

HEDGEYE



Special Webcast: Financial Sector Pro

AI, Quads, Credit Cycle, Housing
Josh Steiner & Drago Malesevic

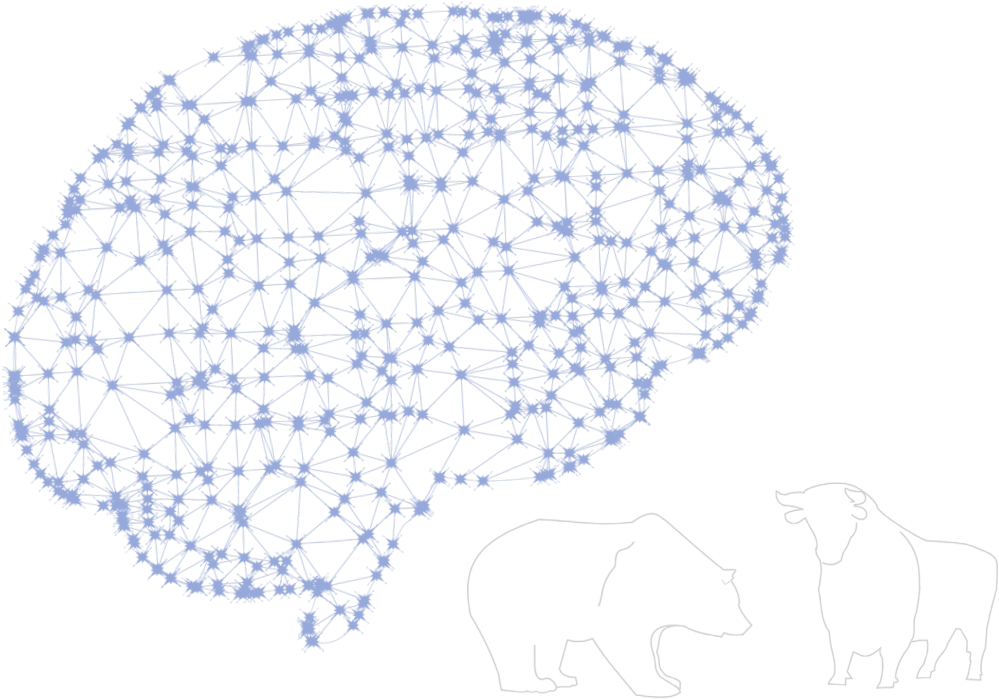
November 10th, 2020

Financial Institutions Group

Josh Steiner, CFA

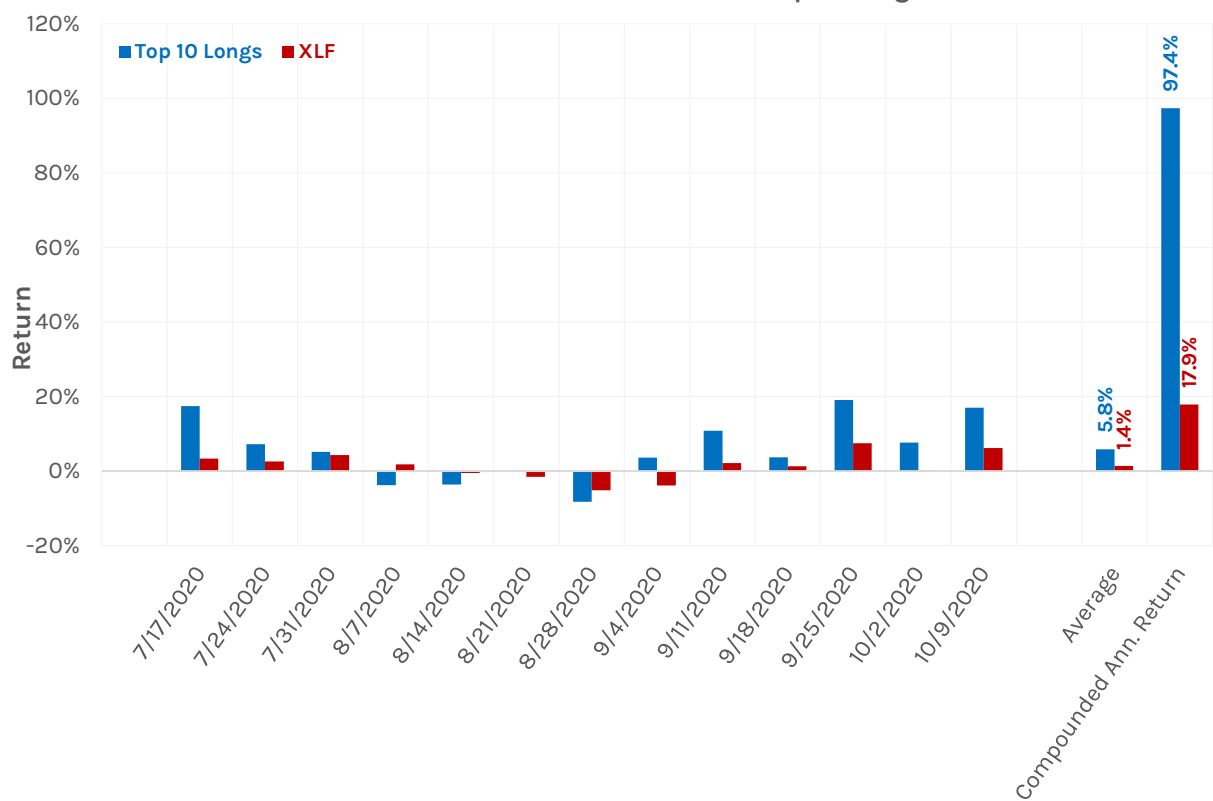
Drago Malesevic, CFA

The Financials A.I. Stock Screener

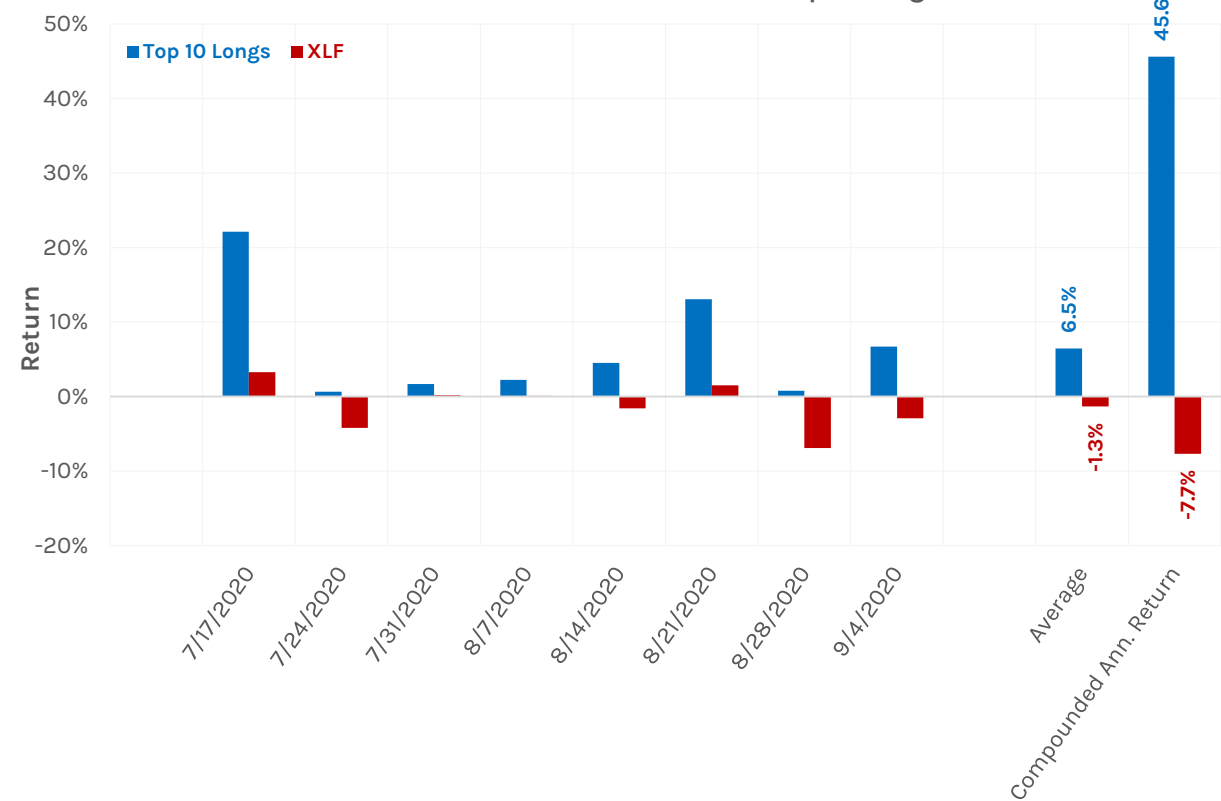


Financials – Over-Bin / Top 10 / Longs

1-Month XLF Performance vs. AI Top 10 Longs



2-Month XLF Performance vs. AI Top 10 Longs



Source: Hedgeye Financials & Data Science

Prediction Date

© Hedgeye Risk Management

Source: Hedgeye Financials & Data Science

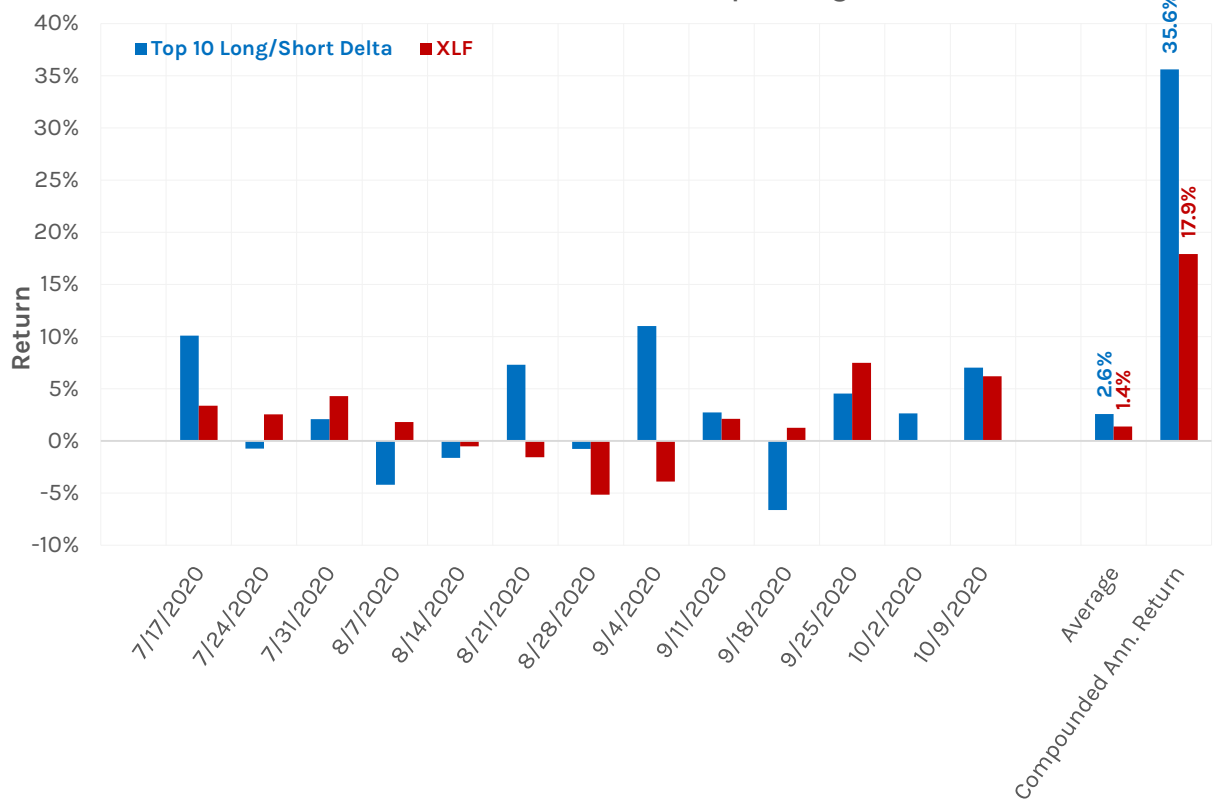
Prediction Date

© Hedgeye Risk Management

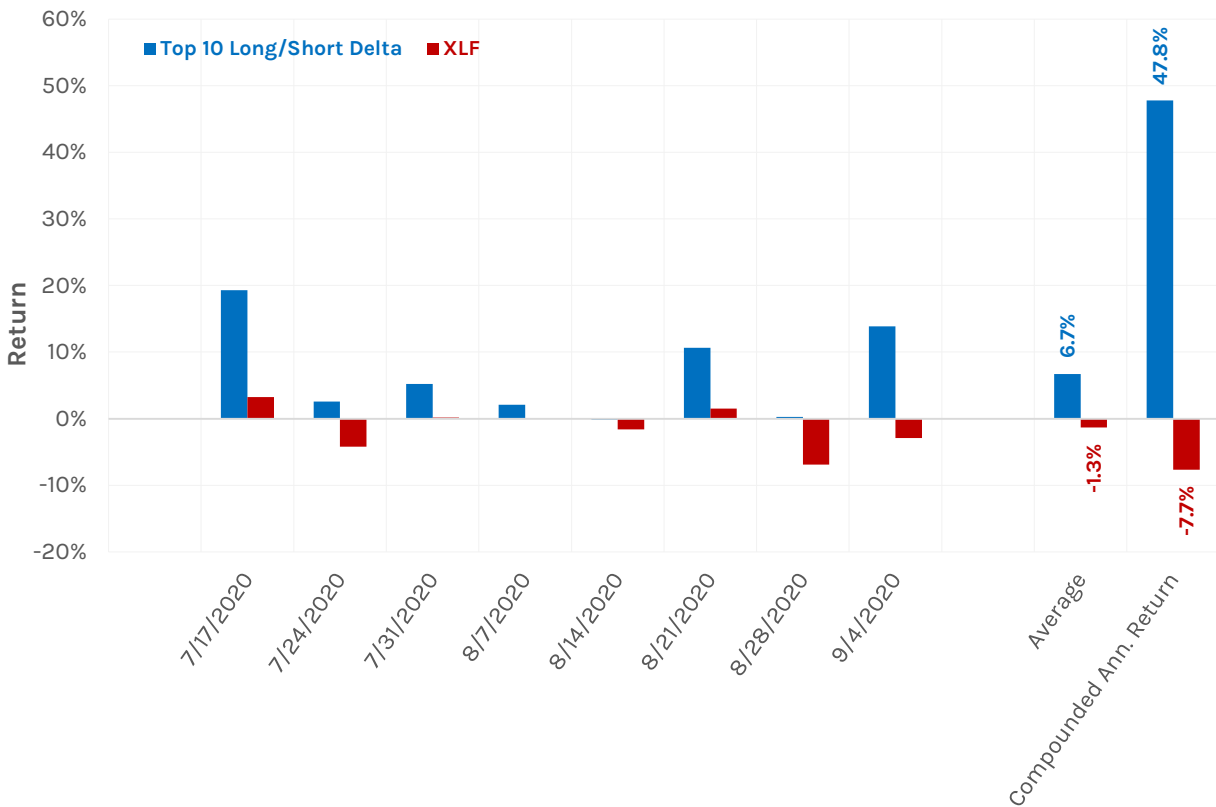
These charts show the 1-month and 2-month performance based on each week’s Top 10 longs. We’re showing absolute returns but also illustrating how the Financials ETF (XLF) performed during the same period.

