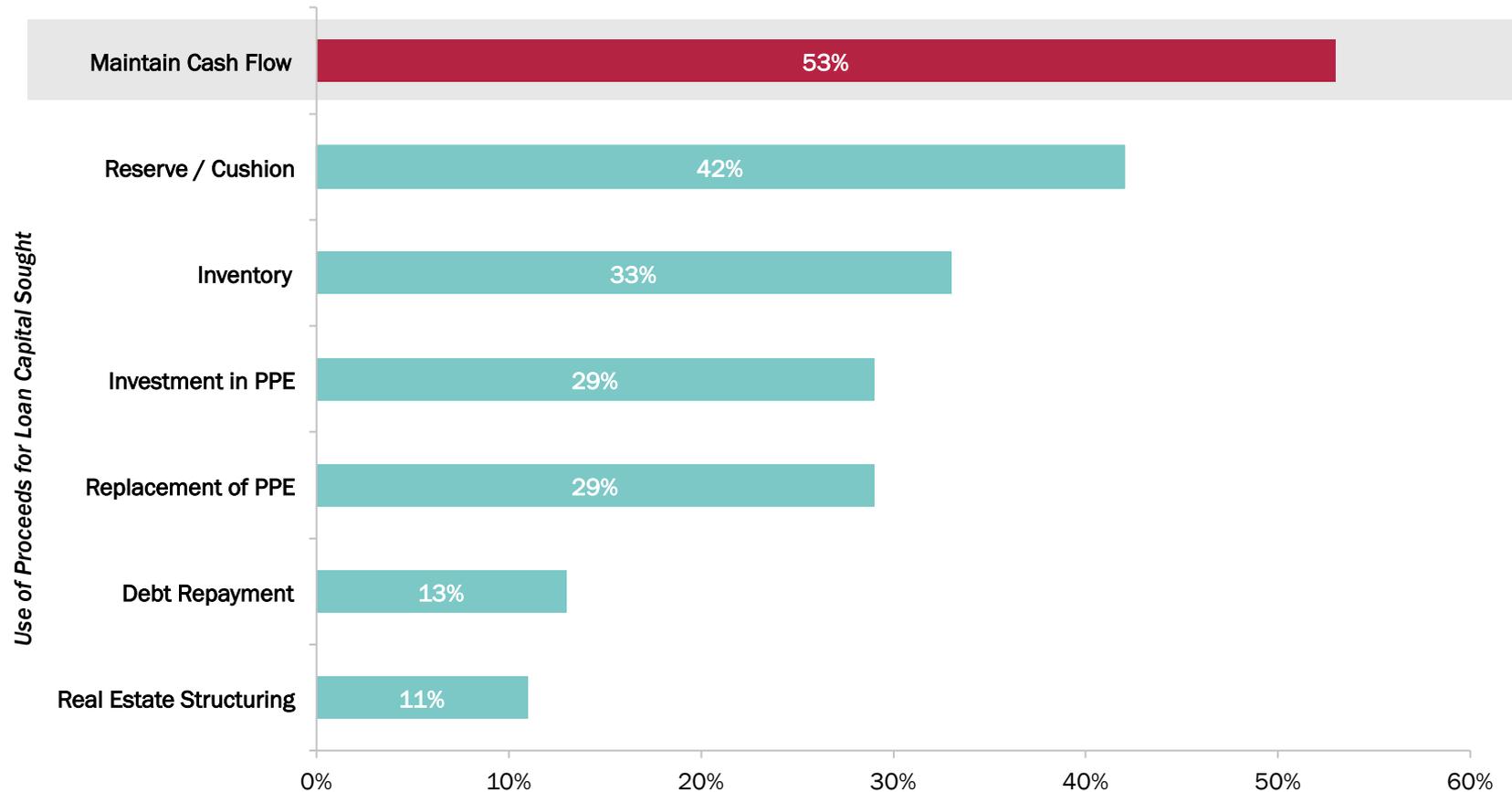
PERCENTAGE OF SMALL BUSINESSES USING VARIOUS SOURCES OF CAPITAL



Source: National Federation of Independent Businesses, "Small Business, Credit Access, and a Lingering Recession", (January '12) and Federal Reserve's Survey of Small Business Finances (Released in '07)

THE CREDIT-LESS RECOVERY?

SMALL BUSINESS' USE OF PROCEEDS FOR LOAN CAPITAL SOUGHT



Source: National Federation of Independent Businesses, “Small Business, Credit Access, and a Lingering Recession”, (January 2012).



THE CREDIT-LESS RECOVERY?

BANK CEO'S: FEW SMALL BUSINESSES SAY, "I CAN'T GET A LOAN"

"Very few (small businesses) say, 'I can't get a loan.' Sometimes they say that, and it is true. I would say that happens more in smaller towns, where smaller banks are having a hard time making loans because the examiners are all over them."

Jamie Dimon

Chairman and CEO of JP Morgan Chase

February 2013

"As small business owners have increasingly looked to invest in and grow their operations, Citi has stepped up to help."

Robert Kleiber

Head of Citibank Small Business Lending

May 2014

"Working with small business owners is one of the most important things we do at Wells Fargo. We know America needs small businesses to grow, add jobs and prosper for our economy to fully thrive... We want to provide the support small businesses across the country need to move forward."

Lisa Stevens

Head, Wells Fargo Small Business Lending

May 2014

"A widget company makes widgets, and a bank makes loans. If banks could make money on it, you bet you'd see more lending to small firms."

Senior U.S. banker at Barclays

January 2013

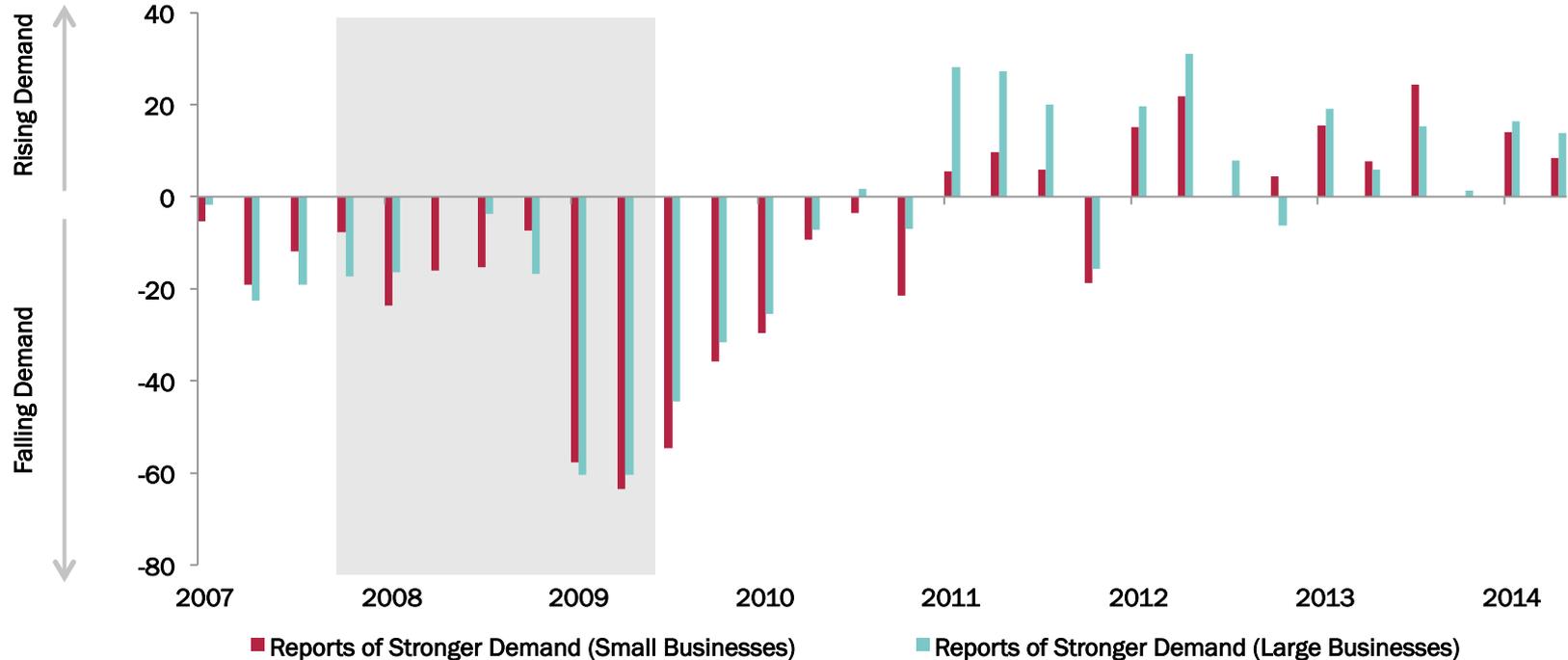


THE CREDIT-LESS RECOVERY?