Financials – Over-Bin / Top 10 / Longs & Shorts - Delta

1-Month XLF Performance vs. AI Top 10 Long/Short Delta



2-Month XLF Performance vs. AI Top 10 Long/Short Delta



Source: Hedgeye Financials & Data Science

Prediction Date

© Hedgeye Risk Management

Source: Hedgeye Financials & Data Science

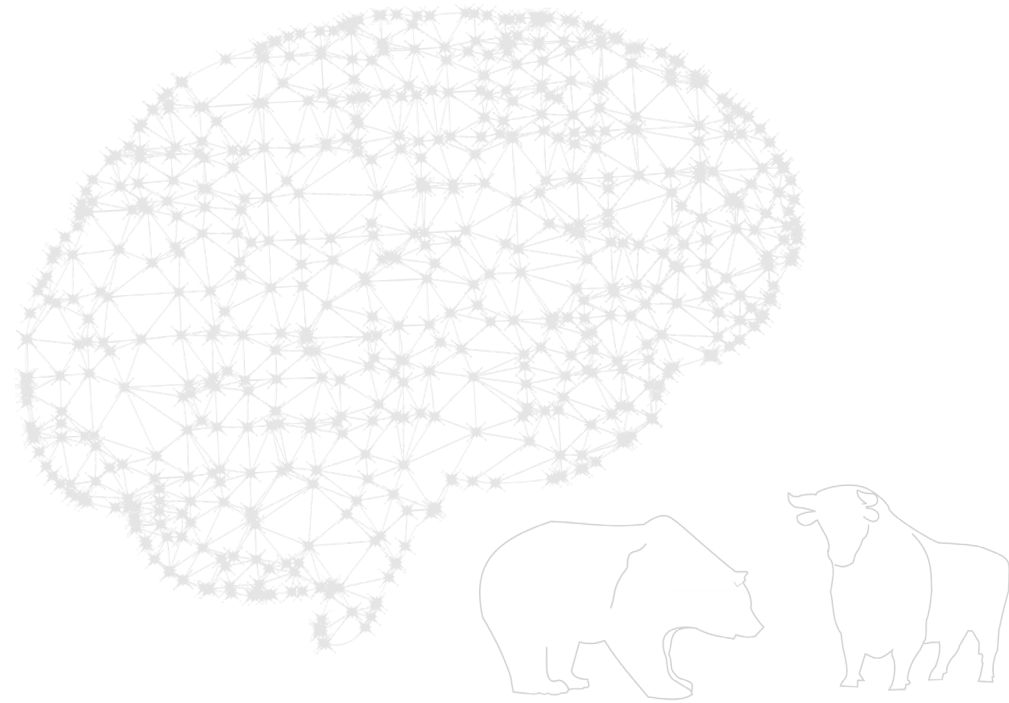
Prediction Date

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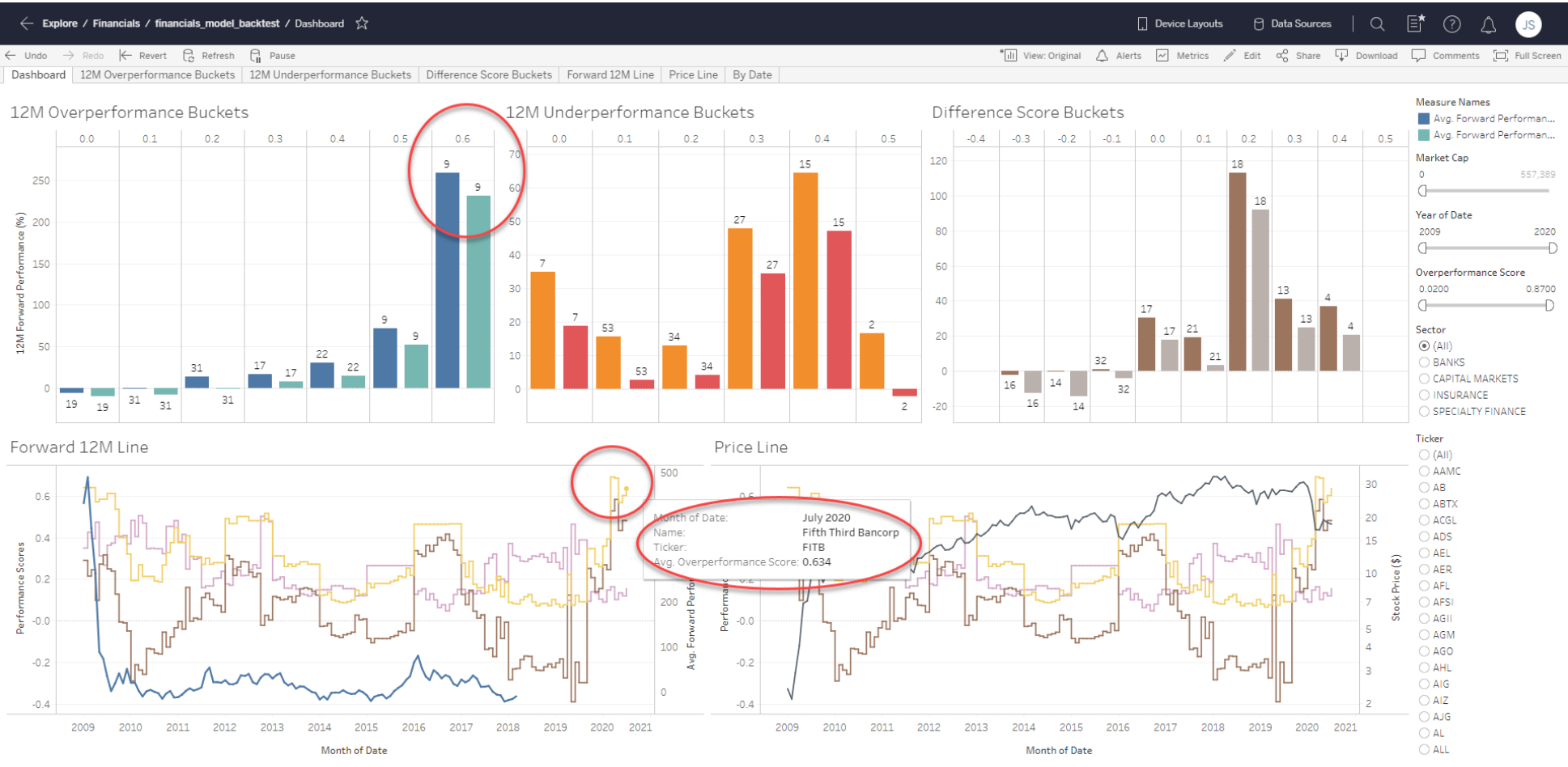
These charts show the 1-month and 2-month performance based on the spread between each week's Top and Bottom 10 longs.

An Update on the A.I. Screener

A Brief Look Back



Example – Fifth Third Bancorp (FITB) (from 7/16/20 AI Presentation)

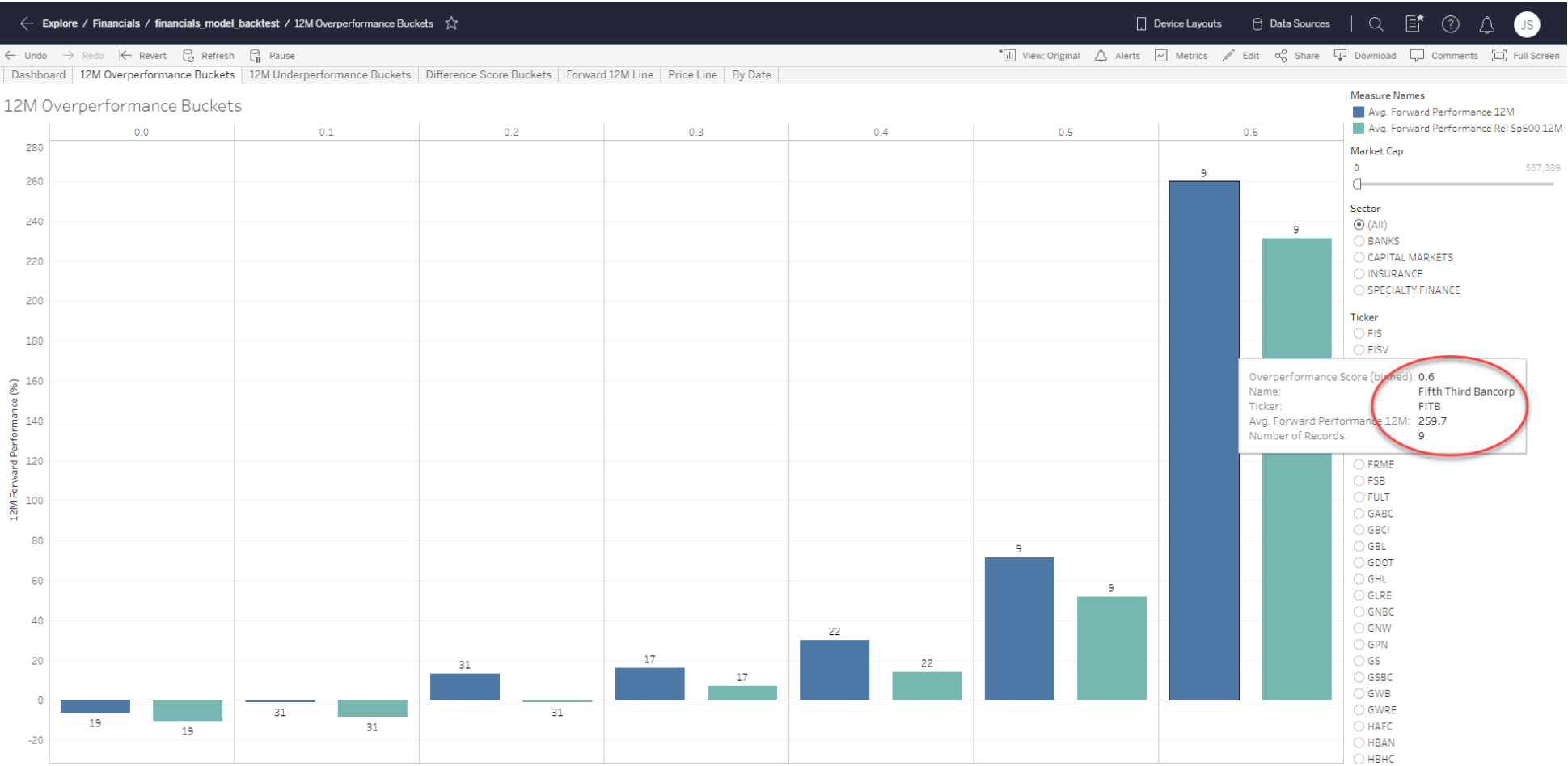


This is an example of the historical dashboard for an individual stock.

The historical AI framework is shown here for Fifth Third Bancorp (FITB). The chart at the top left (shown in more detail on the next slide) shows the historical frequency and returns associated with a given bin range in the Overperformance bin.

The AI system regards the current setup as being very similar to that last seen in 2009.

Example – Fifth Third Bancorp (FITB) (from 7/16/20 AI Presentation)



Here's a detailed look at the frequency and performance of FITB in various bin ranges historically.

Financials – Top & Bottom 10 – Over-bin (from 7/16/20 AI Presentation)

HEDGEYE

Friday, July 10, 2020

OVERPERFORMANCE BIN

Top 10 / Bottom 10

| Top 10 | | Mkt Cap (\$B) | Avg Fwd Perf | Bottom 10 | | Mkt Cap (\$B) | Avg Fwd Perf |
|--------|--------------------------------------|---------------|--------------|-----------|--------------------------------------|---------------|--------------|
| CAR | Avis Budget Group, Inc. | 1.98 | 299% | IBCP | Independent Bank Corporation | 0.28 | -40% |
| FITB | Fifth Third Bancorp | 12.92 | 260% | MTG | MGIC Investment Corporation | 2.50 | -35% |
| CNO | CNO Financial Group, Inc. | 2.20 | 139% | VRTS | Virtus Investment Partners, Inc. | 0.98 | -31% |
| SQ | Square, Inc. Class A | 53.27 | 130% | APAM | Artisan Partners Asset Management, I | 2.04 | -30% |
| WETF | WisdomTree Investments, Inc. | 0.53 | 117% | AB | AllianceBernstein Holding LP. | 2.73 | -24% |
| SLM | SLM Corp | 2.56 | 96% | OZM | Sculptor Capital Management, Inc. Cl | 0.28 | -18% |
| WD | Walker & Dunlop, Inc. | 1.49 | 87% | STT | State Street Corporation | 22.87 | -17% |
| OCN | Ocwen Financial Corporation | 0.08 | 76% | CCBG | Capital City Bank Group, Inc. | 0.31 | -15% |
| AEL | American Equity Investment Life Hold | 2.23 | 65% | BAC | Bank of America Corp | 209.43 | -15% |
| C | Citigroup Inc. | 104.41 | 64% | SC | Santander Consumer USA Holdings, Ir | 5.73 | -13% |

Here is the latest AI output (as of 7/16/20) for the Financials sector. These are its current Top ideas, both long and short, across the more than 300 tickers in the Financials complex.

Some are mega-caps, some are large-caps, mid-caps, small-caps and mico-caps.

One important thing to note. The “Avg Fwd Perf” refers to the performance observed historically associated with the current bin range. This shouldn’t be viewed as a forecast, but rather a reference range.

Financials – Top & Bottom 10 – Over-bin (from 7/16/20 AI Presentation)

Subsequent Performance to Date

Friday, July 10, 2020

OVERPERFORMANCE BIN

Top 10 / Bottom 10

| Top 10 | | Mkt Cap (\$B) | Avg Fwd Perf | 11/9/2020 | Bottom 10 | | Mkt Cap (\$B) | Avg Fwd Perf | 11/9/2020 |
|---------|--------------------------------------|---------------|--------------|-----------|-----------|-----------------------------------|---------------|--------------|-----------|
| CAR | Avis Budget Group, Inc. | 1.98 | 299% | 35% | IBCP | Independent Bank Corporation | 0.28 | -40% | 24% |
| FITB | Fifth Third Bancorp | 12.92 | 260% | 44% | MTG | MGIC Investment Corporation | 2.50 | -35% | 47% |
| CNO | CNO Financial Group Inc. | 2.20 | 139% | 37% | VRTS | Virtus Investment Partners, Inc. | 1.98 | -31% | 36% |
| SQ | Square, Inc. Class A | 53.27 | 130% | 44% | APAM | Artisan Partners Asset Management | 2.04 | -30% | 38% |
| WETF | WisdomTree Investments Inc. | 0.53 | 117% | 17% | AB | AllianceBernstein Holding LP. | 2.73 | -24% | 15% |
| SLM | SLM Corp | 2.56 | 96% | 53% | OZM | Sculptor Capital Management, Inc. | 0.28 | -18% | 1% |
| WD | Walker & Dunlop, Inc. | 1.49 | 87% | 51% | STT | State Street Corporation | 22.87 | -17% | 9% |
| OCN | Ocwen Financial Corporation | 0.08 | 76% | 146% | CCBG | Capital City Bank Group, Inc. | 0.31 | -15% | 19% |
| AEL | American Equity Investment Life Hold | 2.23 | 65% | 12% | BAC | Bank of America Corp | 209.43 | -15% | 16% |
| C | Citigroup Inc. | 104.41 | 64% | -10% | SC | Santander Consumer USA Holdings | 5.73 | -13% | 28% |
| Average | | | | 43.1% | | | | | 23.3% |
| XLF | | | | 15.1% | | | | | 15.1% |
| S&P500 | | | | 11.5% | | | | | 11.5% |

And here is how those picks from mid-July have fared since.

Notably, Fifth-Third (FITB), which was flagged as one of the top ideas by the system has outperformed in essentially every measure.

FITB is higher by +44% on an absolute basis in the 4mos since then.

By comparison, the XLF is higher by +15% since then. The S&P 500 is higher by 12% since then. And the KRE – the regional bank ETF – is higher by +28% since then.

Our AI Financials Stock Screener Output is Published Every Monday AM

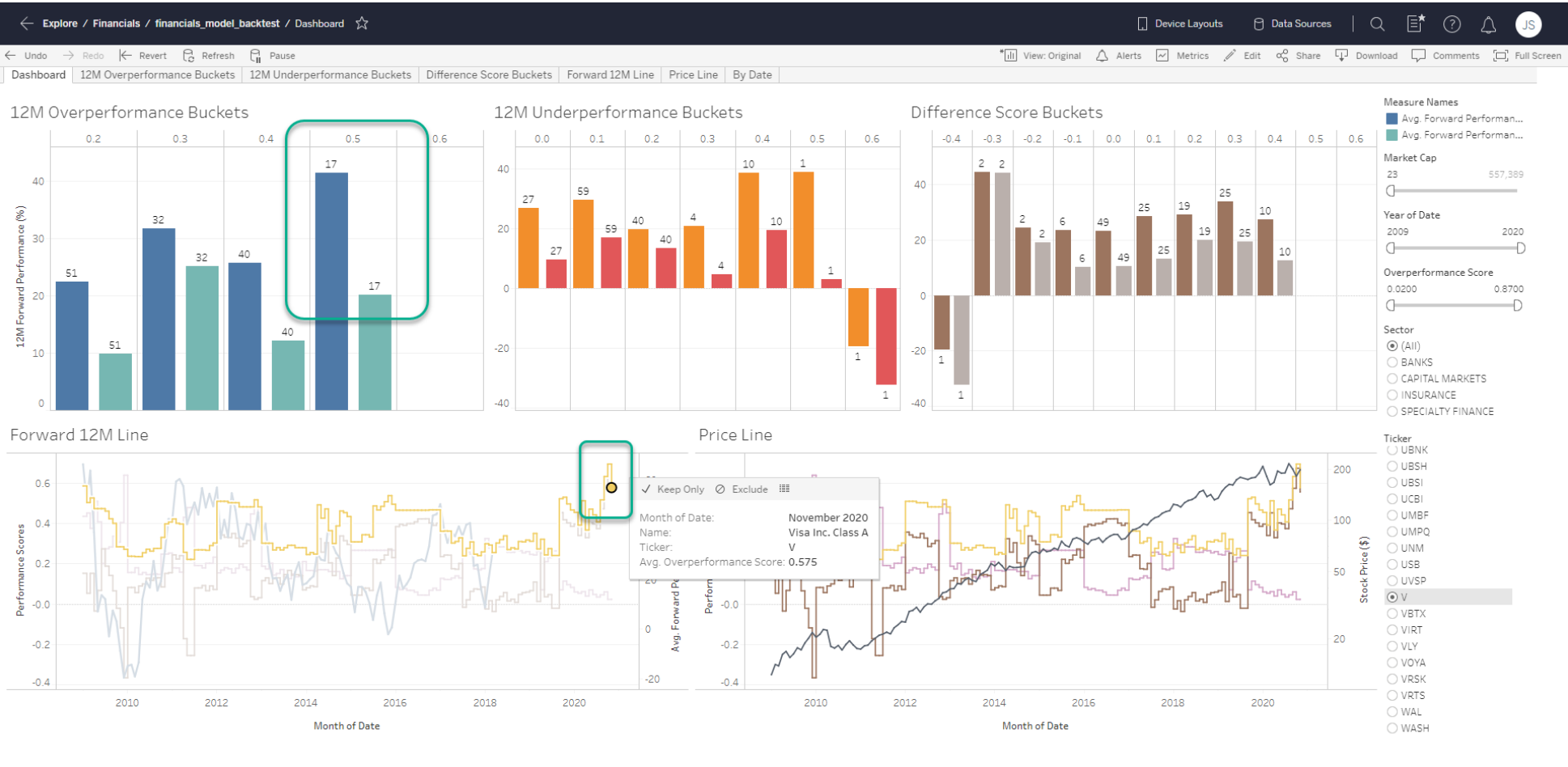
Output for the Week ended November 9th, 2020

Financials:

| OVERPERFORMANCE BIN | | | | | |
|---------------------|---------------|--------------|-----------|---------------|--------------|
| Top 10 / Bottom 10 | | | | | |
| Top 10 | Mkt Cap (\$B) | Avg Fwd Perf | Bottom 10 | Mkt Cap (\$B) | Avg Fwd Perf |
| | | | | | |

Our Financials Sector Pro subscribers receive our AI Financials output every week on Monday morning.

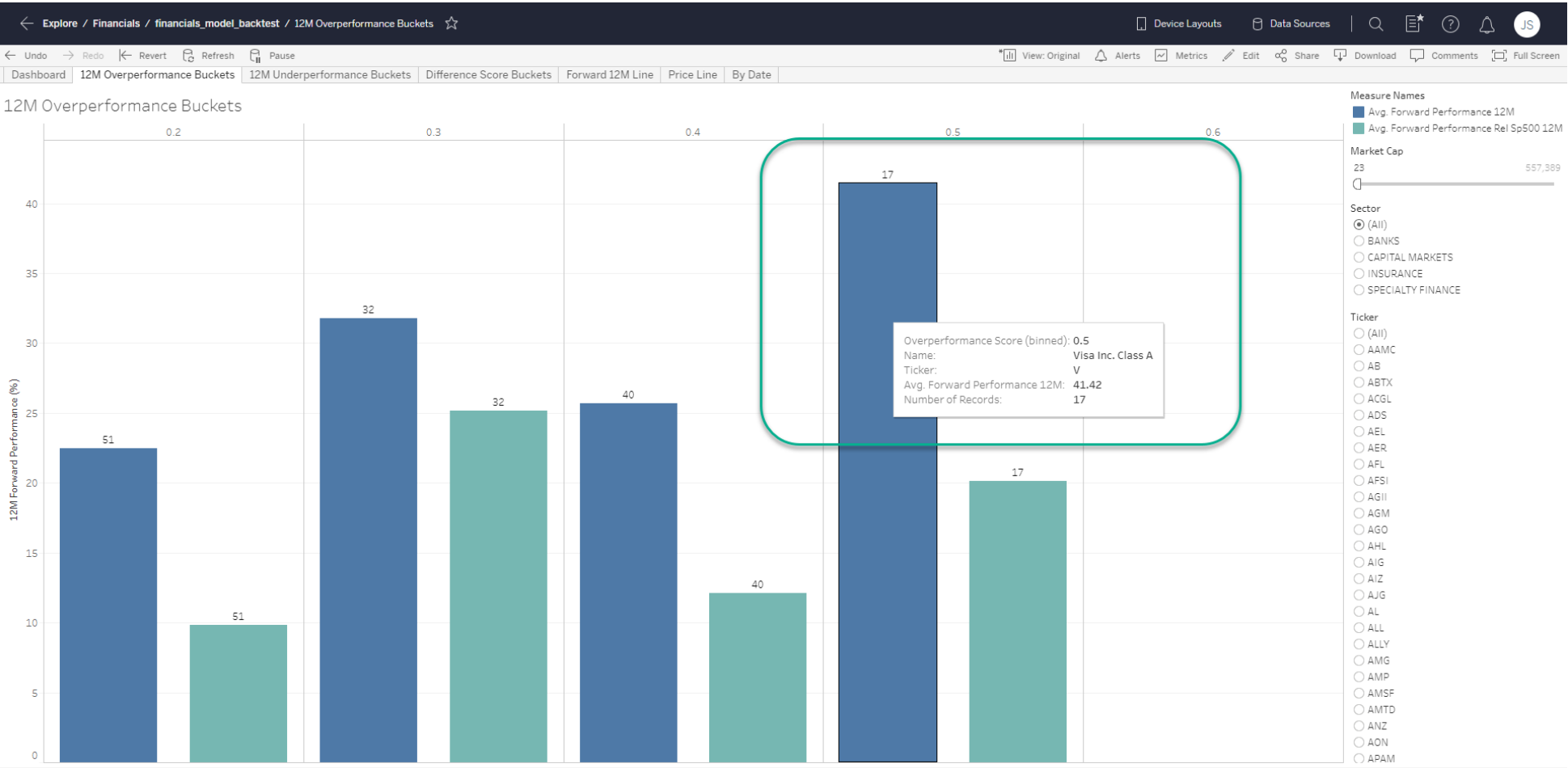
Example – Visa (V)



This is a look at Visa as of 11/9/2020.

Currently the outperformance probability sits at 0.575 – near the highest level in the last 10 years. This has corresponded with an average forward 12mo performance of +41.4% historically.

Example – Visa (V)



Here's a detailed look at the frequency and performance of Visa in various bin ranges historically.

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The Quad Playbook

Extending the Quad Framework to the
Financials Complex

November 10, 2020



Financial Institutions Group

Josh Steiner, CFA

Drago Malesevic, CFA

| | AVERAGE RETURN | | | | | MEDIAN RETURN | | | | | MAX RETURN | | | | | MIN RETURN | | | |
|---|----------------|--------|--------|--------|--|---------------|-------|--------|--------|--|------------|--------|--------|--------|--|------------|---------|---------|---------|
| | QUAD | | | | | QUAD | | | | | QUAD | | | | | QUAD | | | |
| | I | II | III | IV | | I | II | III | IV | | I | II | III | IV | | I | II | III | IV |
| TOP DOWN | | | | | | | | | | | | | | | | | | | |
| FULL COMPLEX | 4.58% | 4.36% | 0.76% | -0.62% | | 3.96% | 3.48% | 0.67% | 0.86% | | 26.77% | 24.72% | 21.17% | 26.31% | | -13.52% | -15.33% | -20.35% | -31.33% |
| S&P500 | 4.59% | 1.81% | 2.24% | 0.85% | | 3.64% | 2.90% | 2.08% | 0.91% | | 20.20% | 13.27% | 14.46% | 13.64% | | -3.83% | -19.91% | -9.56% | -27.28% |
| SECTOR DECOMPOSITION | | | | | | | | | | | | | | | | | | | |
| BANKING | 3.27% | 4.36% | 0.03% | -1.17% | | 2.63% | 3.10% | 0.16% | 0.74% | | 25.03% | 24.23% | 19.27% | 24.07% | | -13.65% | -14.05% | -19.23% | -30.53% |
| SPECIALTY FINANCE | 6.29% | 5.37% | 0.29% | -1.08% | | 5.33% | 3.72% | 0.75% | -0.09% | | 32.08% | 27.60% | 23.54% | 26.15% | | -12.41% | -21.56% | -22.66% | -37.34% |
| INSURANCE | 5.25% | 3.63% | 0.43% | 0.43% | | 4.58% | 3.14% | 1.35% | 2.04% | | 27.46% | 22.56% | 21.33% | 26.77% | | -12.93% | -18.85% | -20.92% | -29.75% |
| CAPITAL MARKETS | 4.71% | 4.09% | 2.58% | -1.01% | | 4.48% | 3.75% | 0.96% | -0.87% | | 27.77% | 27.23% | 26.26% | 33.32% | | -15.05% | -15.08% | -22.33% | -30.23% |
| SERVICES | 7.71% | 3.51% | 2.71% | 1.99% | | 7.35% | 4.05% | 2.81% | 2.36% | | 35.91% | 22.09% | 26.16% | 38.93% | | -17.36% | -21.56% | -20.95% | -31.31% |
| FINTECH | 8.24% | 6.67% | 5.38% | 3.67% | | 6.90% | 5.60% | 5.67% | 2.87% | | 24.34% | 21.55% | 29.18% | 23.74% | | -8.96% | -6.26% | -17.69% | -31.03% |
| SUB-SECTOR DECOMPOSITION | | | | | | | | | | | | | | | | | | | |
| BANKING: | | | | | | | | | | | | | | | | | | | |
| Mega-Cap Banks | 5.65% | 2.46% | 1.01% | 1.18% | | 4.26% | 3.71% | 1.51% | 2.16% | | 30.04% | 23.45% | 28.79% | 36.88% | | -16.15% | -24.60% | -32.39% | -53.67% |
| Large-Cap / Super Regional Banks | 5.22% | 4.50% | -0.92% | 0.95% | | 4.48% | 4.33% | 0.80% | 2.06% | | 30.86% | 25.87% | 15.14% | 27.20% | | -11.05% | -15.78% | -23.11% | -42.32% |
| Mid-Cap / Regional Banks | 3.73% | 4.13% | 0.55% | -0.01% | | 2.97% | 3.01% | 0.61% | 1.30% | | 25.00% | 23.01% | 20.62% | 23.94% | | -14.43% | -14.29% | -19.41% | -28.70% |
| Small-Cap / Community Banks | 2.71% | 4.55% | -0.20% | -2.14% | | 2.30% | 3.00% | -0.01% | 0.03% | | 24.56% | 24.87% | 18.98% | 23.34% | | -14.18% | -13.48% | -18.77% | -30.28% |
| SPECIALTY FINANCE: | | | | | | | | | | | | | | | | | | | |
| Cards / Payments | 7.25% | 5.90% | 3.00% | 2.45% | | 7.87% | 4.67% | 3.22% | 4.19% | | 32.08% | 24.94% | 24.40% | 26.23% | | -11.54% | -21.56% | -18.83% | -34.15% |
| Consumer Finance | 6.07% | 5.96% | -0.44% | -0.78% | | 5.81% | 3.83% | -0.17% | -0.49% | | 32.81% | 31.46% | 23.38% | 27.81% | | -14.95% | -20.07% | -40.05% | -37.66% |
| Mortgage Finance | 4.62% | 4.90% | -1.54% | -2.82% | | 3.60% | 1.54% | -2.05% | -0.75% | | 31.44% | 43.10% | 17.65% | 21.81% | | -19.21% | -21.05% | -20.25% | -39.03% |
| Commercial Finance | 6.23% | 4.58% | -0.43% | -5.15% | | 5.98% | 4.62% | -1.12% | -1.03% | | 36.05% | 22.86% | 26.49% | 25.47% | | -12.73% | -20.27% | -22.91% | -47.22% |
| Debt Collectors | 10.00% | 7.83% | -4.81% | -5.11% | | 5.67% | 6.67% | -1.44% | -3.50% | | 33.26% | 46.17% | 28.72% | 40.15% | | -9.34% | -39.12% | -39.27% | -33.41% |
| Mortgage REITS | 2.21% | -0.30% | -1.35% | -1.01% | | 0.11% | 1.57% | -1.58% | -0.44% | | 24.61% | 13.26% | 10.93% | 16.06% | | -7.94% | -22.06% | -13.16% | -27.65% |
| INSURANCE: | | | | | | | | | | | | | | | | | | | |
| Life & Health Insurers | 5.61% | 5.75% | 0.00% | -1.41% | | 5.21% | 4.09% | 0.74% | 0.87% | | 26.42% | 23.78% | 18.74% | 27.31% | | -12.59% | -13.46% | -23.12% | -46.49% |
| P&C Insurers | 5.03% | 2.40% | 1.42% | 1.39% | | 4.56% | 2.14% | 1.48% | 2.95% | | 31.51% | 22.46% | 23.80% | 23.11% | | -11.25% | -19.75% | -17.60% | -25.06% |
| Auto Insurers | 4.99% | 2.98% | 0.89% | 3.12% | | 4.89% | 3.46% | 1.07% | 3.16% | | 25.74% | 24.67% | 24.66% | 28.86% | | -13.08% | -24.02% | -14.37% | -25.10% |
| Mortgage Insurers/Financial Guaranty Co's | 6.43% | 4.77% | -2.92% | 1.29% | | 2.13% | 4.97% | 1.50% | 3.99% | | 45.48% | 33.10% | 24.48% | 53.38% | | -19.99% | -20.77% | -45.10% | -34.50% |
| Reinsurers | 4.12% | 2.64% | 0.02% | -2.04% | | 4.58% | 3.14% | 0.05% | 1.76% | | 20.09% | 15.28% | 14.52% | 23.28% | | -9.75% | -11.84% | -15.04% | -31.20% |
| Title Insurers | 6.51% | 2.37% | 1.65% | 0.61% | | 6.14% | 3.77% | 1.76% | 1.88% | | 35.70% | 23.76% | 29.50% | 25.64% | | -19.49% | -19.46% | -20.05% | -24.26% |
| Insurance Brokers | 4.81% | 3.93% | 1.31% | 1.88% | | 3.64% | 2.07% | 1.31% | 1.78% | | 21.72% | 21.47% | 24.57% | 30.06% | | -13.09% | -21.41% | -22.59% | -21.24% |
| CAPITAL MARKETS: | | | | | | | | | | | | | | | | | | | |
| Traditional Asset Managers | 5.00% | 3.13% | 6.53% | 0.11% | | 6.08% | 3.50% | 2.01% | 0.89% | | 29.76% | 30.12% | 35.26% | 39.00% | | -16.47% | -23.53% | -21.85% | -36.79% |
| Alternative Asset Managers | 4.82% | 3.21% | -0.91% | -3.61% | | 4.55% | 2.68% | -0.22% | -3.89% | | 19.51% | 18.84% | 14.98% | 13.89% | | -9.60% | -8.08% | -18.25% | -25.27% |
| Investment Banks & Brokerages | 3.95% | 5.41% | -0.36% | -1.56% | | 2.65% | 6.41% | -0.13% | -1.08% | | 27.62% | 28.54% | 24.17% | 26.36% | | -18.50% | -11.29% | -24.62% | -27.72% |
| Custodian Banks | 6.03% | 2.88% | 2.11% | 2.77% | | 4.59% | 4.16% | 3.59% | 1.06% | | 25.06% | 21.39% | 19.80% | 44.48% | | -10.95% | -27.79% | -18.43% | -33.69% |
| Exchanges | 6.30% | 6.51% | 3.15% | 4.19% | | 5.92% | 5.52% | 2.37% | 1.99% | | 28.81% | 27.32% | 42.97% | 44.73% | | -25.03% | -7.74% | -24.58% | -17.84% |
| E-Brokers | 3.56% | 4.65% | 5.62% | -2.59% | | 2.58% | 3.72% | 2.50% | -3.19% | | 41.25% | 43.36% | 56.33% | 32.39% | | -15.94% | -28.78% | -24.26% | -33.58% |
| SERVICES: | | | | | | | | | | | | | | | | | | | |
| Services | 7.71% | 3.51% | 2.71% | 1.99% | | 7.35% | 4.05% | 2.81% | 2.36% | | 35.91% | 22.09% | 26.16% | 38.93% | | -17.36% | -21.56% | -20.95% | -31.31% |
| FINTECH: | | | | | | | | | | | | | | | | | | | |
| Fintech | 8.24% | 6.67% | 5.38% | 3.67% | | 6.90% | 5.60% | 5.67% | 2.87% | | 24.34% | 21.55% | 29.18% | 23.74% | | -8.96% | -6.26% | -17.69% | -31.03% |