LOAN OFFICERS THINK DEMAND FROM SMALL FIRMS REMAINS WEAK

- Loan officers noted demand was hit hard among small firms, slower to recover than at large firms
- In nearly every quarter since the recovery began, demand from large firms has been stronger

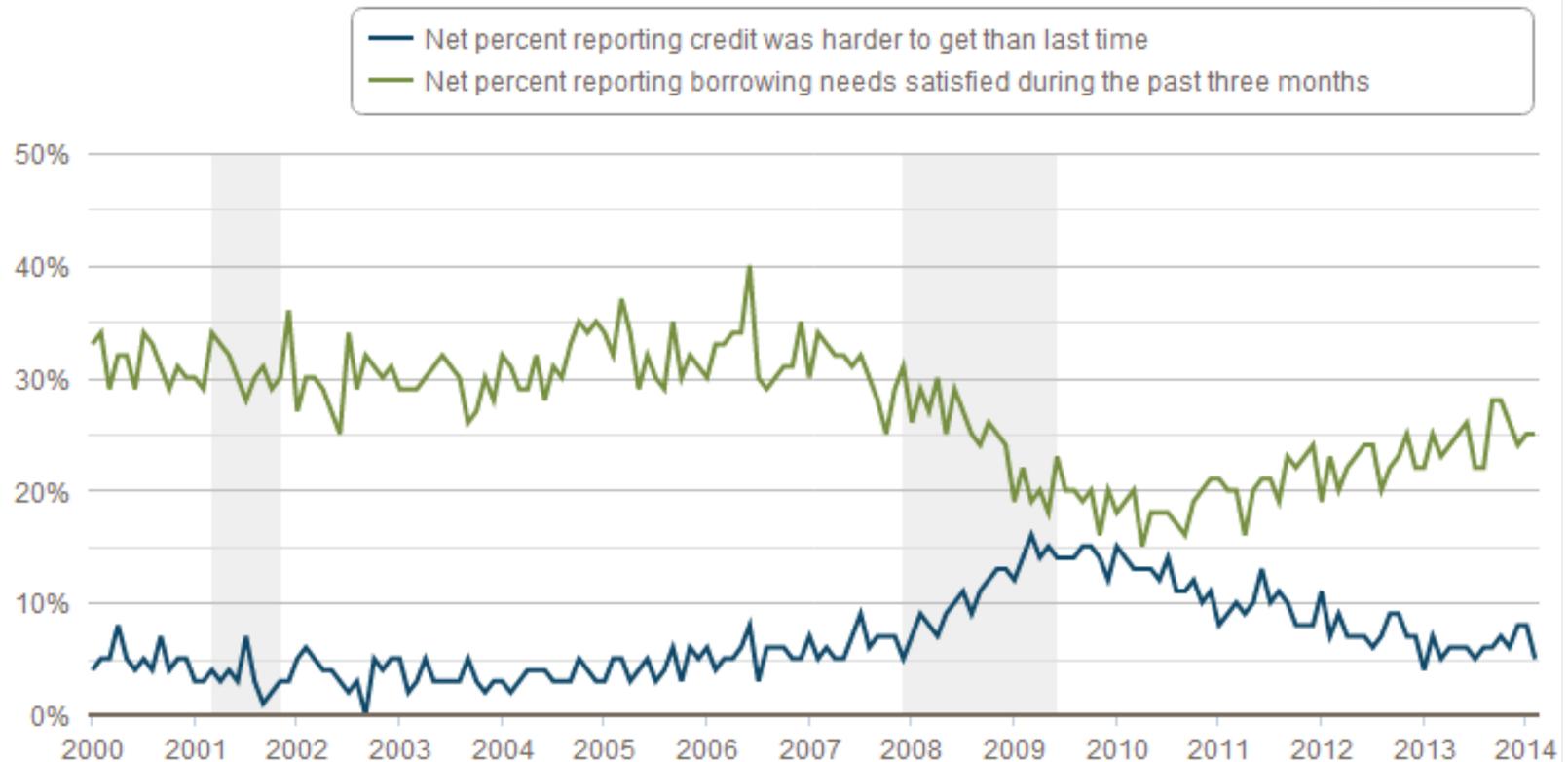
QUARTERLY PERCENTAGE OF BANKERS REPORTING HIGHER DEMAND FOR LOANS



Source: Federal Reserve, "Senior Loan Officer Survey" as of April 2014.

THE CREDIT-LESS RECOVERY?

SMALL BUSINESS OWNERS' PERCEPTION OF CREDIT ACCESS

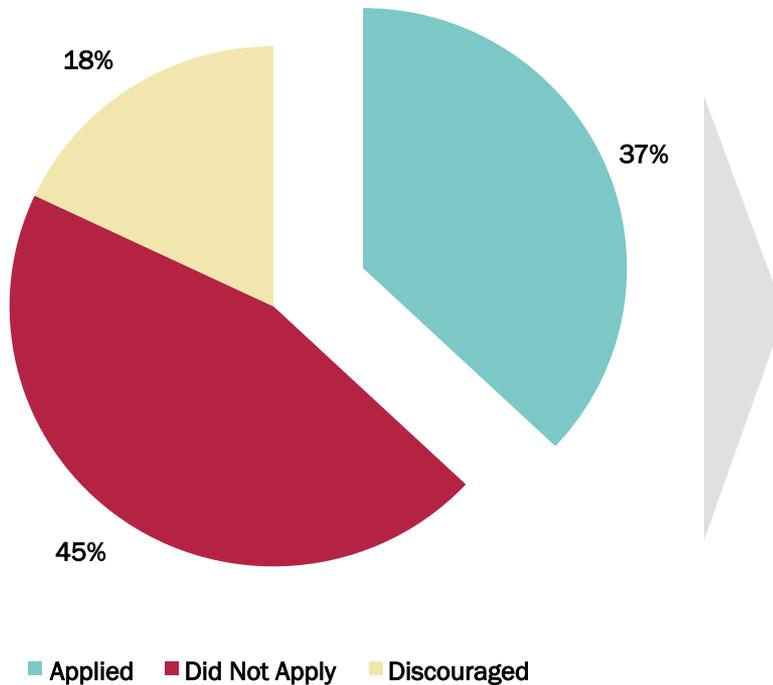


Source: National Federation of Independent Businesses, Small Business Economic Trends (May 2014).

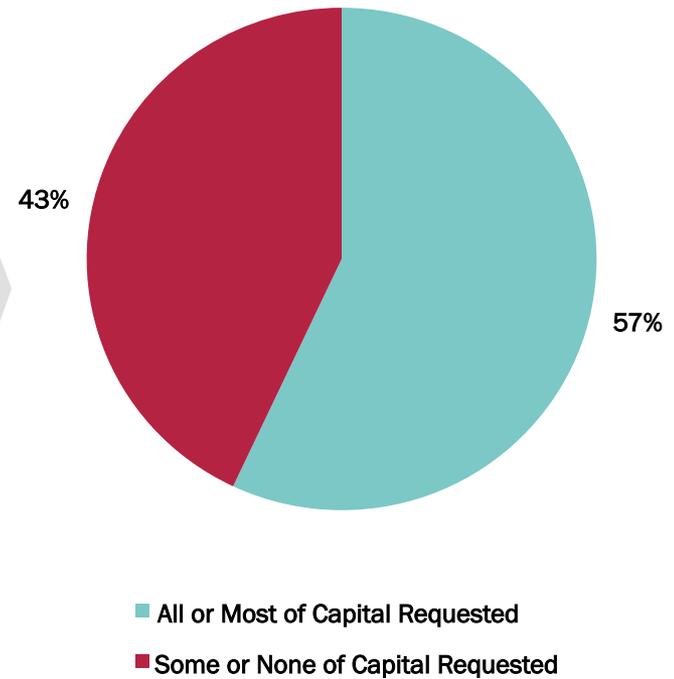
THE CREDIT-LESS RECOVERY?

MANY SMALL BUSINESS OWNERS SAY THEY HAVE MIXED SUCCESS OBTAINING BANK CREDIT

ABOUT 40 PERCENT OF SMALL FIRMS APPLY FOR CREDIT, WHILE ABOUT 20 PERCENT GET DISCOURAGED BY THE PROCESS...



...OF THE FIRMS THAT END UP APPLYING FOR CREDIT, OVER 40 PERCENT ARE EITHER REJECTED OR ONLY GET SOME OF THE CREDIT THEY REQUESTED



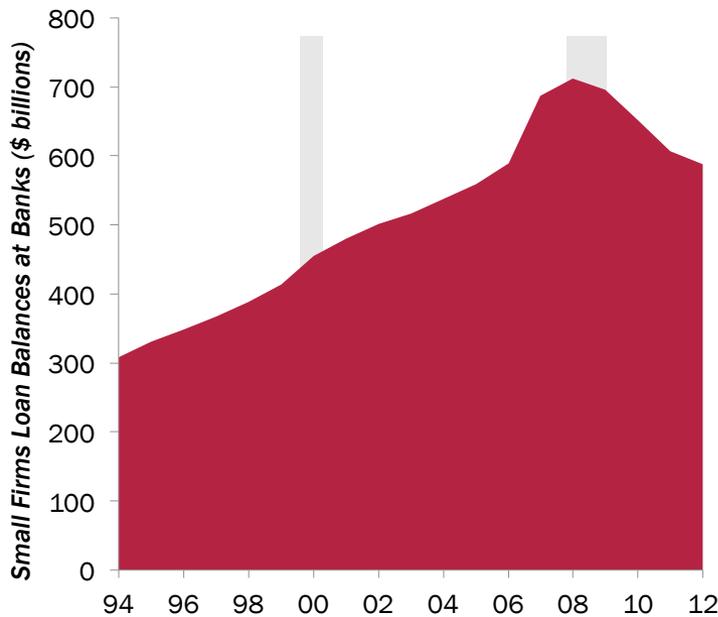
Source: Percentages that apply for credit, don't apply for credit, are unsuccessful in application, discouraged from applying or have insufficient capital extrapolated from the Federal Reserve (Atlanta), "Small Business Credit Survey", Fall 2013.

THE CREDIT-LESS RECOVERY?

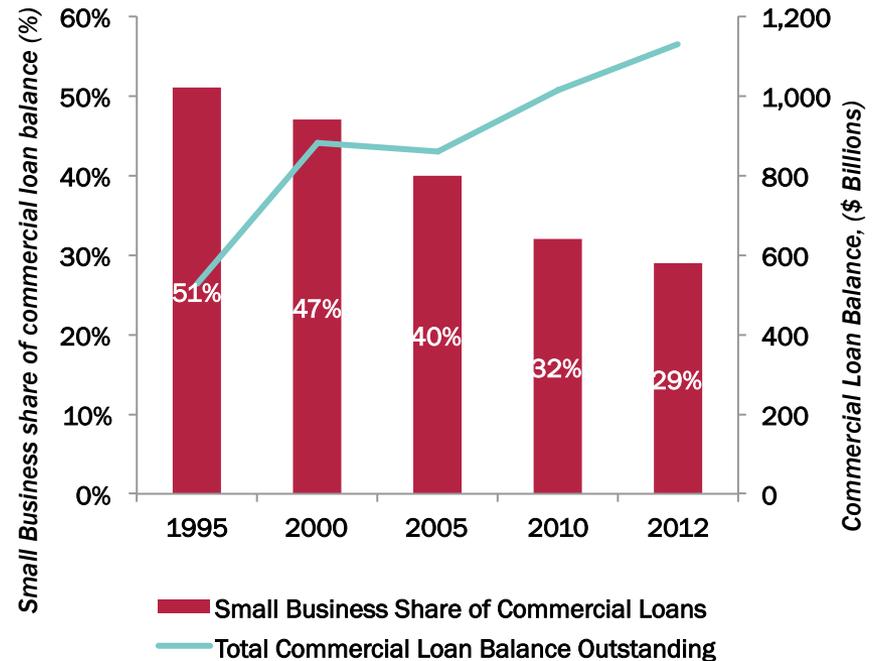
SMALL BUSINESS LOANS FALLING IN ABSOLUTE & RELATIVE TERMS

- Small business loans are down 21 percent since peaking in '07
- Banking industry is increasingly less focused on small business lending,

SMALL BUSINESS LOANS DOWN ABOUT 20 PERCENT SINCE PEAKING PRIOR TO CRISIS...