Quad III: Average Quarterly Return vs. Batting Average [+ve Performance]



Quad II: Average Quarterly Return vs. Batting Average [+ve Performance]



HEDGEYE



SENIOR LOAN OFFICER SURVEY

DETAILED REVIEW BY LOAN CATEGORY

November 10, 2020

FINANCIAL INSTITUTIONS GROUP

Josh Steiner, CFA

Drago Malesevic, CFA

Hedgeye Dashboard – Commercial Lending

Net Percentage of Respondents

CRE lending has taken the brunt of the pandemic.

In a continuation of trend from 1H2020, banks tightened standards and reported weaker demand across all three major commercial real estate (CRE) loan categories—construction and land development loans, nonfarm nonresidential loans, and multifamily loans—over the third quarter.

COMMERCIAL LENDING

Commercial & Industrial Loans

Tightening Standards

Large and Medium Firms

Small Firms

Increasing Spreads

Large and Medium Firms

Small Firms

Stronger Demand

Large and Medium Firms

Small Firms

Commercial Real Estate Loans

Tightening Standards

Construction and Land Development

Nonfarm and Nonresidential

Multifamily

Stronger Demand

Construction and Land Development

Nonfarm and Nonresidential

Multifamily

| | 3Q20 | 2Q20 | 1Q20 | 4Q19 | 3Q19 | 5Q G.A. ⁽¹⁾ | Streak ⁽²⁾ | 12Q Extr. ⁽³⁾ |
|-----------------------------------|-------|-------|-------|-------|-------|------------------------|-----------------------|--------------------------|
| Large and Medium Firms | 37.7 | 71.2 | 41.5 | 0.0 | 5.4 | 28.6 | 3 | |
| Small Firms | 31.3 | 70.0 | 39.7 | -1.4 | 5.6 | 26.6 | 3 | |
| Large and Medium Firms | 13.2 | 58.9 | 40.9 | -20.8 | -20.5 | 9.8 | 3 | |
| Small Firms | 10.6 | 54.3 | 30.2 | -10.3 | -15.7 | 10.9 | 3 | |
| Large and Medium Firms | -35.3 | -23.3 | 7.6 | -11.1 | -21.6 | -17.9 | 2 | * |
| Small Firms | -45.5 | -28.6 | 0.0 | -11.4 | -16.9 | -22.1 | 2 | * |
| | 3Q20 | 2Q20 | 1Q20 | 4Q19 | 3Q19 | 5Q G.A. | Streak | 12Q Extr. |
| Construction and Land Development | 56.7 | 80.9 | 52.4 | 7.4 | 16.2 | 40.1 | 22 | |
| Nonfarm and Nonresidential | 55.1 | 77.5 | 52.3 | 1.4 | 10.7 | 36.3 | 9 | |
| Multifamily | 44.9 | 64.3 | 49.2 | 0.0 | 12.0 | 31.8 | 3 | |
| Construction and Land Development | -40.3 | -59.4 | -47.6 | -5.8 | -9.6 | -35.9 | 16 | |
| Nonfarm and Nonresidential | -45.6 | -69.0 | -32.3 | 2.7 | 0.0 | -34.9 | 3 | |
| Multifamily | -24.6 | -57.7 | -21.5 | -1.4 | -4.0 | -25.0 | 5 | |

Notes

(1) 5-quarter geometric average

(2) Number of consecutive, strictly positive or negative quarters

(3) Binary indicator of 12-quarter positive / negative extremes

(4) GSE-eligible (Fannie / Freddie) and Government (FHA / VA) represent the two most notable categories, together accounting for ~90% of all origination volume

Magnitude Reference Key

Remained Basically Unchanged: [0,5)

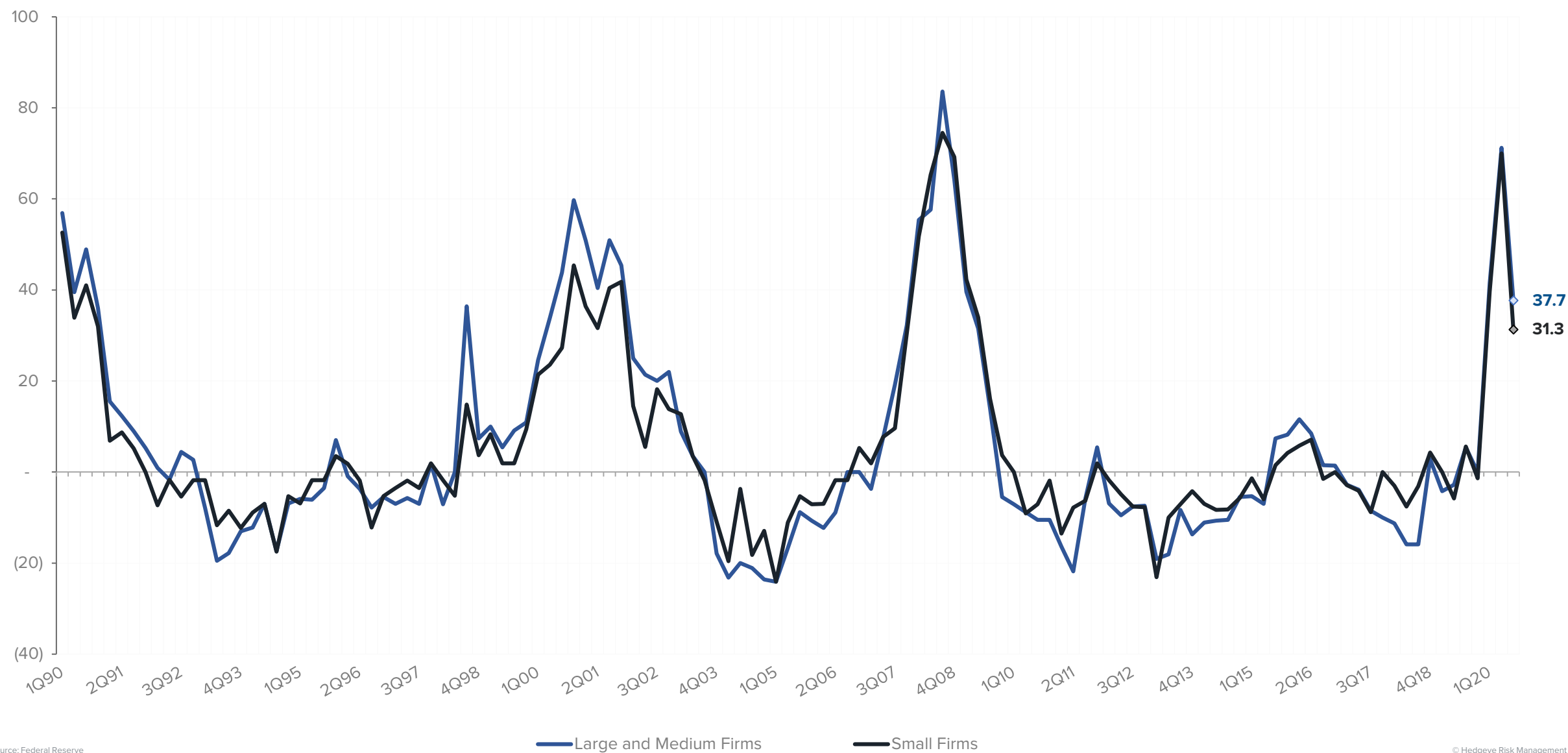
Modest: [5,10)

Moderate: [10,20)

Significant: [20,50)

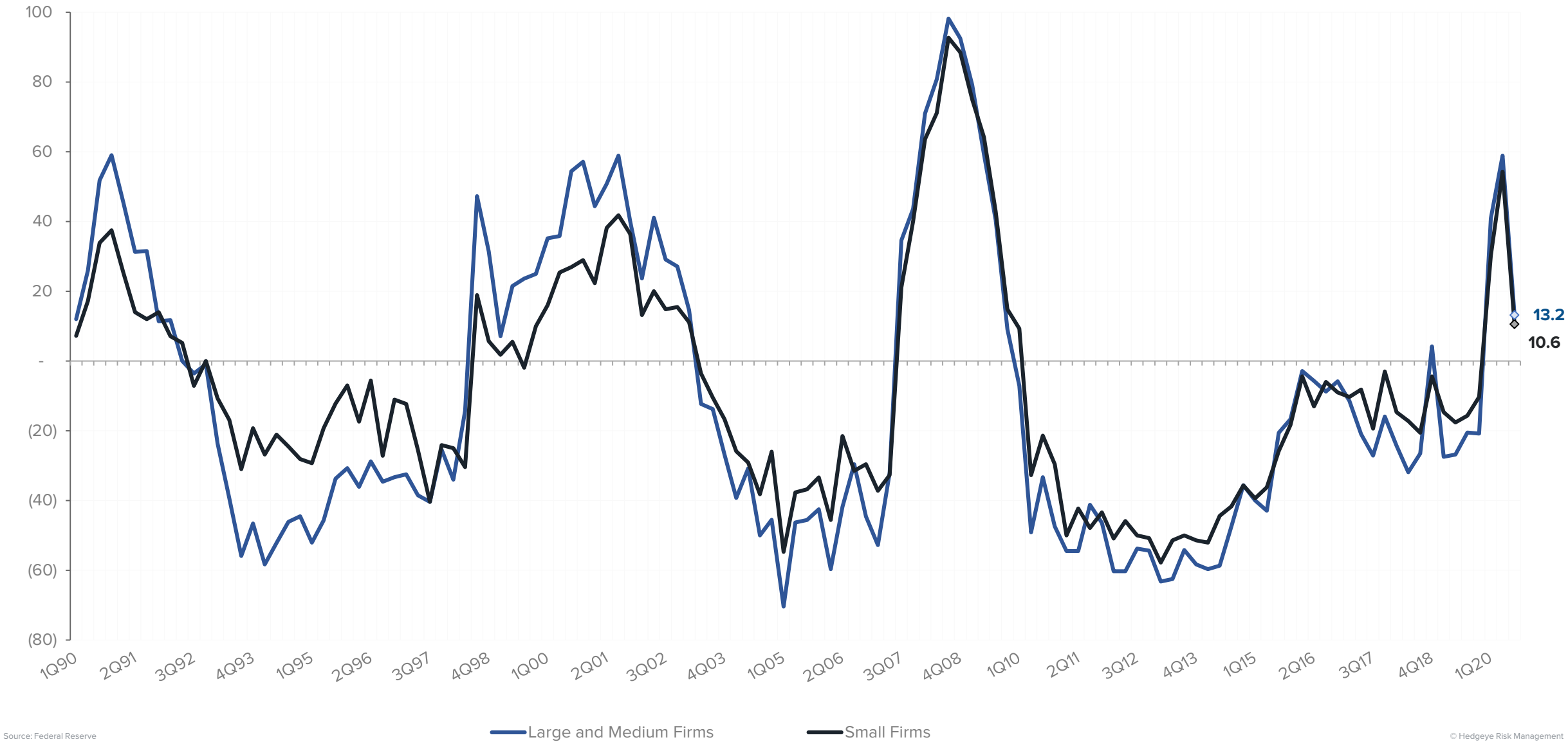
Major: ≥ 50

Net Percentage of Domestic Respondents Tightening Standards for C&I Loans



Spreads

Net Percentage of Domestic Respondents Increasing Spreads of Loan Rates Over Banks' Cost of Funds