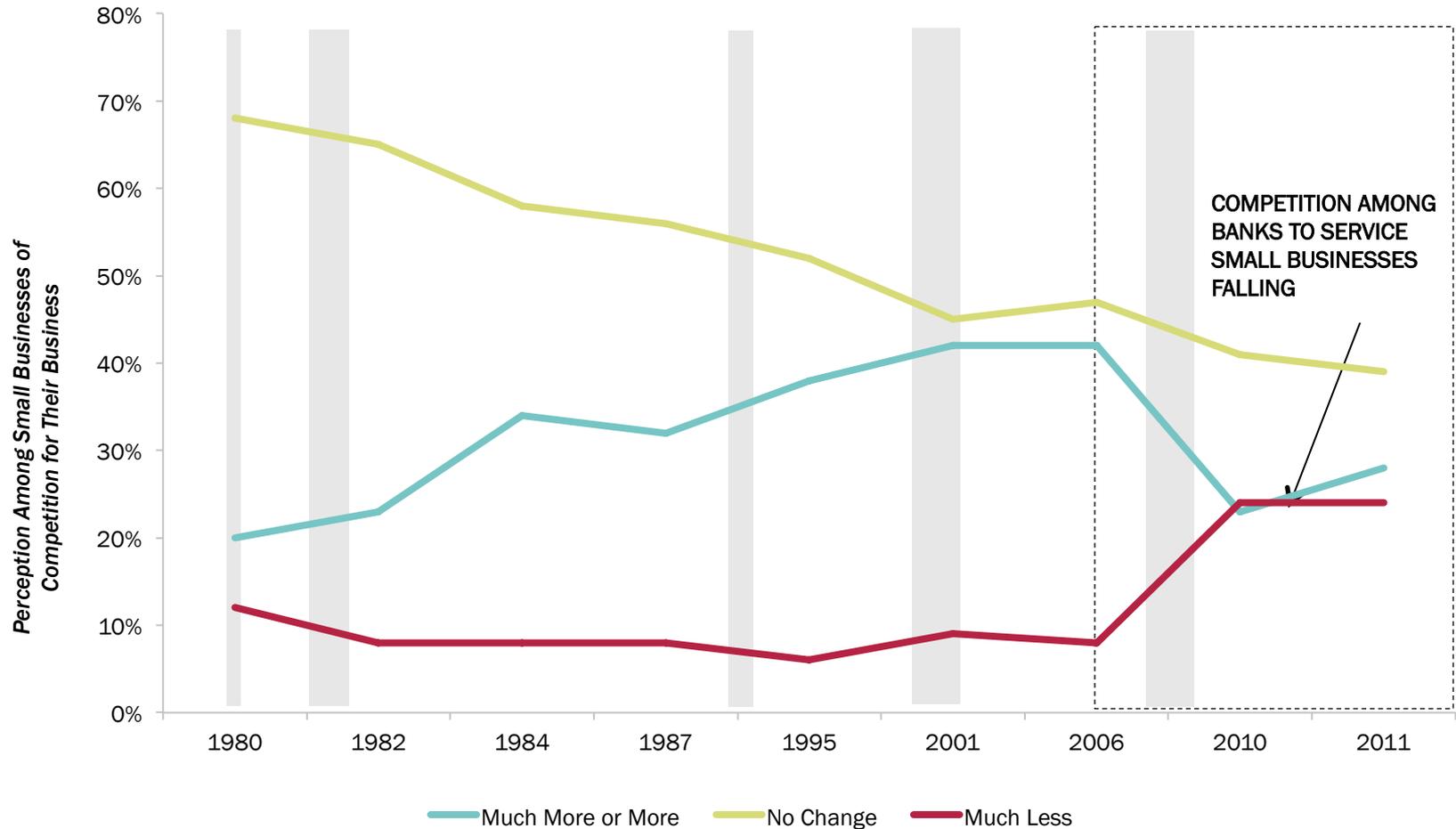
...AND SMALL BUSINESS LOANS AS A SHARE OF TOTAL LOANS IN DECLINE



Source: Federal Deposit Insurance Corporation, Call Report Data. As of June 2012 (latest available data).

THE CREDIT-LESS RECOVERY?

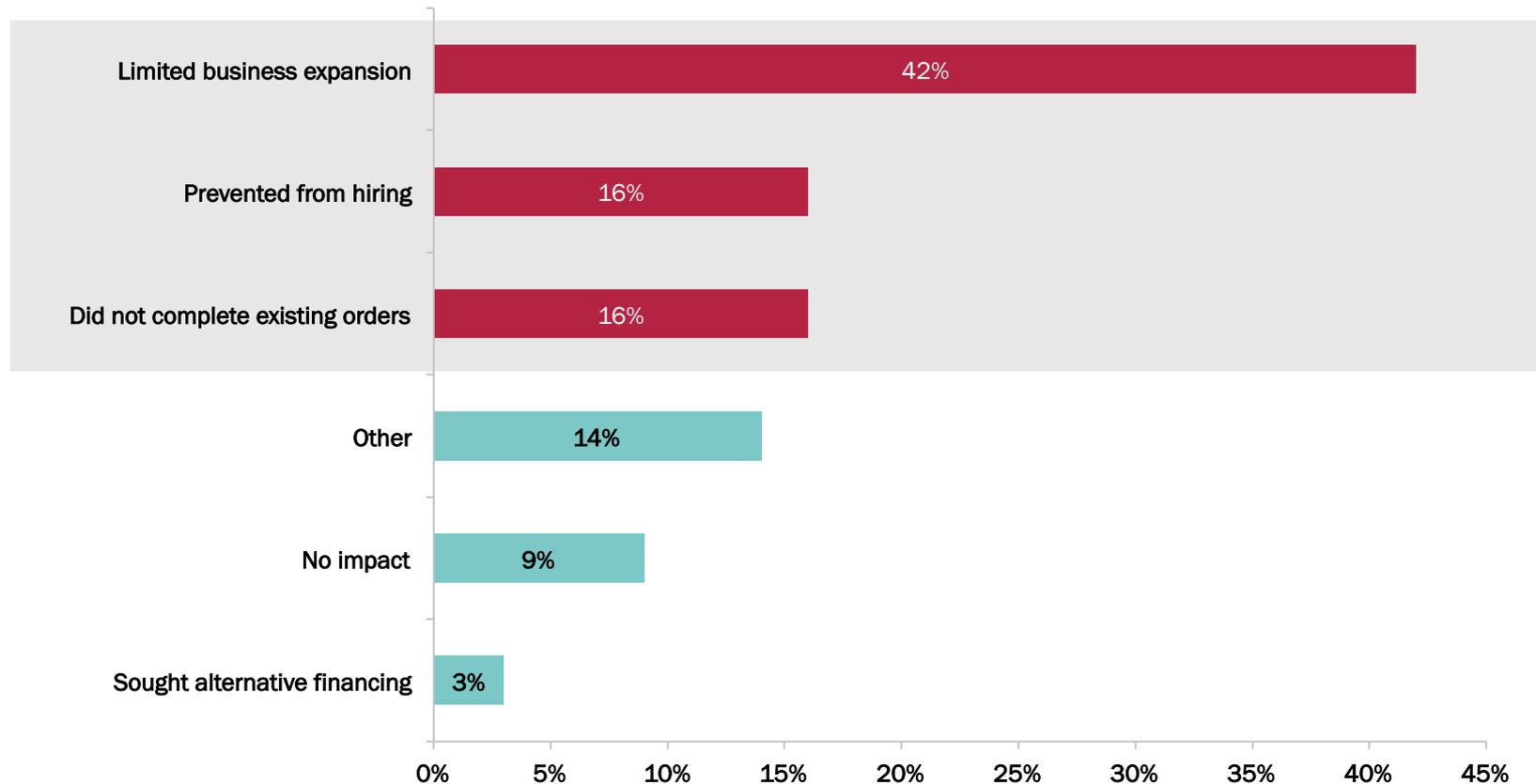
BANK COMPETITION FOR SMALL BUSINESS LOANS IS FALLING



Source: Federal Reserve (New York), "Small Business Credit Survey", Fall 2013.

IMPACT OF CREDIT DENIAL ON SMALL BUSINESSES AND ECONOMY

IMPACT OF CREDIT DENIAL ON YOUR BUSINESS?



Source: Federal Reserve (New York), "Small Business Credit Survey", Fall 2013.