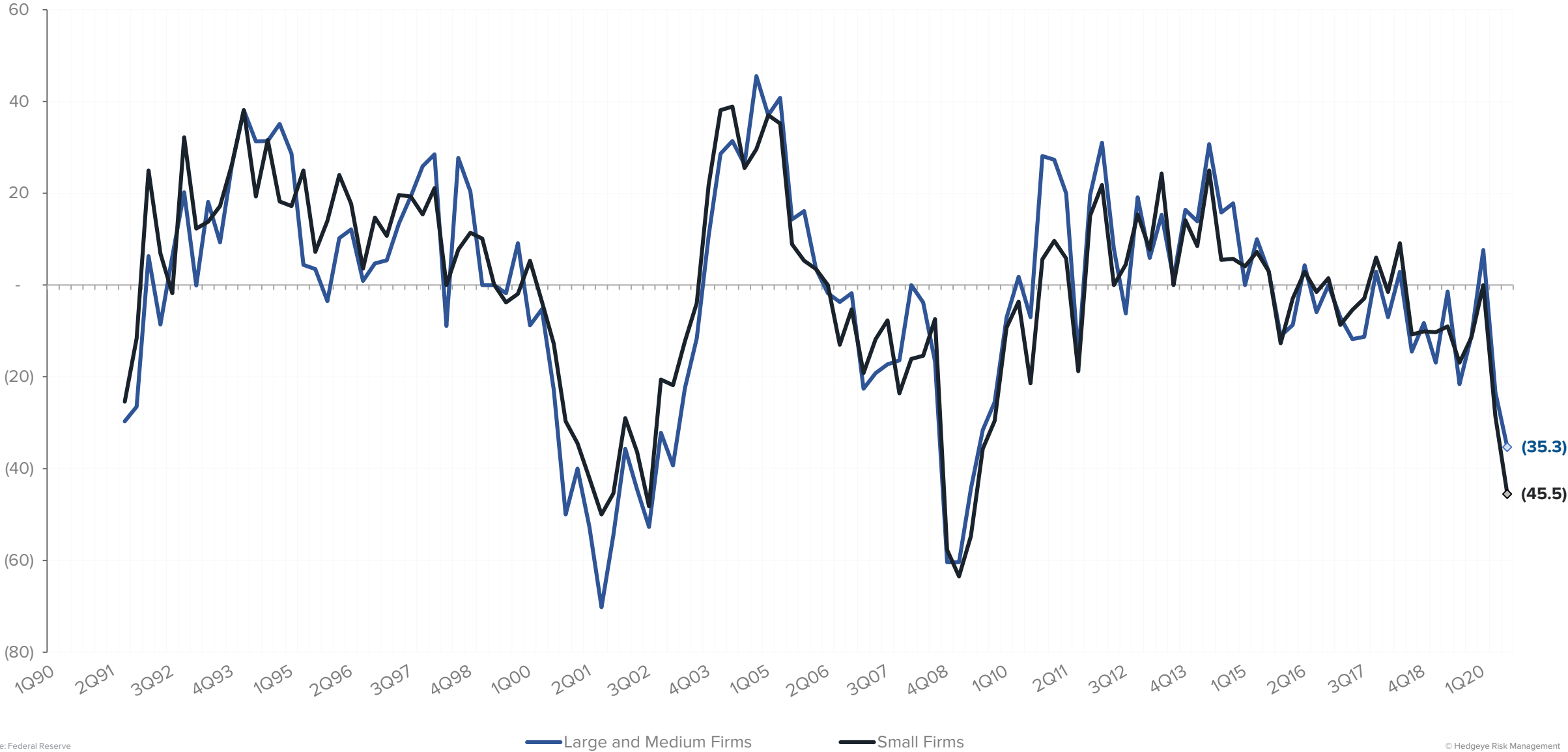


Source: Federal Reserve

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Demand

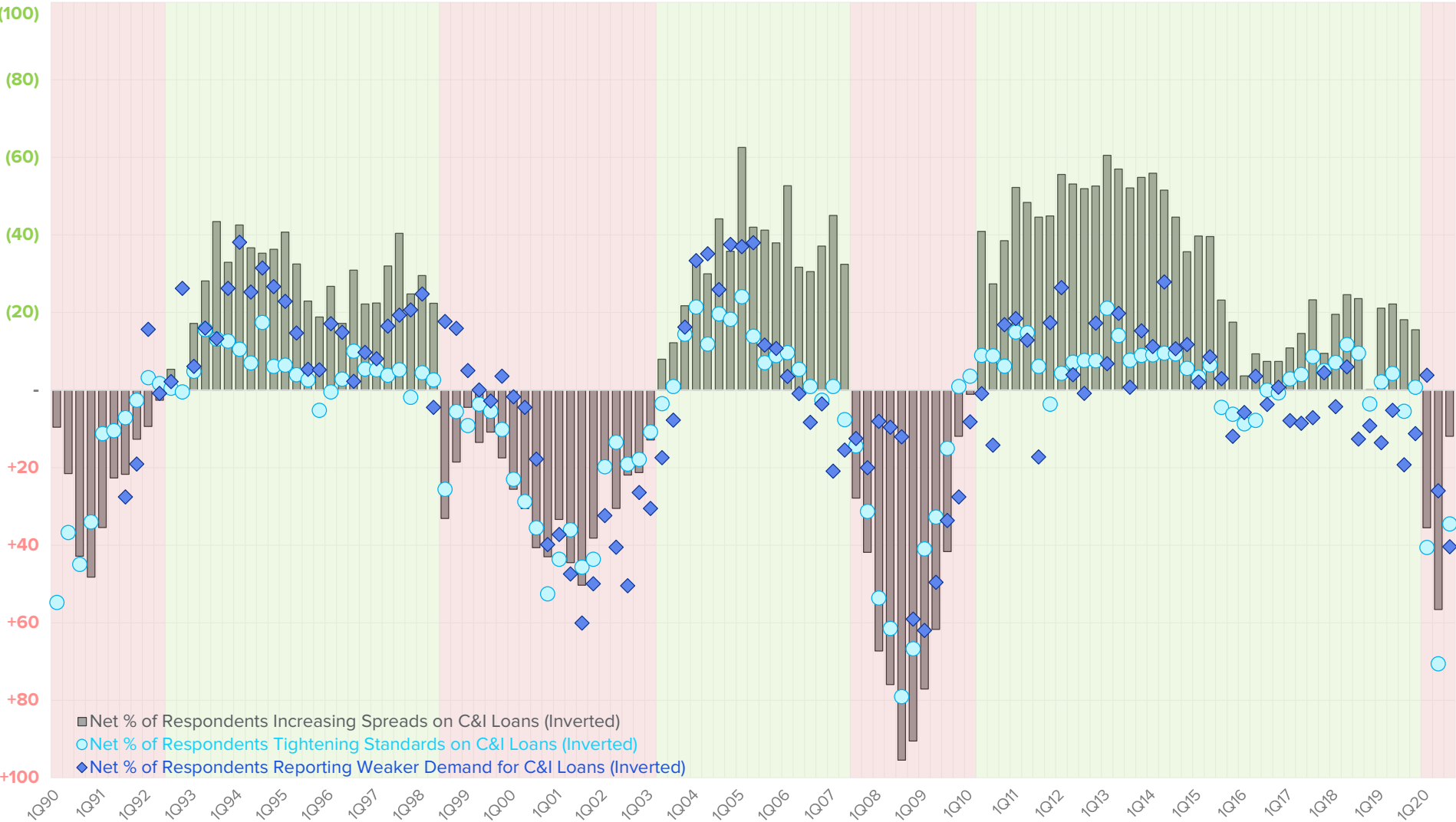
Net Percentage of Domestic Respondents Reporting Stronger Demand for C&I Loans



Why This Matters

C&I Lending: Spreads, Standards, & Demand

Midpoint of Large & Medium and Small Firms



Source: Federal Reserve

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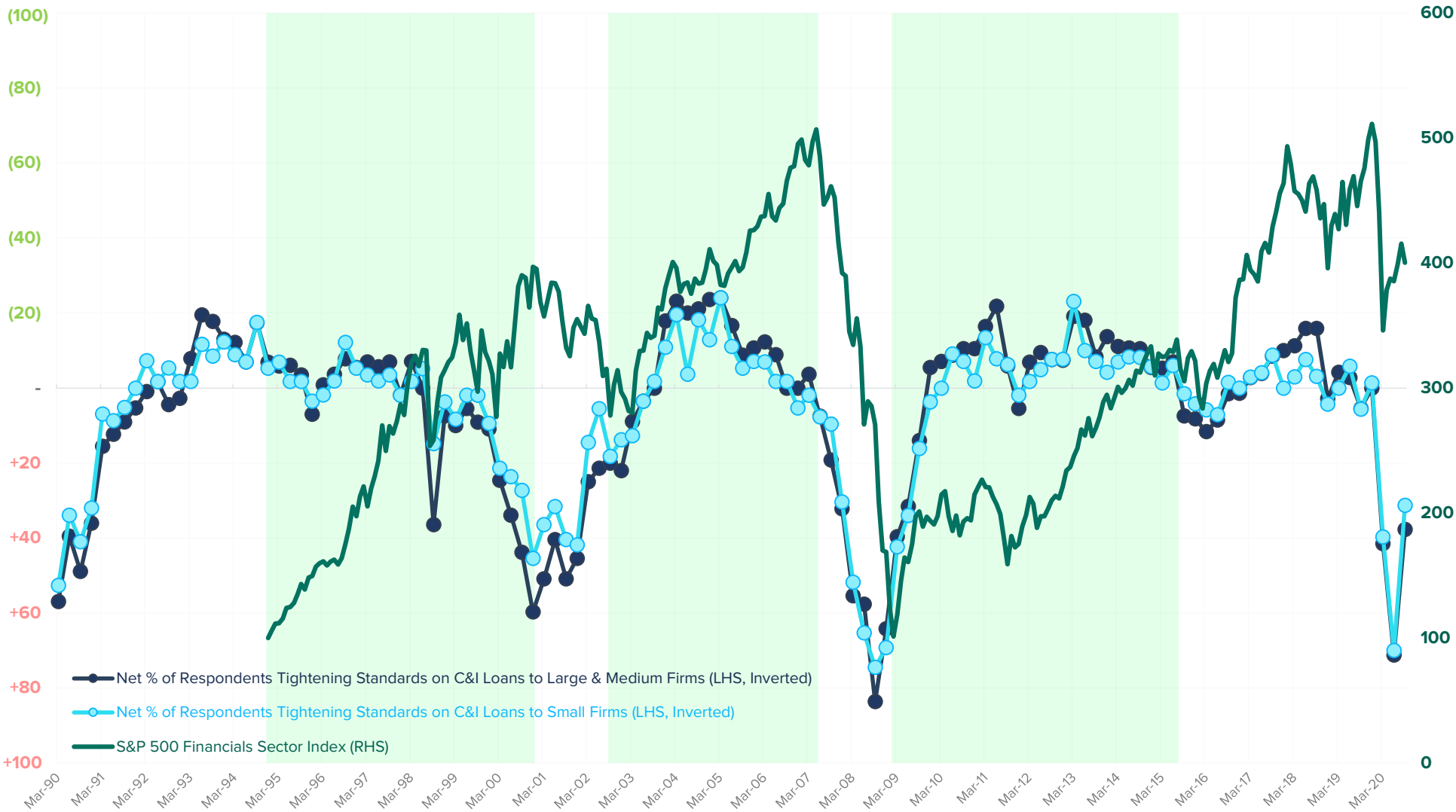
We've gone back historically and looked at the Senior Loan Officer Survey many different ways in an effort to discern its usefulness as a forward indicator. After much trial and error, our biggest takeaway is that when two of the three C&I questions have turned negative historically, it has portended a recession in the near future. This isn't coincident; it's causal. Banks tightening the screws, increasing the price of money or reporting reduced demand for money all portend a slowing of economic activity. The problem is that the cyclical activity tends to autocorrelate, or self-reinforce.

In other words, banks tighten credit => consumption/investment decline => workers are laid off => delinquencies rise => banks further tighten credit => and so on and so forth.

Here is a chart showing the three questions in the C&I survey back to 1990. To be clear, we've inverted the primary y-axis and we've also reversed the demand question so that all three categories are directionally consistent, i.e. when credit is constricting/price is rising/demand is falling, the survey measures on this chart fall, and vice versa.

Why This Matters Cont.

C&I Lending Standards Vs. S&P 500 Financials Sector Index



This chart looks at the historical C&I lending standards (LHS) juxtaposed against the S&P 500 Financials Index (RHS). C&I lending standards have historically begun tightening coincident with or ahead of peaks in Financial equity prices, with the reverse generally holding true as well.

We've highlighted in green the periods during which Financials stocks have risen. In the 1990s it was clear that lending standards were tightening by late 1999, suggesting the roll was near. In the 2003-2007 period standards began to tighten in 2007.

Source: Federal Reserve

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Hedgeye Dashboard – Consumer Lending

Net Percentage of Respondents

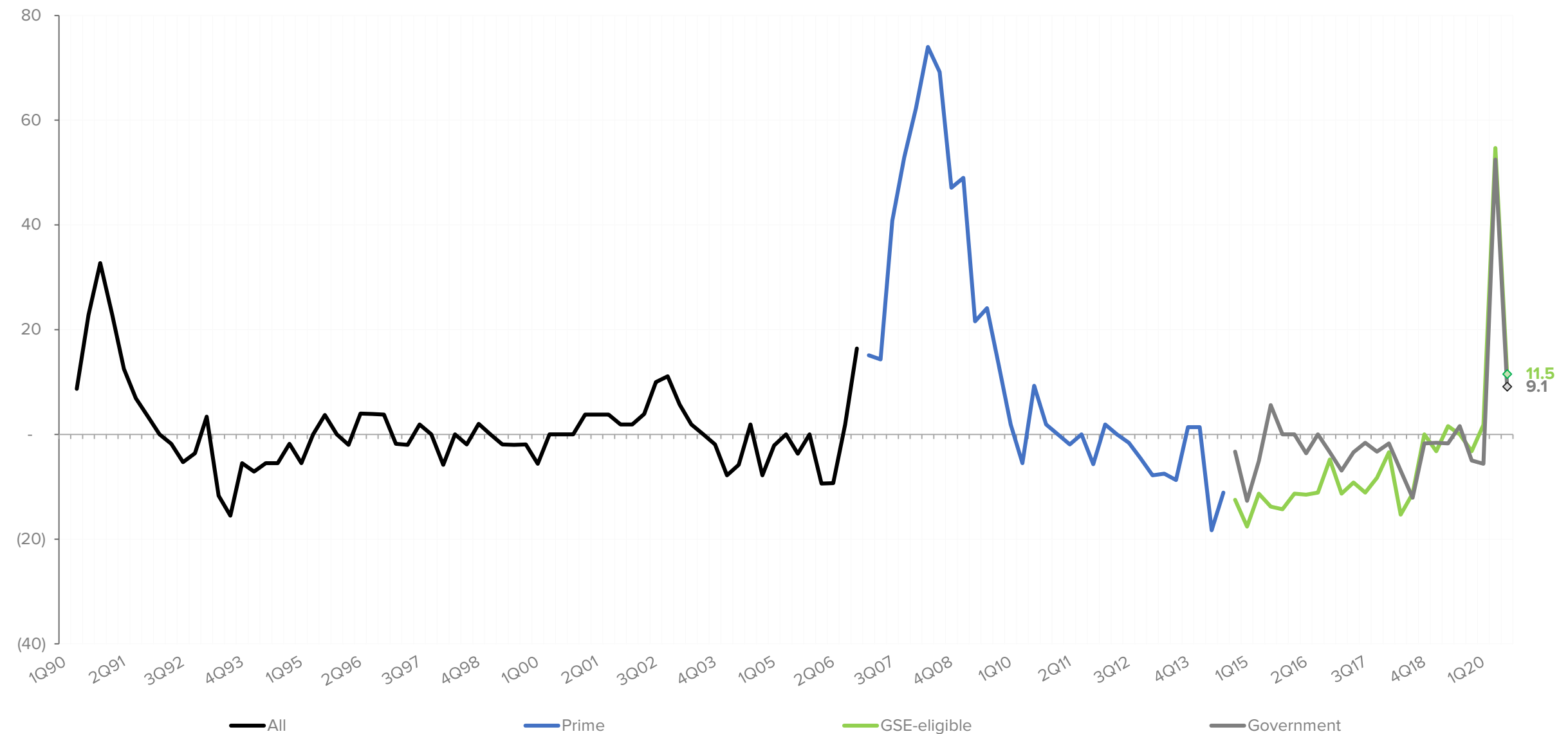
Despite tightening underwriting standards across all categories of residential real estate, an even grater share of banks reported stronger housing loan demand – except for subprime products – over the third quarter.

While banks reported tightening standards across all non-mortgage consumer loans, the third quarter saw a rebound in demand for credit card and auto loans, particularly in the case of the latter.

| CONSUMER LENDING | | | | | | | | |
|---|-------|-------|-------|------|------|---------|--------|-----------|
| Residential Mortgage Loans ⁽⁴⁾ | 3Q20 | 2Q20 | 1Q20 | 4Q19 | 3Q19 | 5Q G.A. | Streak | 12Q Extr. |
| Tightening Standards | | | | | | | | |
| GSE-eligible | 11.5 | 54.7 | 1.8 | -3.2 | 0.0 | 11.2 | 3 | |
| Government | 9.1 | 52.5 | -5.6 | -5.0 | 1.6 | 8.7 | 2 | |
| QM non-jumbo, non-GSE-eligible | 14.3 | 59.3 | 11.3 | -4.9 | 1.5 | 14.4 | 3 | |
| QM-jumbo | 20.3 | 68.9 | 18.5 | -1.6 | 0.0 | 18.8 | 3 | |
| Non-QM jumbo | 19.3 | 70.2 | 15.1 | 0.0 | 3.2 | 19.3 | 3 | |
| Non-QM non-jumbo | 20.0 | 63.6 | 14.3 | -1.8 | 3.3 | 17.9 | 3 | |
| Subprime | 33.3 | 42.9 | 14.3 | 0.0 | 12.5 | 19.6 | 3 | |
| Stronger Demand | | | | | | | | |
| GSE-eligible | 63.3 | 50.8 | 21.8 | 20.6 | 40.6 | 38.4 | 6 | * |
| Government | 44.4 | 20.7 | 25.9 | 3.4 | 35.5 | 25.2 | 6 | * |
| QM non-jumbo, non-GSE-eligible | 40.0 | 21.7 | 24.5 | 10.0 | 32.3 | 25.3 | 6 | * |
| QM-jumbo | 44.8 | 23.0 | 27.3 | 11.3 | 39.1 | 28.5 | 6 | * |
| Non-QM jumbo | 39.3 | 19.3 | 20.4 | 10.2 | 29.5 | 23.3 | 6 | * |
| Non-QM non-jumbo | 34.5 | 20.4 | 12.2 | 9.1 | 28.8 | 20.6 | 6 | * |
| Subprime | -40.0 | 14.3 | 0.0 | 0.0 | 0.0 | -7.3 | 1 | * |
| Household Loans | 3Q20 | 2Q20 | 1Q20 | 4Q19 | 3Q19 | 5Q G.A. | Streak | 12Q Extr. |
| Tightening Standards | | | | | | | | |
| Credit Cards | 26.7 | 71.7 | 38.5 | 13.6 | 10.4 | 30.5 | 8 | |
| New and Used Autos | 13.5 | 55.4 | 16.0 | 8.9 | 0.0 | 17.4 | 4 | |
| Consumer Loans Excl. Credit Cards and Autos | 16.4 | 60.7 | 21.8 | 1.6 | 6.7 | 19.8 | 8 | |
| Stronger Demand | | | | | | | | |
| Credit Cards | 2.3 | -65.2 | -23.1 | 2.3 | 6.4 | -21.5 | 1 | |
| Auto | 7.7 | -49.1 | -34.7 | -5.4 | 10.3 | -17.9 | 1 | |
| Consumer Excl. Cards and Auto | -7.3 | -42.6 | -12.7 | -1.6 | 3.3 | -13.9 | 4 | |
| Increased Willingness to make Installment Loans | 3.4 | -41.0 | -20.0 | 5.0 | 1.7 | -12.2 | 1 | |
| Notes | | | | | | | | |
| (1) 5-quarter geometric average | | | | | | | | |
| (2) Number of consecutive, strictly positive or negative quarters | | | | | | | | |
| (3) Binary indicator of 12-quarter positive / negative extremes | | | | | | | | |
| (4) GSE-eligible (Fannie / Freddie) and Government (FHA / VA) represent the two most notable categories, together accounting for ~90% of all origination volume | | | | | | | | |
| Magnitude Reference Key | | | | | | | | |
| Remained Basically Unchanged: [0,5) Modest: [5,10) Moderate: [10,20) Significant: [20,50) Major: ≥ 50 | | | | | | | | |

Standards

Net Percentage of Domestic Respondents Tightening Standards for Mortgage Loans

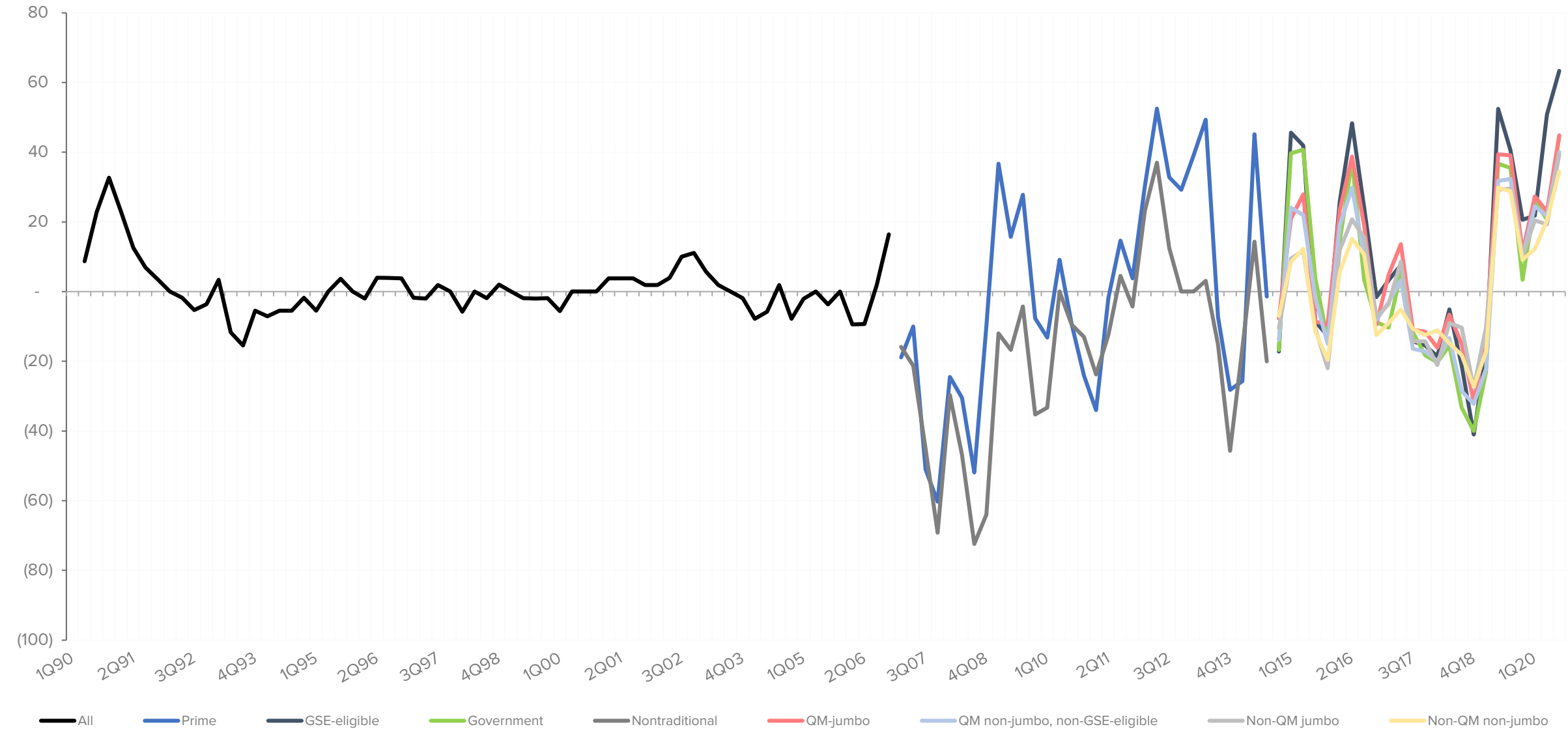


Source: Federal Reserve

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Demand

Net Percentage of Domestic Respondents Reporting Stronger Demand for Mortgage Loans

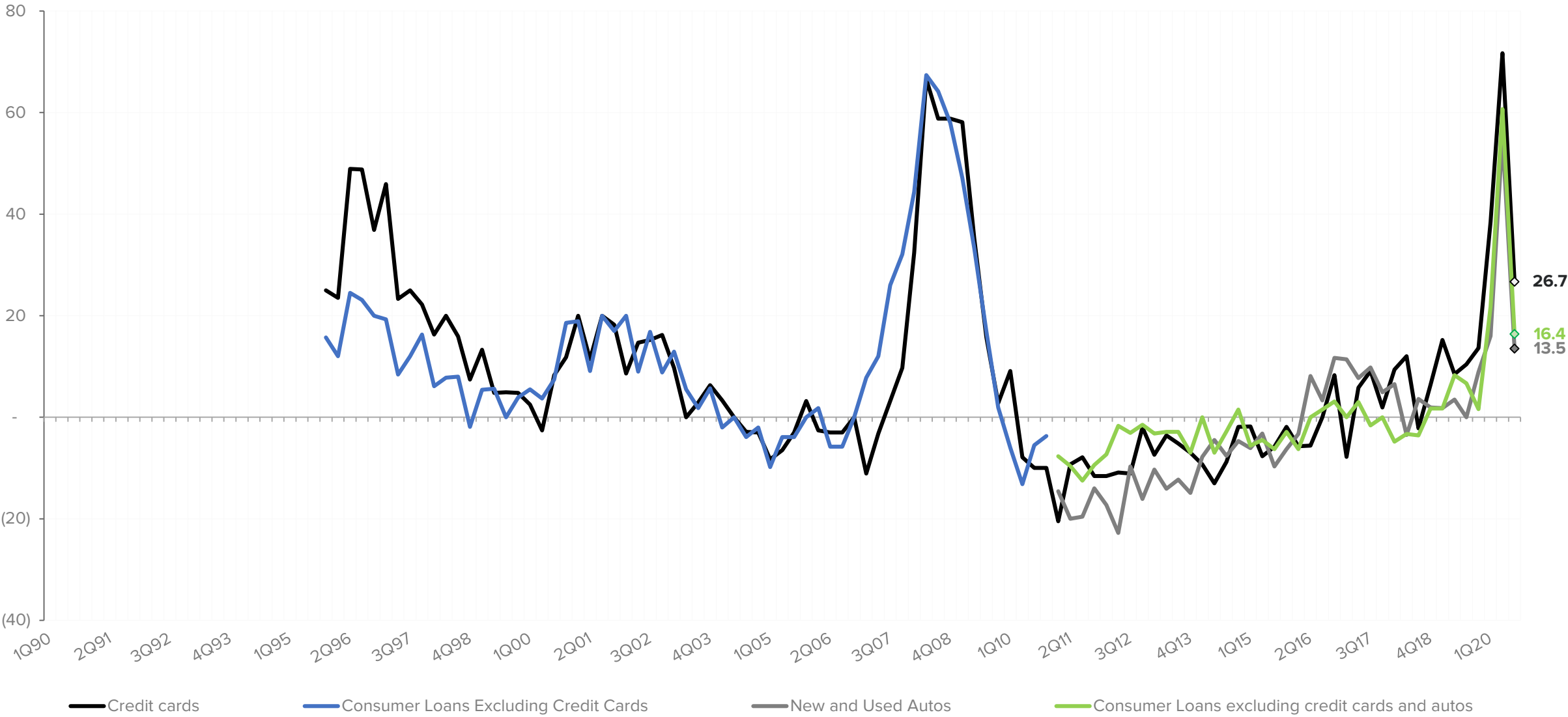


Source: Federal Reserve

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Standards

Net Percentage of Domestic Respondents Tightening Standards on Consumer Loans

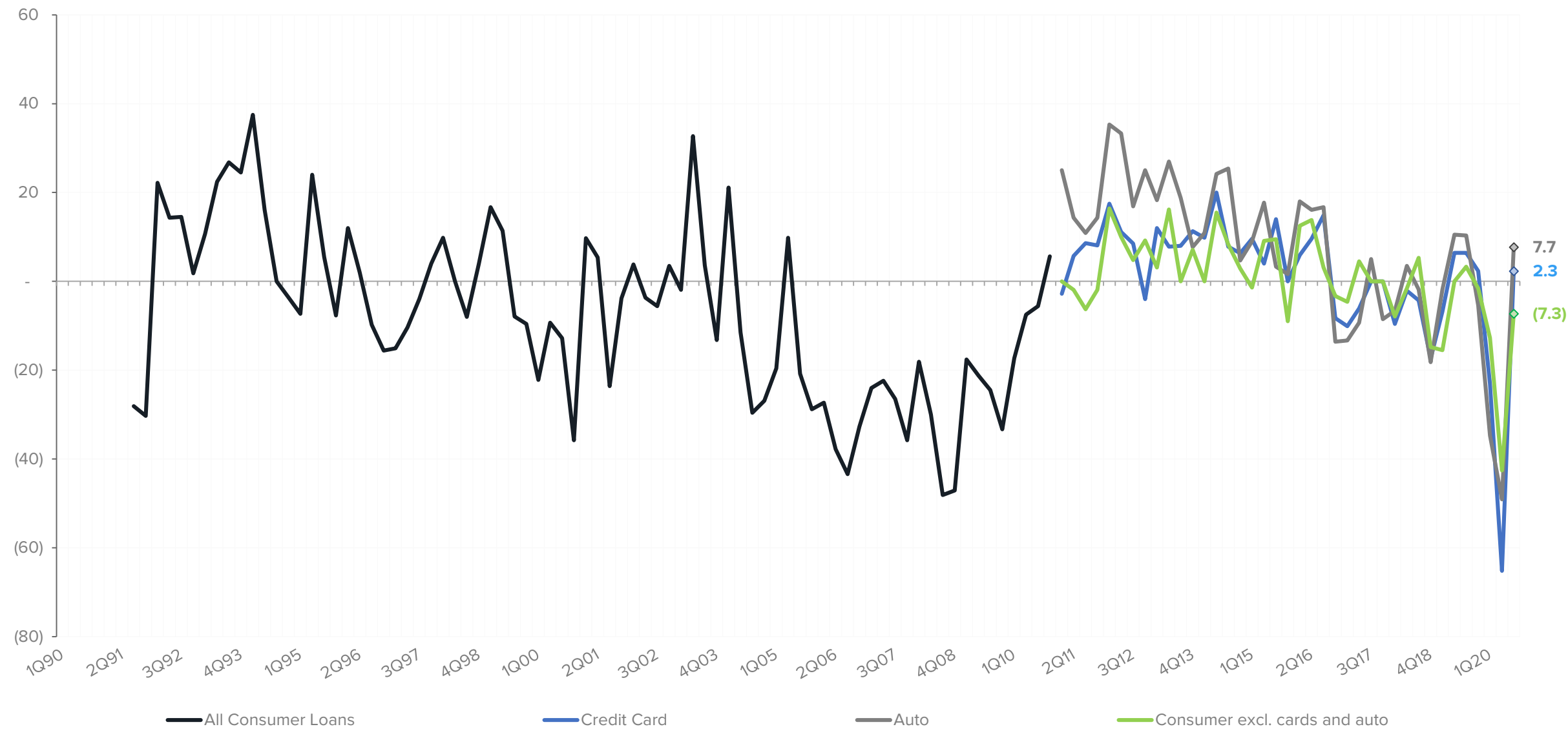


Source: Federal Reserve

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Demand

Net Percentage of Domestic Respondents Reporting Stronger Demand for Consumer Loans