KEY PROBLEMS IN BANK LENDING

Cyclical and Structural Barriers That Impede Bank Credit Access for Small Businesses



KEY PROBLEMS IN BANK LENDING

OVERVIEW OF KEY PROBLEMS IN SMALL BUSINESS LENDING

RECENT CYCLICAL BARRIERS
The Perfect Storm

SALES: Small businesses were battered by the recession, reporting weak sales and income receipts as their biggest hurdle for about four years, and some may be less qualified for bank credit today

COLLATERAL: Financial crisis hit sources of collateral hard, particularly real estate, further undermining the ability of small business owners to borrow

LENDERS MORE RISK AVERSE: Banks were hit hard in the crisis, notably small banks which are most likely to lend to small firms, and have become more risk averse. Moreover, retrenchment in lending due to bank failures and problem institutions has been exacerbated by the lack of new bank starts

REGULATORY OVERHANG: Banking examiners and regulators have responded to the crisis by forcing banks to conserve capital and make fewer risky loans

LONGER-TERM STRUCTURAL BARRIERS
There Before Crisis, Exacerbated Since

BANKING CONSOLIDATION: Small banks are most likely to lend to small firms, but the number of community banks is in long-term decline as banking assets consolidate into fewer large institutions

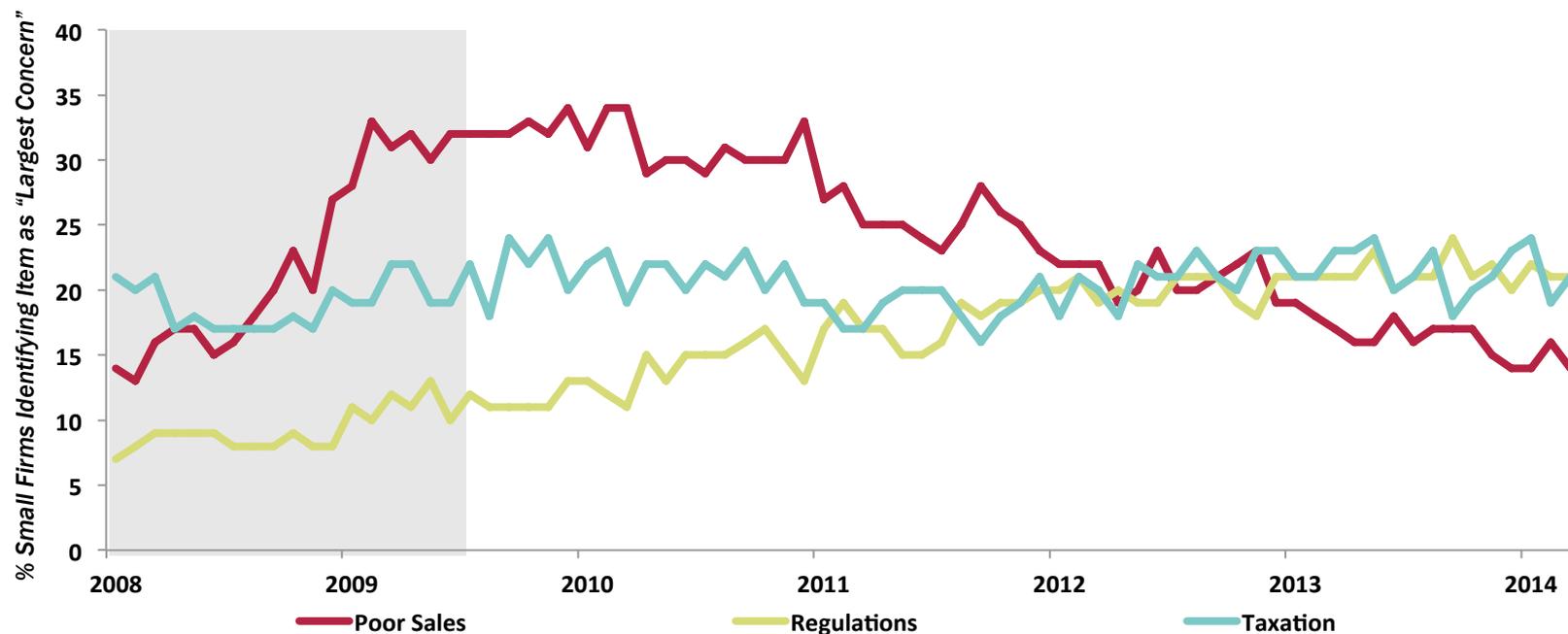
SEARCH COSTS: Small firms face high search costs, often going to several lenders before securing capital, with significant time and expense wasted on paperwork

TRANSACTION COSTS: Wide heterogeneity, high failure rates, varying use of borrowed funds by small firms make it hard to develop general standards and mean that the costs of processing \$100K loan is the same as processing a \$1M loan, but with less profit



KEY PROBLEMS IN BANK LENDING: **CYCLICAL – LINGERING PROBLEMS FROM THE CRISIS****SMALL FIRM INCOME HIT HARD, STILL RECOVERING**

- Sales reported as biggest problem for almost 4 straight years, underscoring that small firms were battered by the recession and may be less creditworthy than prior to the crisis
- Income of the typical household headed by a self-employed person declined 19 percent in real terms between 2007 and 2010, according to the Federal Reserve*



Source: National Federation of Independent Businesses, "Small Business Economic Trends Survey". As of May 2014. *Federal Reserve analysis of income of self-employed individuals as of 2010.

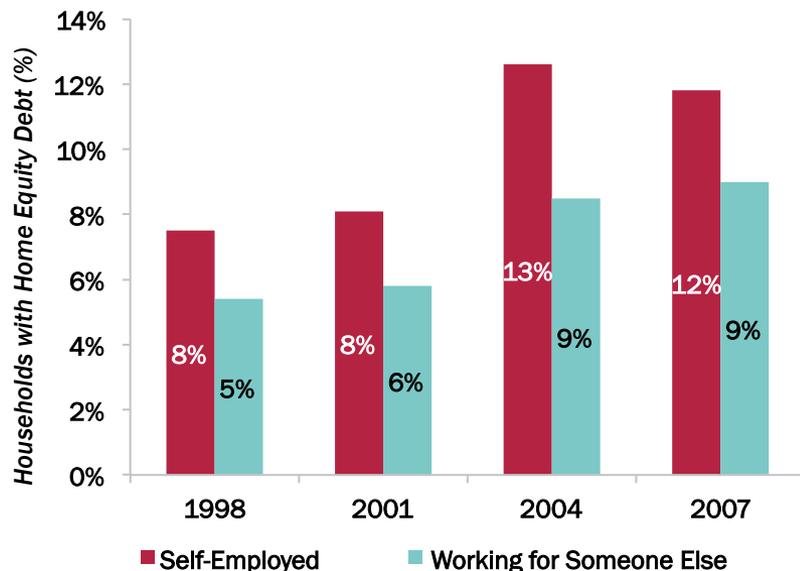


KEY PROBLEMS IN BANK LENDING: **CYCLICAL – LINGERING PROBLEMS FROM THE CRISIS**

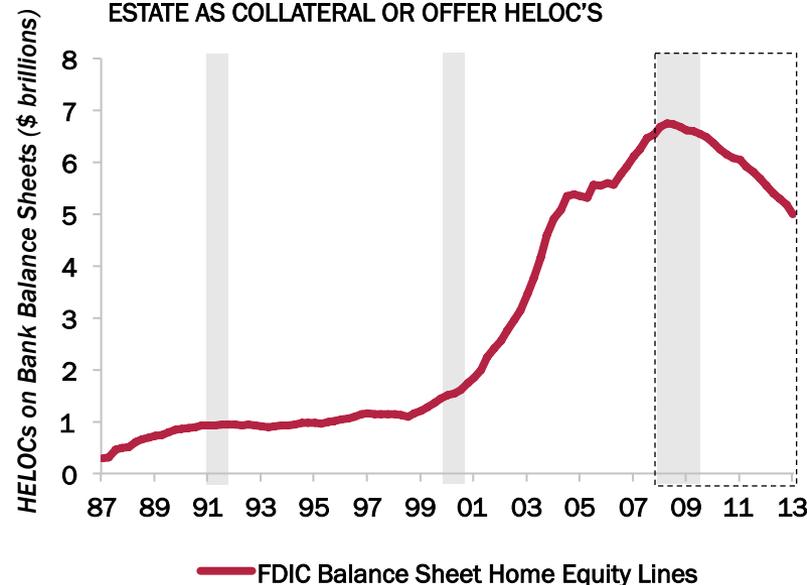
HOUSING CRISIS HIT SMALL BUSINESS COLLATERAL HARD

- Real estate is two-thirds of the assets of small business owners, and is often used as collateral
- Households headed by a self-employed person are more likely to have a home equity line of credit than households headed by a person who works for someone else

SMALL BUSINESS OWNERS DEPEND ON REAL ESTATE FOR COLLATERAL AND HELOC'S...



...BUT HOME PRICES WERE HIT HARD IN THE CRISIS AND BANKS ARE HESITANT TO VALUE REAL ESTATE AS COLLATERAL OR OFFER HELOC'S



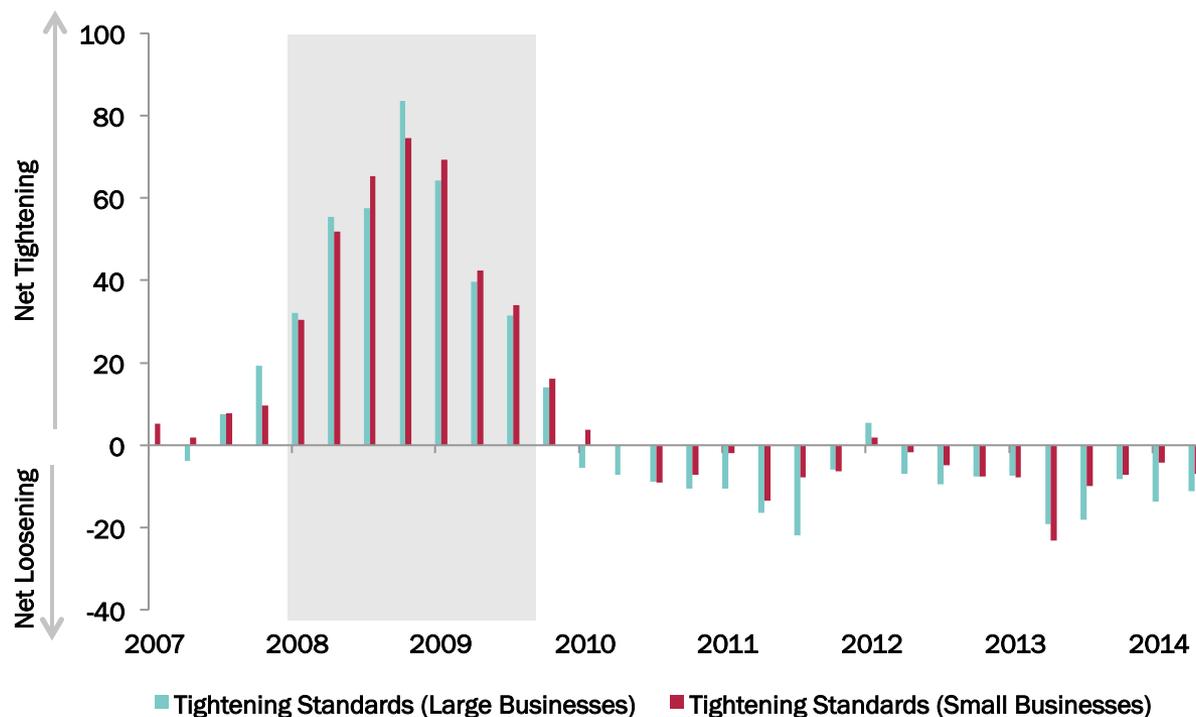
Source: National Federation of Independent Businesses, "Small Business Economic Trends Survey". As of May 2014. Similarly, an analysis by the Federal Reserve in '07 found that 20.4 percent of households headed by a self-employed person had a home equity line of credit compared to 12.6 percent of households overall.