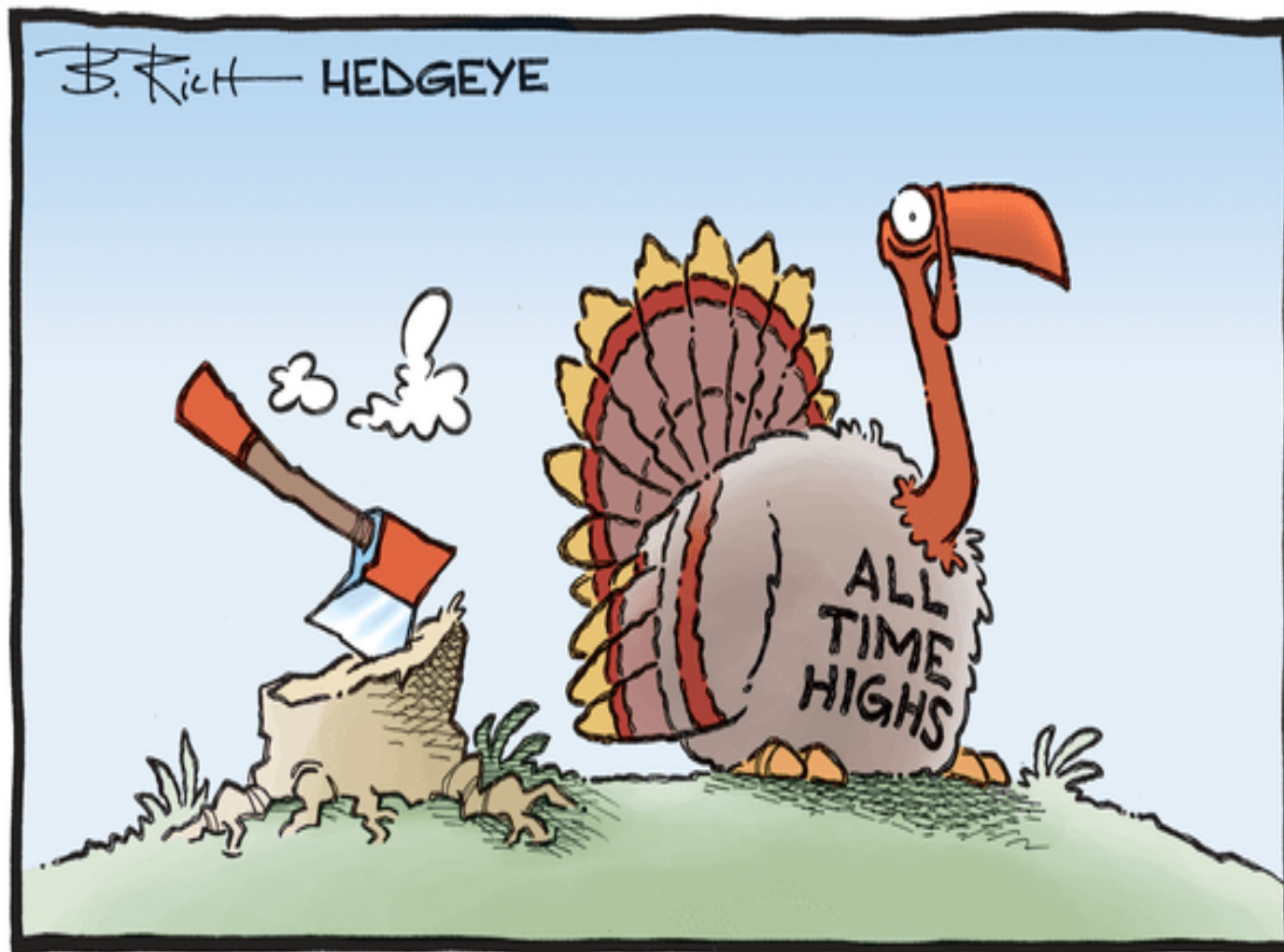


HEDGEYE

HOUSING:

4Q20 THEMES

October 9, 2020



U.S. HOUSING

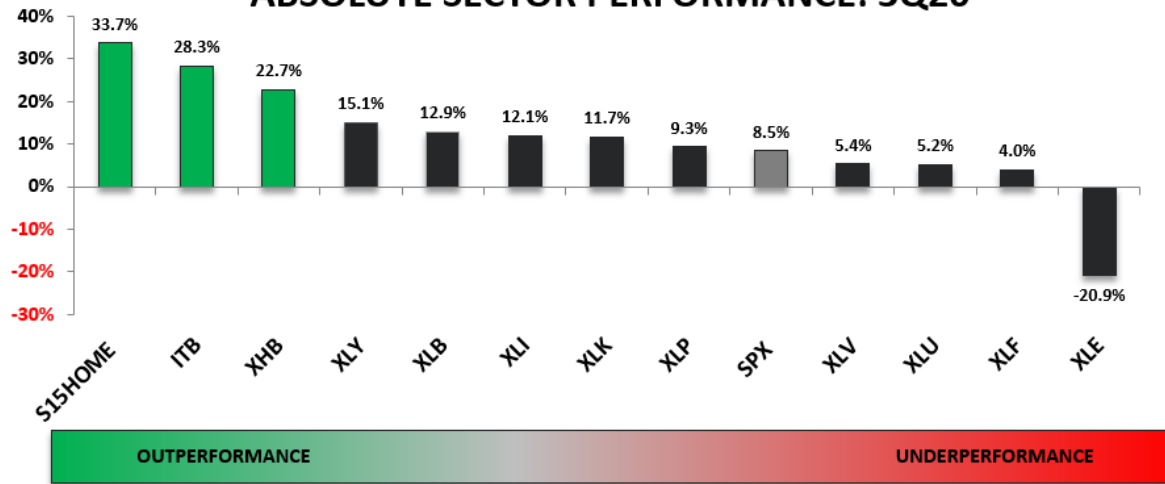
Joshua Steiner, CFA

Christian Drake

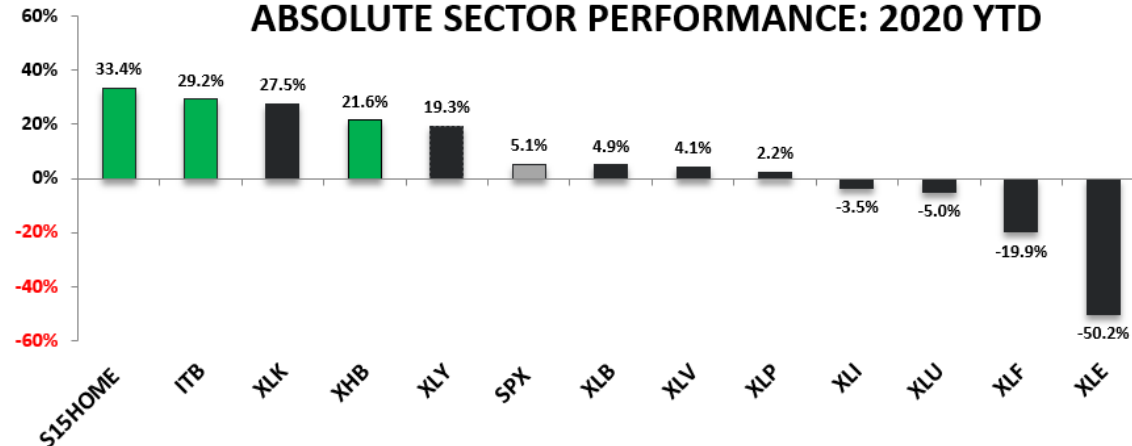
Q3 2020 Housing Performance (through 10/8/20)

The moves have been harrowing in both directions with 1H registering the worst and best quarters in 20 years And with 3Q providing an encore of outsized absolute/relative performance

ABSOLUTE SECTOR PERFORMANCE: 3Q20



ABSOLUTE SECTOR PERFORMANCE: 2020 YTD



Seasonality in Housing Returns

S15Home Index, Qtrly Performance

| Year | 1Q | 2Q | 3Q | 4Q | Full Year |
|------------|--------|--------|--------|--------|-----------|
| 1999 | -21.4% | 6.2% | -24.2% | -0.8% | -37% |
| 2000 | -3.4% | -5.5% | 37.1% | 22.7% | 54% |
| 2001 | 5.5% | 7.5% | -17.2% | 45.5% | 37% |
| 2002 | 8.8% | 10.2% | -21.1% | 1.1% | -4% |
| 2003 | 3.5% | 38.1% | 8.9% | 26.6% | 97% |
| 2004 | 13.5% | -13.0% | 13.8% | 21.3% | 36% |
| 2005 | 4.3% | 20.5% | -4.4% | -4.3% | 15% |
| 2006 | -5.1% | -26.3% | 0.8% | 13.2% | -20% |
| 2007 | -19.2% | -9.3% | -34.8% | -6.9% | -56% |
| 2008 | 15.6% | -29.4% | 24.0% | -32.7% | -32% |
| 2009 | -4.3% | 3.6% | 24.7% | -4.5% | 18% |
| 2010 | 13.7% | -21.0% | 8.4% | 5.2% | 2% |
| 2011 | -0.3% | -1.6% | -28.7% | 34.4% | -6% |
| 2012 | 24.3% | 20.5% | 15.7% | 6.4% | 84% |
| 2013 | 13.4% | -9.6% | -5.2% | 14.0% | 11% |
| 2014 | -2.8% | 5.4% | -12.3% | 15.3% | 4% |
| 2015 | 11.6% | -2.9% | -3.4% | 1.1% | 6% |
| 2016 | -2.2% | 1.6% | -1.7% | -2.5% | -5% |
| 2017 | 20.4% | 7.3% | 9.2% | 23.9% | 75% |
| 2018 | -11.2% | -4.9% | -10.1% | -11.9% | -33% |
| 2019 | 18.4% | 8.7% | 17.5% | 0.5% | 52% |
| 2020 | -37.7% | 57.8% | 33.7% | | |
| Ave | 2.1% | 2.9% | 1.4% | 8.4% | 14.2% |
| Median | 3.9% | 2.6% | -0.5% | 5.8% | 4.8% |
| % Time (+) | 57% | 48% | 55% | 70% | 65% |
| % Time (-) | 43% | 52% | 45% | 30% | 35% |

Housing Data – Hedgeye Housing Compendium

Our Compendium table has been flush with green alongside the re-ramp in activity back to new cycle/multi-decade/all-time highs. Its worth noting that a full greening/reddening has served as a soft contraindicator in recent years.

HEDGEYE HOUSING COMPENDIUM

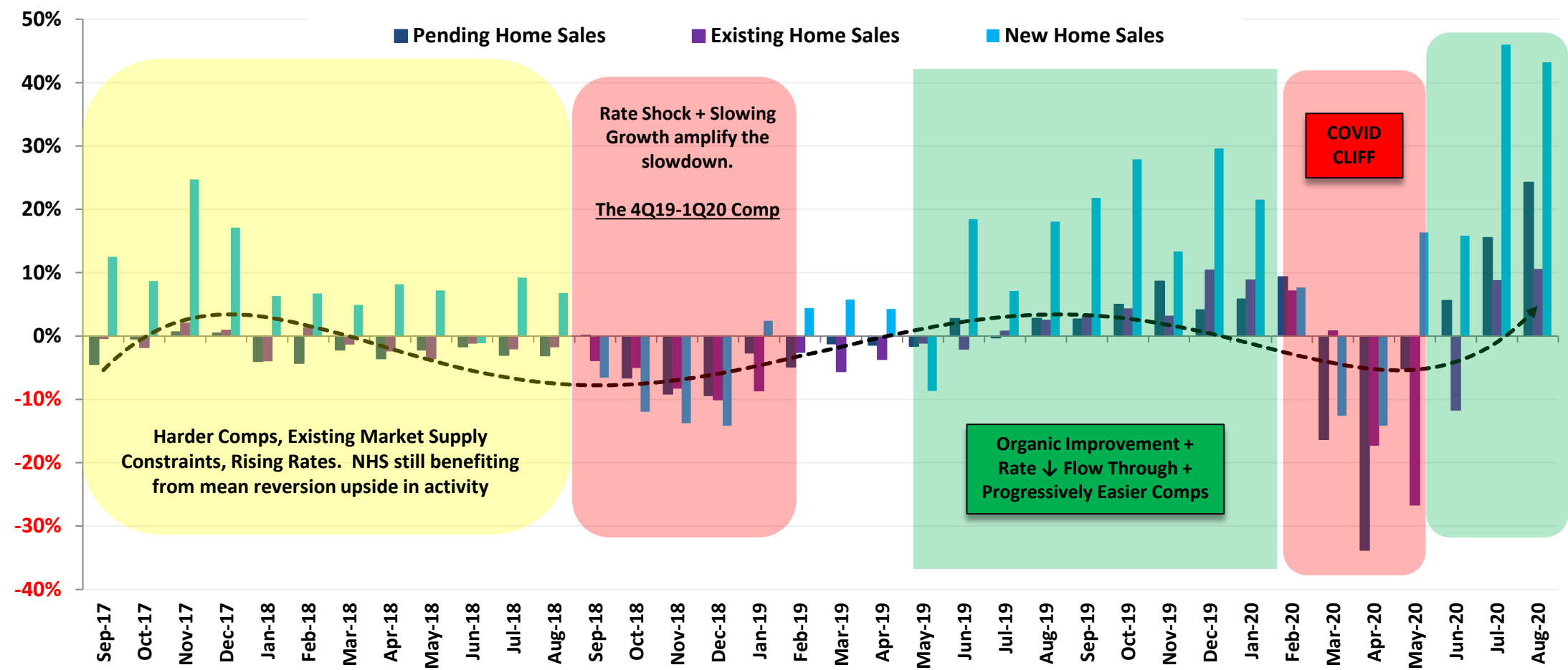
| | | | | | TRADE/TREND/TAIL | | | Rate of Change | | | |
|-------------------------------|--|--------|--------|-------|------------------|------------|-------------|----------------|--------------|-------------|-----------|
| | | | | | Most Recent Data | Short Term | Intmed Term | Long Term | Short Term | Intmed Term | Long Term |
| | | | | | | Period | Latest Data | Last Price | Prior Period | 3M Ago | 12M Ave |
| Home Prices | Case-Shiller 20 City HPI YoY NSA | Jul-20 | Better | 3.9% | 3.4% | 2.1% | 2.6% | 0.5% | 1.9% | 1.4% | |
| | Case-Shiller 20 City HPI MoM SA | Jul-20 | Better | 0.6% | 0.0% | 0.5% | 0.2% | 0.6% | 0.1% | 0.3% | |
| | Corelogic HPI - NSA YoY % Chg | Jun-20 | Better | 4.3% | 4.0% | 3.4% | 3.6% | 0.4% | 1.0% | 0.8% | |
| | Corelogic (Ex-Dist.) HPI - NSA YoY % Chg | Jun-20 | Better | 4.0% | 3.6% | 2.8% | 3.1% | 0.4% | 1.1% | 0.9% | |
| | FHFA HPI - NSA YoY % Chg | Jul-20 | Better | 6.2% | 5.6% | 4.5% | 4.4% | 0.6% | 1.7% | 1.8% | |
| | | | | | | | | | | | |
| Supply & Demand: Existing | MBA Purchase Apps Index (Mo. Ave) | Oct-20 | Worse | 316.0 | 320.5 | 262.1 | 257.6 | -1.4% | 20.6% | 22.7% | |
| | NAR: Pending Home Sales (Index) | Aug-20 | Better | 132.8 | 122.1 | 107.9 | 105.1 | 8.8% | 23.1% | 26.3% | |
| | NAR: Existing Home Sales (SAAR) | Aug-20 | Better | 6.00 | 5.86 | 5.41 | 5.31 | 2.4% | 10.9% | 13.1% | |
| | NAR: Existing Home Inv. (millions units) | Aug-20 | Better | 1.49 | 1.50 | 1.82 | 1.73 | -0.7% | -18.1% | -13.6% | |
| | NAR: Existing Home Inv: Months Supply | Aug-20 | Better | 2.98 | 3.07 | 4.04 | 3.90 | -3.0% | -26.2% | -23.7% | |
| | | | | | | | | | | | |
| Supply & Demand: New Homes | NAHB: HMI | Sep-20 | Better | 83 | 78 | 68 | 65 | 5.0 | 15.0 | 0.3 | |
| | Census: Total Starts | Aug-20 | Worse | 1416 | 1492 | 1274 | 1282 | -5.1% | 11.1% | 10.5% | |
| | Census: SF Starts | Aug-20 | Better | 1021 | 981 | 906 | 885 | 4.1% | 12.7% | 15.3% | |
| | Census: Total Permits | Aug-20 | Worse | 1470 | 1483 | 1437 | 1382 | -0.9% | 2.3% | 6.4% | |
| | Census: SF Permits | Aug-20 | Better | 1036 | 977 | 900 | 861 | 6.0% | 15.1% | 20.4% | |
| | Resi Construction Spending (in Billions) | Aug-20 | Better | 599 | 577 | 529 | 525 | 3.7% | 13.1% | 14.0% | |
| | Census: New Home Sales | Aug-20 | Better | 1011 | 965 | 726 | 676 | 4.8% | 39.3% | 49.7% | |
| | Census: New Home Inventory (000) | Aug-20 | Better | 281 | 290 | 322 | 331 | -3.1% | -12.7% | -15.2% | |
| | | | | | | | | | | | |
| Miscellaneous | Interest Rates (30 Year FRM) | Oct-20 | Better | 3.01% | 3.07% | 3.96% | 4.28% | -0.1% | -1.0% | -1.3% | |
| | ITB Price (EOP) | Oct-20 | Better | 57.92 | 54.97 | 42.11 | 38.48 | 5.4% | 37.6% | 50.5% | |
| | XHB Price (EOP) | Oct-20 | Better | 55.43 | 52.78 | 43.10 | 40.58 | 5.0% | 28.6% | 36.6% | |