KEY PROBLEMS IN BANK LENDING: **CYCLICAL – LINGERING PROBLEMS FROM THE CRISIS**

BANKS ARE MORE RISK AVERSE IN THE RECOVERY

- Double-digit tightening began before recession, which continued for over two years
- Loosened access for small firms at just single-digits during recovery, faster to loosen for large firms

PERCENTAGE OF BANKERS REPORTING NET TIGHTENING OR LOOSENING OF LOAN CONDITIONS



EXAMPLES OF TIGHTENING OBSERVED IN SMALL BUSINESS LENDING:

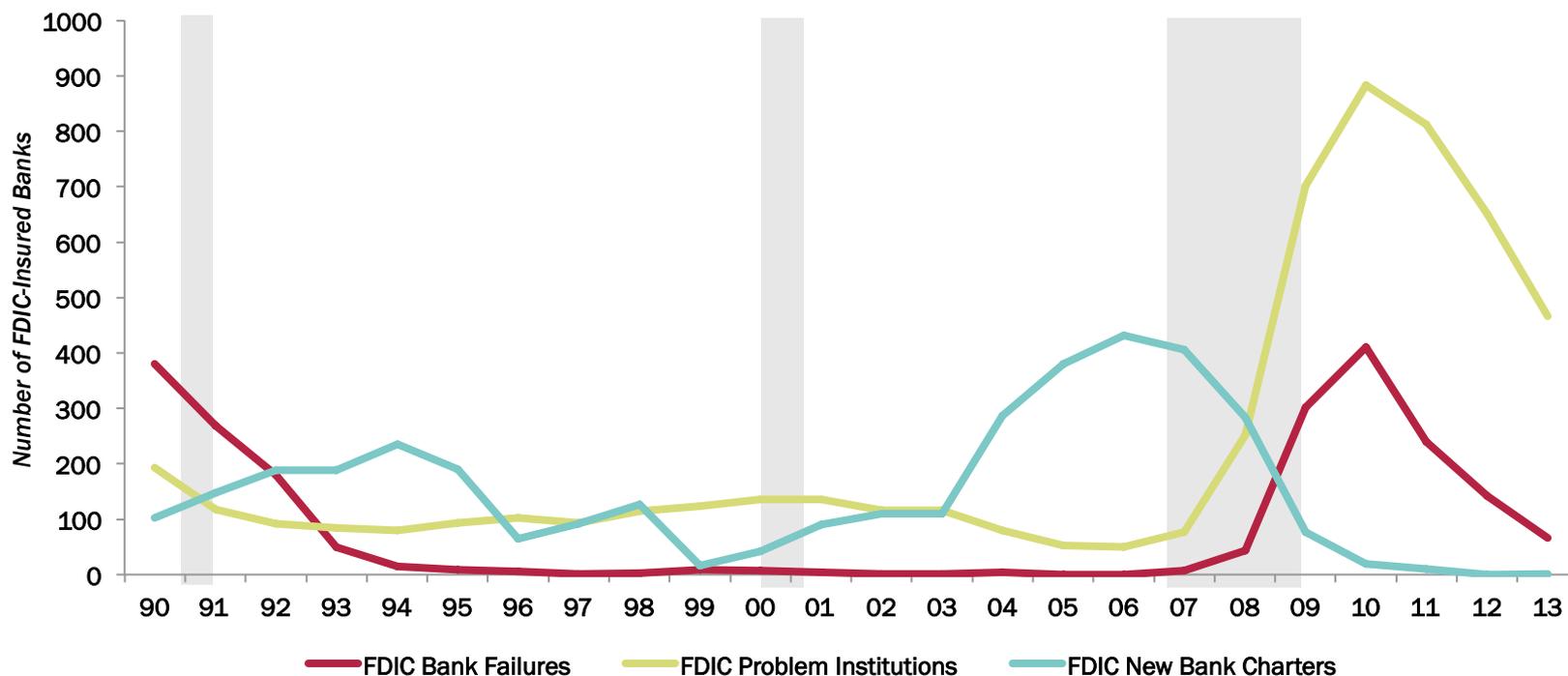
- Greater focus on borrower’s own profile, including personal income and assets
- Higher collateral requirements
- Calling in loans early and ahead of official maturity
- Reduction in loan-to-value thresholds, increasing the amount of equity businesses need for new loans
- Higher personal credit thresholds, including higher credit scores
- Aversion to any loans secured by real estate or other forms of illiquid collateral

Source: Federal Reserve, “Senior Loan Officer Survey” as of April 2014.

KEY PROBLEMS IN BANK LENDING: **CYCLICAL – LINGERING PROBLEMS FROM THE CRISIS**

BANK STARTS NOT KEEPING PACE WITH BANK FAILURES

- Troubled and failed banks were largely community banks—the most likely to lend to small firms
- This environment—where troubled local banks appear unable to meet re-emerging small firm credit needs—would be an ideal market for new banks to emerge, but new charters are down to a trickle



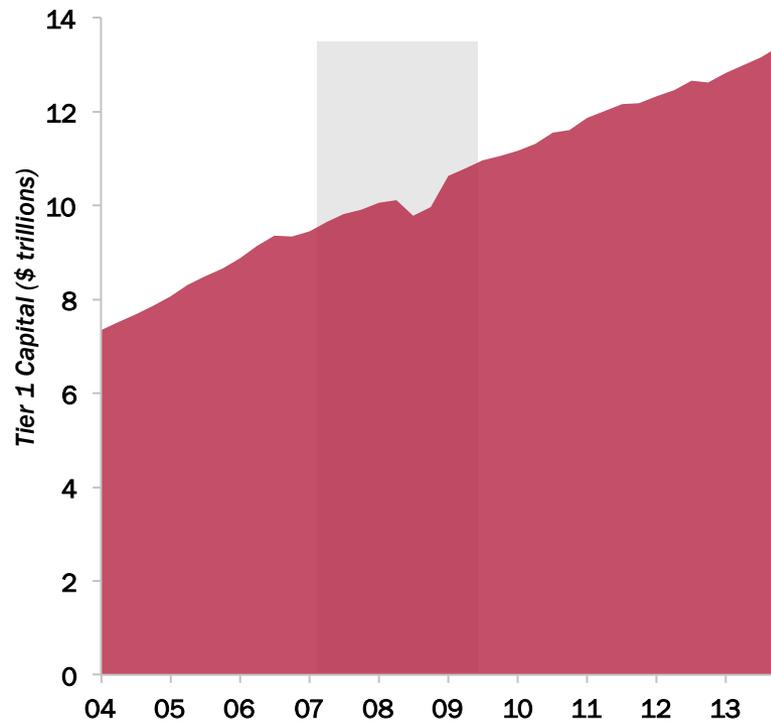
Source: Federal Deposit Insurance Corporation, Call Report Data. As of 4Q13 (latest available data).

KEY PROBLEMS IN SMALL BUSINESS LENDING: **CYCLICAL – REGULATORY OVERHANG**

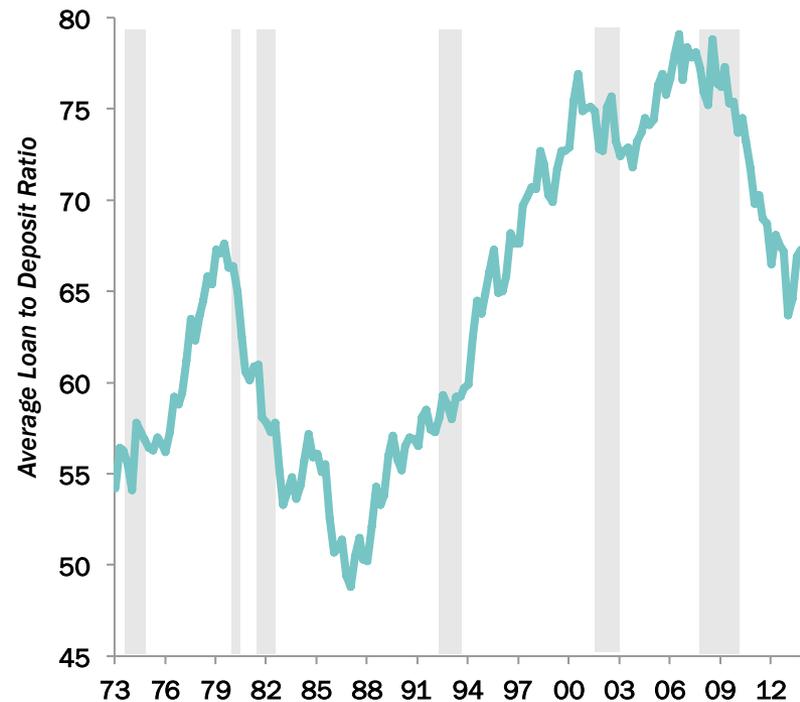
REGULATION MAY BE HURTING SMALL BUSINESS LOAN VOLUME

- Banks continue to raise capital levels to meet new regulatory standards, potentially undermining their ability to underwrite small business loans

BANKS ARE RAISING TIER 1 CAPITAL LEVELS...



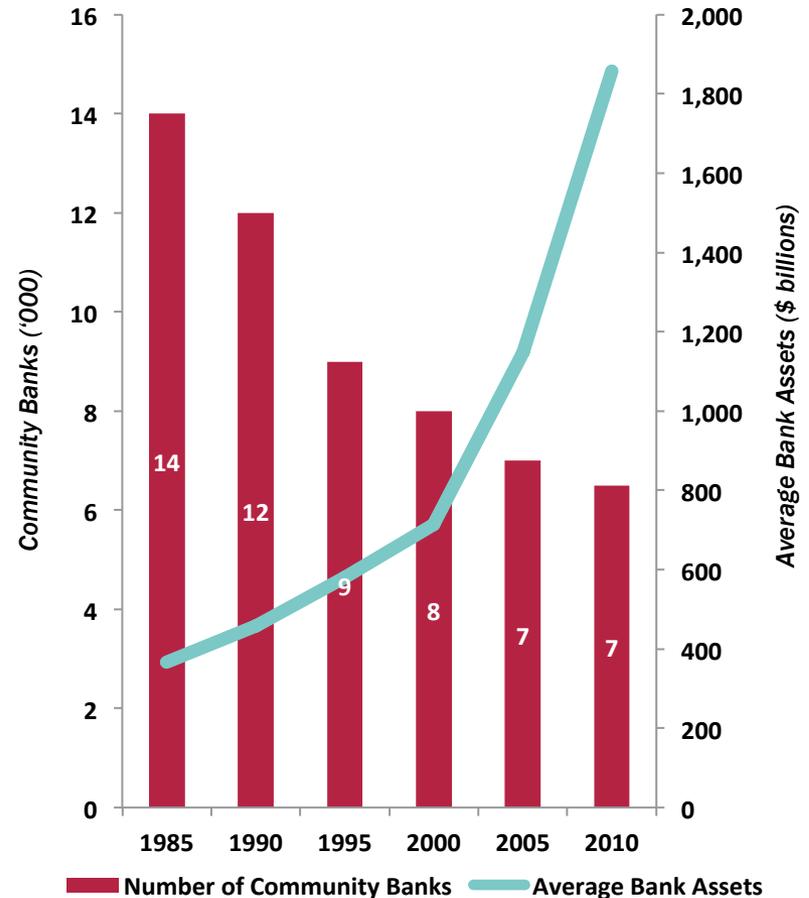
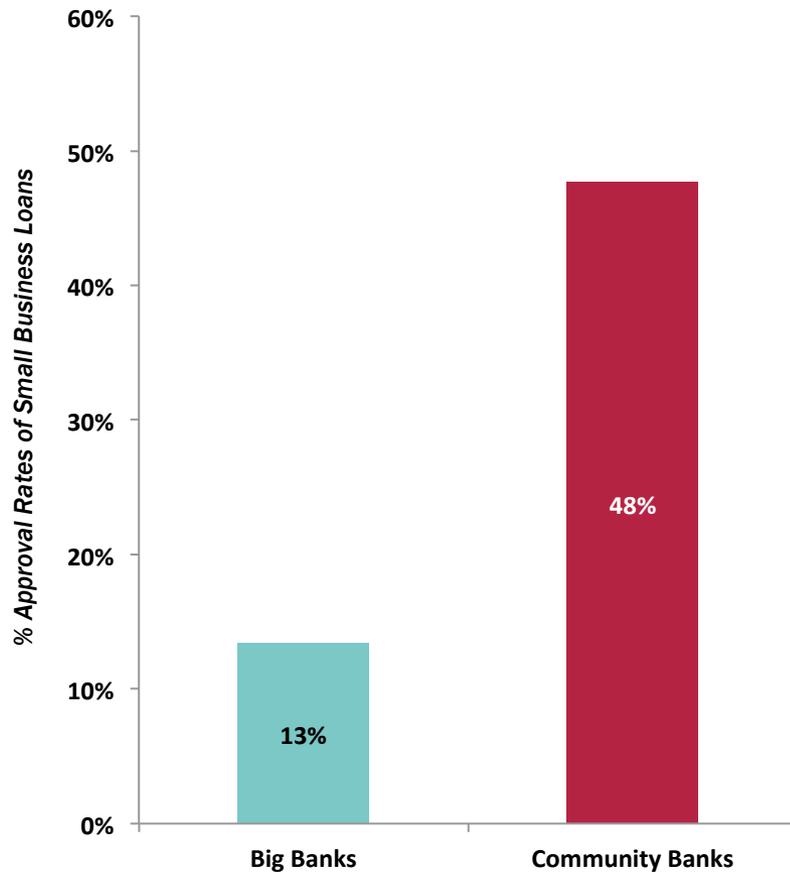
...AND HOARDING DEPOSITS, RATHER THAN LEND



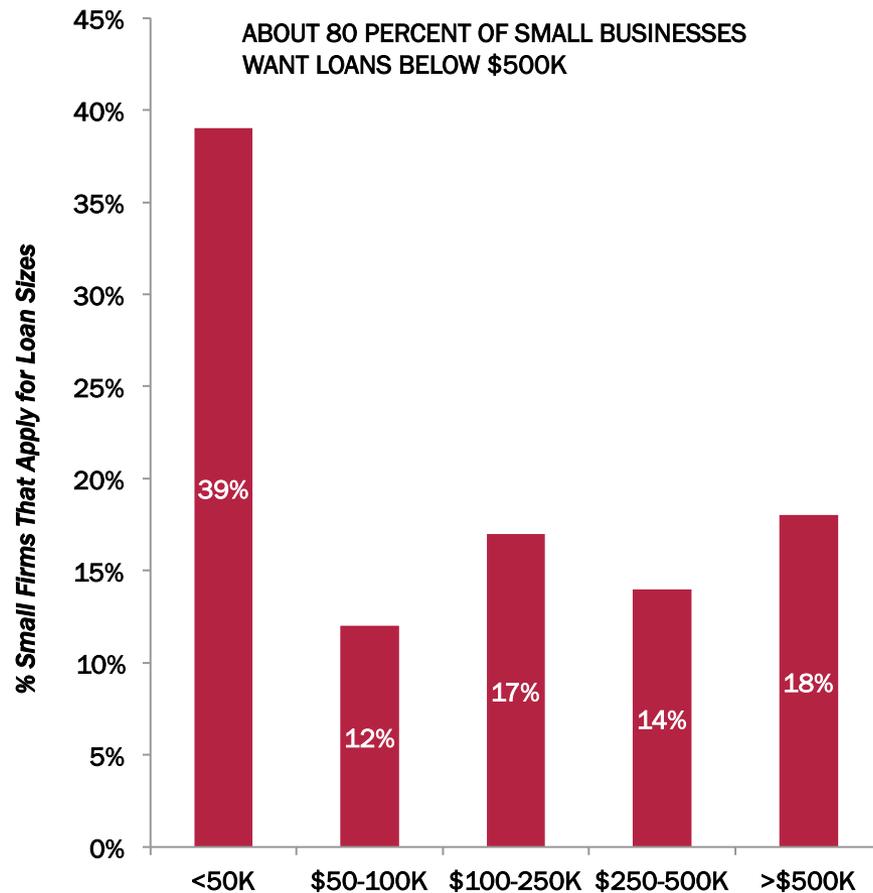
Source: Federal Deposit Insurance Corporation. As of March 2014.

KEY PROBLEMS IN SMALL BUSINESS LENDING: **STRUCTURAL – BANKING CONSOLIDATION**

SMALL BUSINESSES RELY ON COMMUNITY BANKS, BUT THE NUMBER OF COMMUNITY BANKS IS FALLING DUE TO BANKING CONSOLIDATION



Source: Biz2Credit Small Business Lending Index (As of May 2014). Federal Deposit Insurance Corporation, Call Report Data. As of June 2013 (latest available data).

KEY PROBLEMS IN SMALL BUSINESS LENDING: **STRUCTURAL – TRANSACTION COSTS****FIRMS WANT SMALL LOANS, WHICH AREN'T PROFITABLE FOR BANKS**

COSTS BANKS JUST AS MUCH TO UNDERWRITE A \$1M LOAN AS \$100K LOAN

Search costs: Difficult to find borrowers that meet standards for qualified demand

Transaction costs: Wide heterogeneity, high failure rates, varying use of borrowed fund of small firms make it hard to general standards

No securitization market: Securitization improves return on capital by enabling liquidity and balance sheet diversity, but wide heterogeneity of small business loans has hurt the development of a secondary market

Source: Federal Reserve (New York), "Small Business Credit Survey", Fall 2013.



HOW TECHNOLOGY MAY CHANGE THE GAME

New Credit Algorithms and Emerging Marketplaces for
Small Business Loans



BANKS MAY BE THE “DINOSAURS” OF SMALL BUSINESS LENDING

“Retail banks are dinosaurs.”

Bill Gates – Founder, Microsoft

October ‘94

*“Given current market trends, retail banking as we know it today will no longer exist by 2020. Even by 2015, almost all small retail banks will be struggling, and **even some of the large banks will be trying to re-invent themselves as software companies** as they are confronted by competition from more agile and technologically adept competitors.”*

Aaron Greenspan – CEO of Think Computer Corp

November ‘10

“Banking is very digitizable... Lending Club’s peer-to-peer model is changing personal lending.”

Peter Sands – CEO, Standard Chartered

June ‘13

“The banking middle men may in time become the surplus links in the chain.”