Source: Hedgeye Risk Management, S&P, Corelogic, FHFA, MBA, NAR, NAHB, Census Dept., Factset, Bloomberg

Housing Data → Mapping the Evolution

Housing volume progressively accelerated from 1Q19 through early 2020 as housing demand indicators moved back to/near cycle highs before careening off the COVID cliff into 2Q. We have fully re-scaled the cliff amidst a dramatic reacceleration in through 3Q. The reported RoC data should remain solid nearer-term.

Rate of Change (Y/Y) In Housing Demand: New Home Sales, Existing Home Sales & Pending Home Sales (2016 - Present)



Rates Picture

Primary Mortgage Market Survey®

U.S. weekly averages as of 10/08/2020

Supported by central bank policy and the largest macro shock in a century, it's been a one way march to lower, all-time lows for rates in 2020.

30-Yr FRM
2.87% ▼0.01 1-Wk
 ▼0.70 1-Yr
0.8 Fees/Points

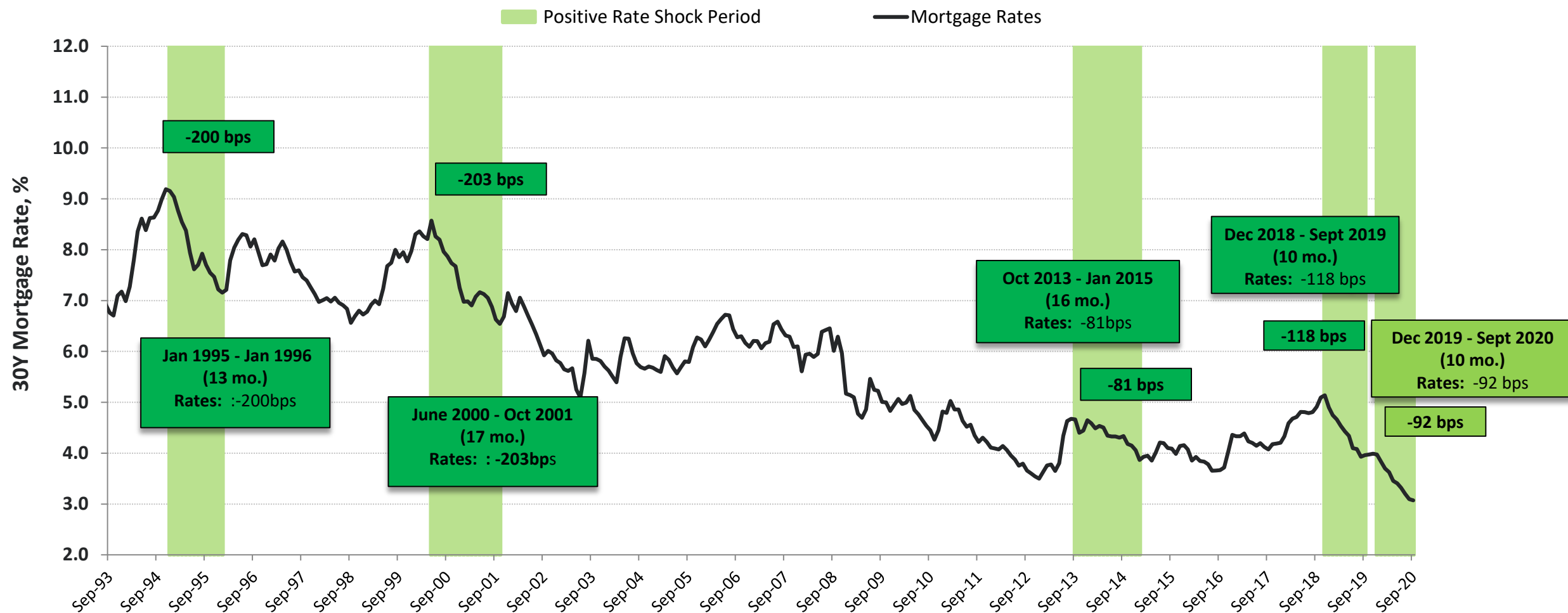
15-Yr FRM
2.37% ▲0.01 1-Wk
 ▼0.68 1-Yr
0.7 Fees/Points

5/1-Yr ARM
2.89% ▼0.01 1-Wk
 ▼0.46 1-Yr
0.2 Fees/Points



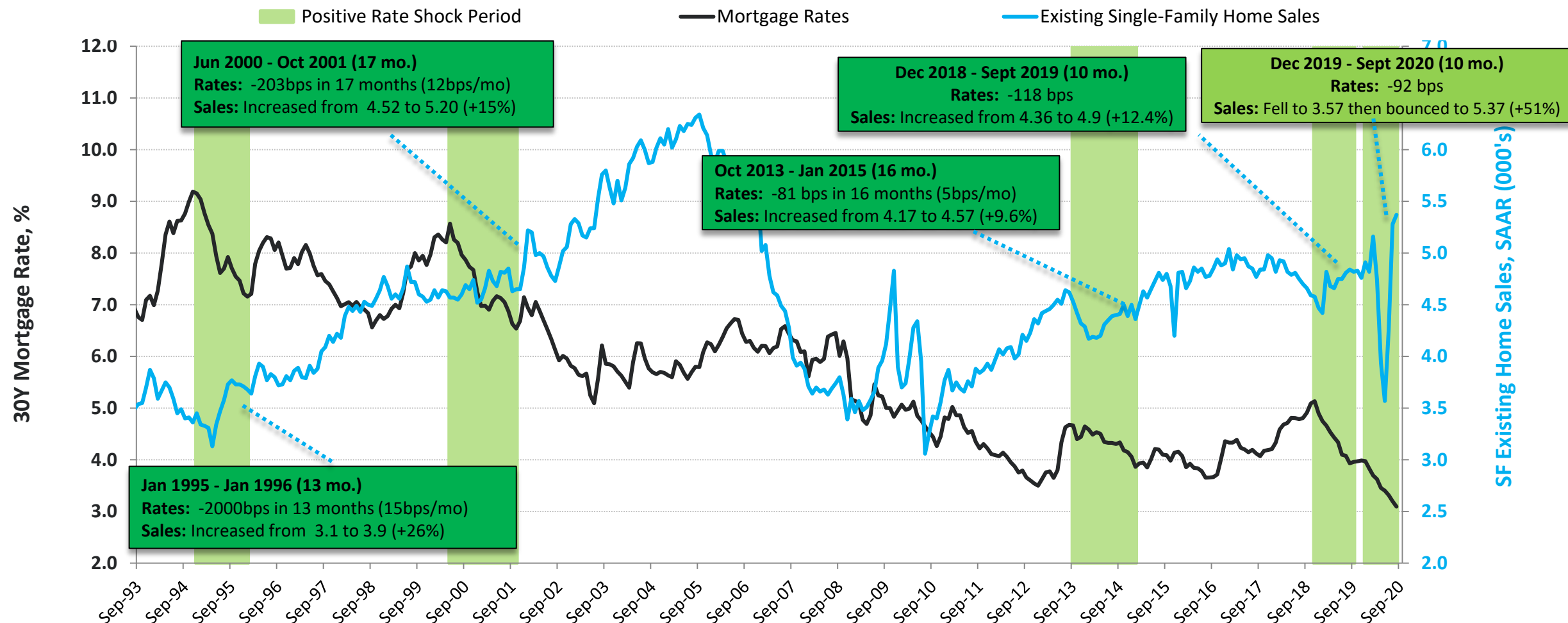
↑ Rate Shock → ↓ Rate Shock

Positive Rate Shock Analogs



↓ Rates vs Home Sales

Mortgage Rates vs. Home Sales



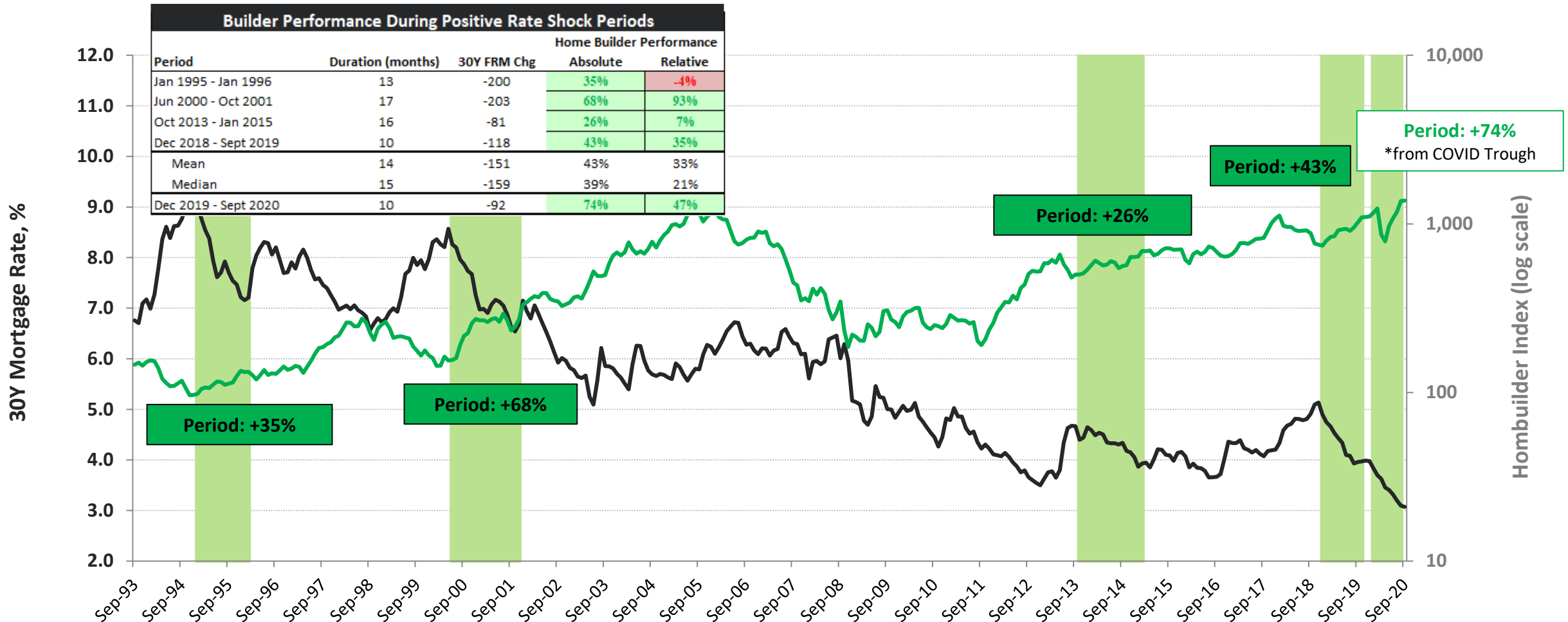
↓ Rates vs Builder Equity Performance

Mortgage Rates vs. Homebuilder Performance

Positive Rate Shock Period

Mortgage Rates

S5HOME Index (S&P Homebuilder Index)



Conspicuously Positive fundamentals will gradually give way to RoC deceleration as we push into 4Q20.

Positives:

- Its hard to get convictedly negative on new cycle and all-time high volume trends. While the upside volume constraints we highlighted will begin to manifest, the next couple months of reported demand data should remain decidedly strong.
- Rates are low and will likely remain low for the foreseeable future even if we get some transient curve steepening
- Attitudes towards homeownership were extremely positive prior to the Virus with the primary complaints being lack of supply and high prices.
- Demographic tailwinds still afford a robust long-term demand picture with Millennials 2-3 years away from entering peak 33-34 YOA demand.
- Conditions for Builders and Home Improvement remain relatively attractive given existing market supply, rates and the probable tail to quarantine catalyzed renovation activity.

Negatives:

- **Depression Level Unemployment/Underemployment.** Over 25 million workers are (still) receiving U.I. benefits and labor market improvement, while encouraging, is not enough for what should be the steepest part of the recovery curve.
- **Income Cliffs:** The exhaustion of PPP funds, the expiration of enhanced U.I. benefits and various consumer forbearance programs present a rolling procession of acute risks to (housing) consumption and credit as we move through 2H. Banks are tightening mortgage lending standards quickly.
- **Tighter Underwriting:** The mortgage credit box has undergone a material constriction and the balance of risk remains towards further tightening.
- **Comps/Constraints:** The data appears to be topping and Comps get progressively more difficult. Moreover, there is only so much incremental juice from 2nd home demand and/or pull-forward in housing consumption related to rate dynamics. Given supply conditions, further meaningful gains in volume become increasingly constrained.

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