Andrew Haldane – Executive Director, Bank of England

March ‘12

“Alternative lending has filled a gap left by risk-averse banks... By embracing technology to make small-business lending more efficient and profitable, the alternative lenders have opened opportunities for businesses”

The New York Times

March ‘14

*“The largest banks continue to tout their small-business lending records, but the numbers they provide to back this up are less than convincing... **the bigger banks simply aren’t equipped to handle small-business lending.**”*

The New York Times

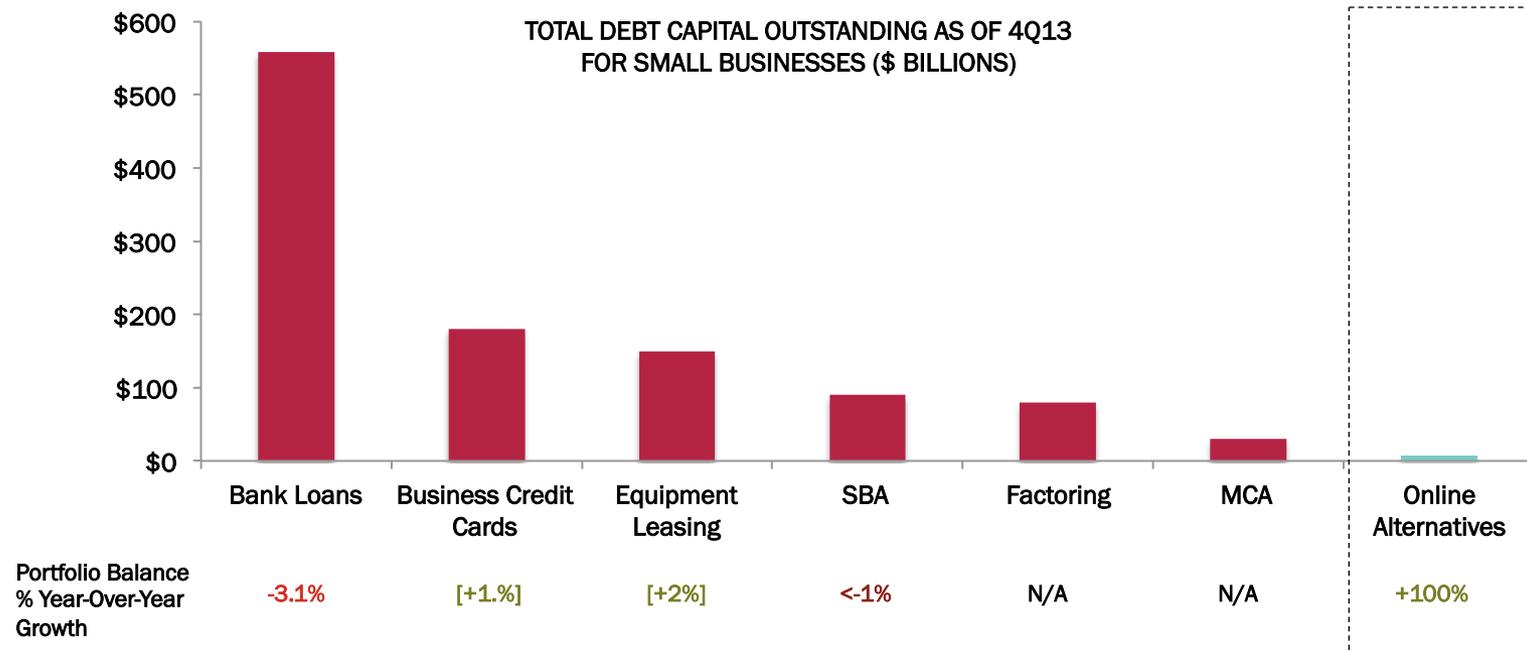
January ‘13



HOW TECHNOLOGY MAY CHANGE THE GAME

ONLINE LOAN MARKET IS VERY SMALL, BUT GROWING FAST

- Online lenders, including balance sheets lenders, lender agnostic platforms and peer-to-peer platforms have decisioned just \$7B of loan capital as of 4Q13, but most of these players are registering triple digit year-over-year growth rates

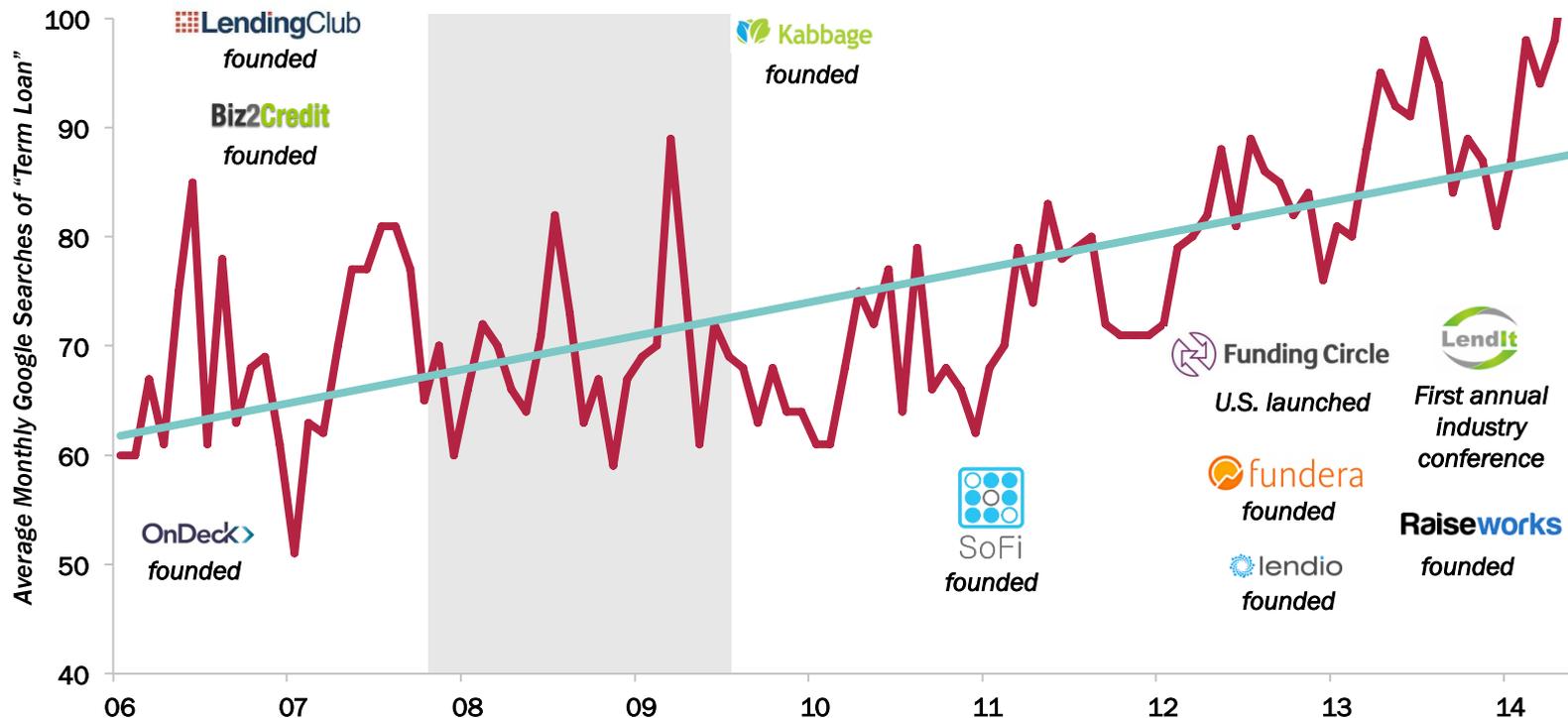


Source: Bank loans data taken from FDIC Call Reports; SBA data sourced from SBA publicly available information; Credit card data sourced from creditcards.com; remainder sourced from interviews with industry experts, and authors' analysis.

HOW TECHNOLOGY MAY CHANGE THE GAME

SMALL BUSINESSES CLEARLY WANT ONLINE LOAN OPTIONS

- Google searches of “term loan” are running about 45 percent above ’06 levels, and have grown every year during the crisis, implying businesses are increasingly turning online to search for loans



Source:: Google. As of May 2014.

THREE PROMISING ONLINE MODELS IN LENDING TO SMALL FIRMS

Online Balance Sheet Lenders

Use balance sheet capital from institutional investors and decisions loans via proprietary risk scoring algorithms that rely largely on cash flow data, credit scores, social data, industry, geographic and other firmographic information



Lenders Agnostic Marketplaces

Connect small business borrowers to a series of lenders that are part of their online marketplaces; most work with conventional lenders like big and small banks, SBA lenders as well as alternatives like OnDeck and Kabbage



Peer to Peer (P2P) Platforms

Peer to peer, largely consumer-focused with exception of Funding Circle, lending platforms focusing on prime and super- prime quality borrowers; both announced plans to expand into small business lending in '14



Source: Authors' analysis.

HOW TECHNOLOGY MAY CHANGE THE GAME

NEW MODELS TAPPING INTO UNPRECEDENTED DATA SOURCES

- Emerging players are developing credit algorithms that integrate a series of new data streams

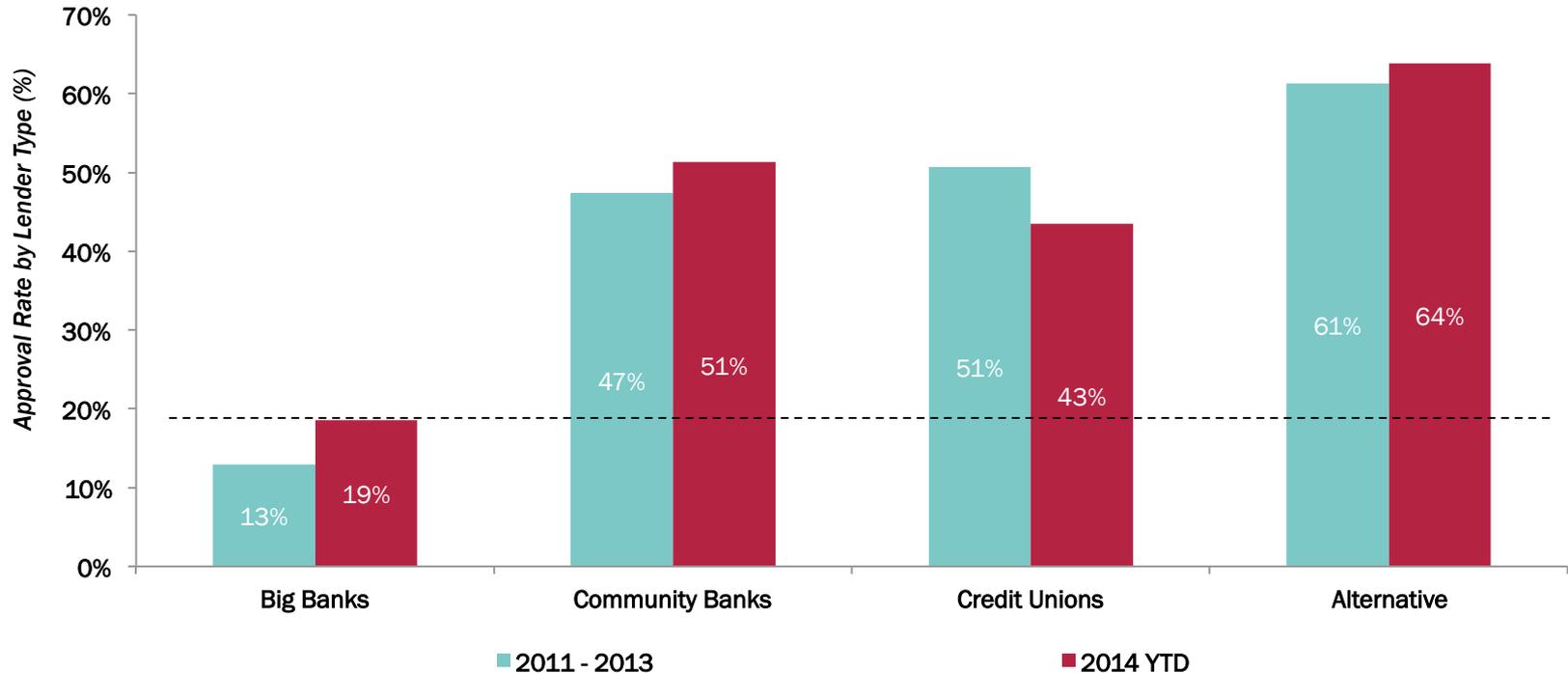
		Rationale	Sources	Users	
				Alternatives	Banks
More Predictive	Cash Flow	Best measure of firm fundamentals, gauging ability to repay and managing risk repayment cycle during life of loan	  	×	
	Credit Bureau	Useful for consumer risk profile, but limited business risk profile information and weak predictor of creditworthiness	   	×	×
Less Predictive	Firmographic	Risk correlates to revenue and profit level, firm size, age, industry, geography, customer size, owner ed.	   	×	
	Social	Highly volatile day to day, but viewed holistically can be a predictor of riskiness, esp. in retail / restaurant	   	×	

Source: Authors' analysis. Interviews with industry analysts and companies.

HOW TECHNOLOGY MAY CHANGE THE GAME

ALTERNATIVE LENDERS TAKING MORE RISK

- Alternative lenders are the most likely to extend credit to small businesses in large part because they use alternative data sets, particularly on cash flow and business fundamentals, to better understand the creditworthiness of small business borrowers



Source: Biz2Credit Small Business Lending Index. As of March 2014.

HOW TECHNOLOGY MAY CHANGE THE GAME

TRADITIONAL PLAYERS ARE EYEING THE NEW MARKETPLACE

Joint Ventures

BBVA Compass teams with OnDeck (May '14)

- BBVA will use OnDeck's technology to provide qualifying small business clients with loans up to \$250K, six- to 24-month terms, and funding in as fast as one business day.

Community banks start to buy loans via Lending Club (June '13)

- Partnership with Titan Bank and Congressional Bank, where they will buy loans through Lending Club's platform

Santander partners with Funding Circle (July '13)

- Santander will pass on leads to Funding Circle that they are unable to finance.

M&A

LendingClub acquires Springstone Financial (April '14)

- Springstone provides affordable financing options for consumers looking to finance private education and elective medical procedures through a network of over 14,000 schools and healthcare providers

Barclays acquires 49 percent of South African P2P Platform RainFin (March '14)

- RainFin launched their platform in July 2012. Offers unsecured consumer loans, ranging up to 1 year. 1st year they loaned \$0.35m; Average net return to lender 10.2%.

Organic Entry

Range of companies may also decide to get into this space on their own, particularly:

- Companies with access to significant data sets on small business trends, including Intuit, which runs America's largest accounting software for small businesses ("QuickBooks")

- Credit card companies, particularly Capital One, which have built up significant data on and relationships with small business through their credit card products

- Square has also launched a merchant cash advance product in May '14



APPENDICES



SWIFT POLICY RESPONSE GOT US BACK FROM BRINK DURING CRISIS

Recovery Act ('09)

- **Strengthened SBA lending programs**: reduced fees, raised guarantees to 90 percent for loan programs, which caused sharp rise in SBA loan volume, +64K small businesses financed
- **Small business tax relief**: Small business tax credits, including increased capex expensing; five year carryback of operating losses; exclusion of 75% of small businesses cap gains

Small Business Jobs Act ('10)

- **Small Business Lending Fund (SBLF)**: Program invested \$4B across 332 financial institutions provided low-cost capital to community banks with assets <\$10B to spur lending
- **State Small Business Credit Initiative (SSBCI)**: \$1.5B to support state and local programs that provide lending to small businesses
- **SBA lending**: extended 90 percent guarantees and reduced fees; created refinancing program to help small business with refinancing commercial mortgages; enhanced loan limits for SBA's flagship loan products – led to three years of record SBA lending
- **Small business tax relief**: Small business tax credits, including capex expensing; temporary provisions zeroing out capital gains taxes and allowing entrepreneurs to deduct more start-up costs; allowed carryback for five years of business tax credits

JOBS Act ('12)

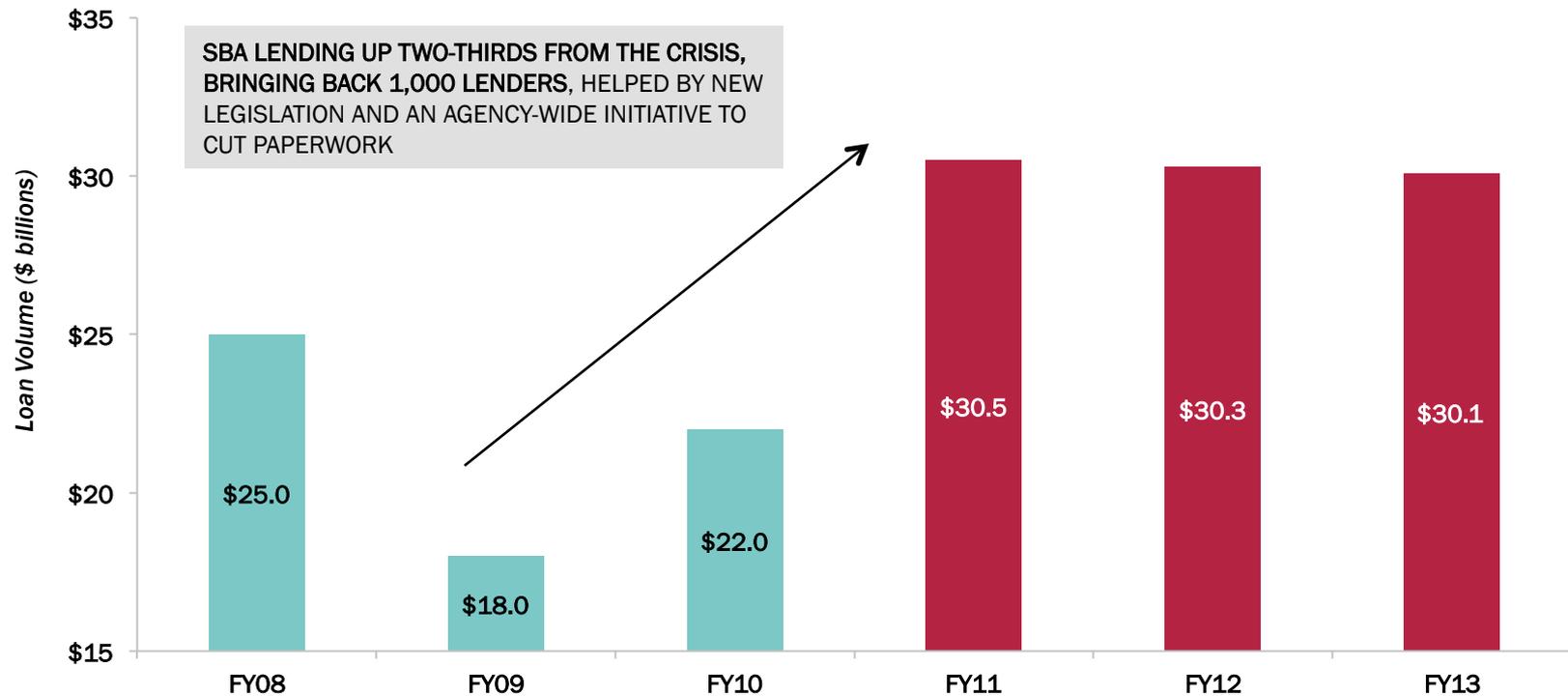
- **On-ramp**: Incubator period of no longer than 5 years post-IPO for a new class of “emerging growth companies” to phase in certain costly SEC requirements
- **Mini-IPO**: Expands Regulation A “mini public offering” cap from \$5M to \$50M
- **Crowd-funding**: Framework for securities-based crowd-funding via regulated online platforms
- **General solicitation**: Eliminates ban to accredited investors in private offerings



FEDERAL RESPONSE TO THE FINANCIAL CRISIS OF 2008

RECORD SBA LOANS HAVE HELPED, BUT LIMITED MARKET REACH

- Swift action to spur SBA lending has helped, resulting in record years in '11, '12 and '13
- But, SBA represents less than 10 percent of the market, limiting the broader market impact



Source: Small Business Administration. 7(a) and 504 loan volume since Fiscal Year 2008. As of May 2014.



PROFILES OF NEW COMPANIES IN ONLINE SMALL BUSINESS LENDING

ONLINE MODELS ARE SMALL, BUT GROWING FAST

	Online Balance Sheet	Marketplaces	P2P Platforms
	 	 	 
Model	Use balance sheet capital to decision loans via new risk scoring algorithms that include non-trad'l data	Connect borrowers with range of traditional and alternative lenders, incl. big banks, SBA, new players	Connect prime and super-prime quality borrowers with capital from consumers, inst'l investors
Loans to Date	Est. \$1.5B as of 4Q13	N/A	Est. \$4.7B as of 4Q13
APR	20 – 50 percent	Wide variation given range of products and lenders	9 – 12 percent
Terms	6 – 12 months on average; focused on new loans	Wide variation given range of products and lenders	3 year or 5 year; largely focused on refinancing of credit card debt
VCs	Google Ventures, First Round, Tiger, SAP Capital	Khosla Ventures, First Round Capital, Square 1	Khosla Ventures, Kleiner Perkins, General Atlantic

Source: Authors' analysis. Conversations with industry analysts and companies.