Stock Market Milestones and Mortgage Demand: Evidence from US

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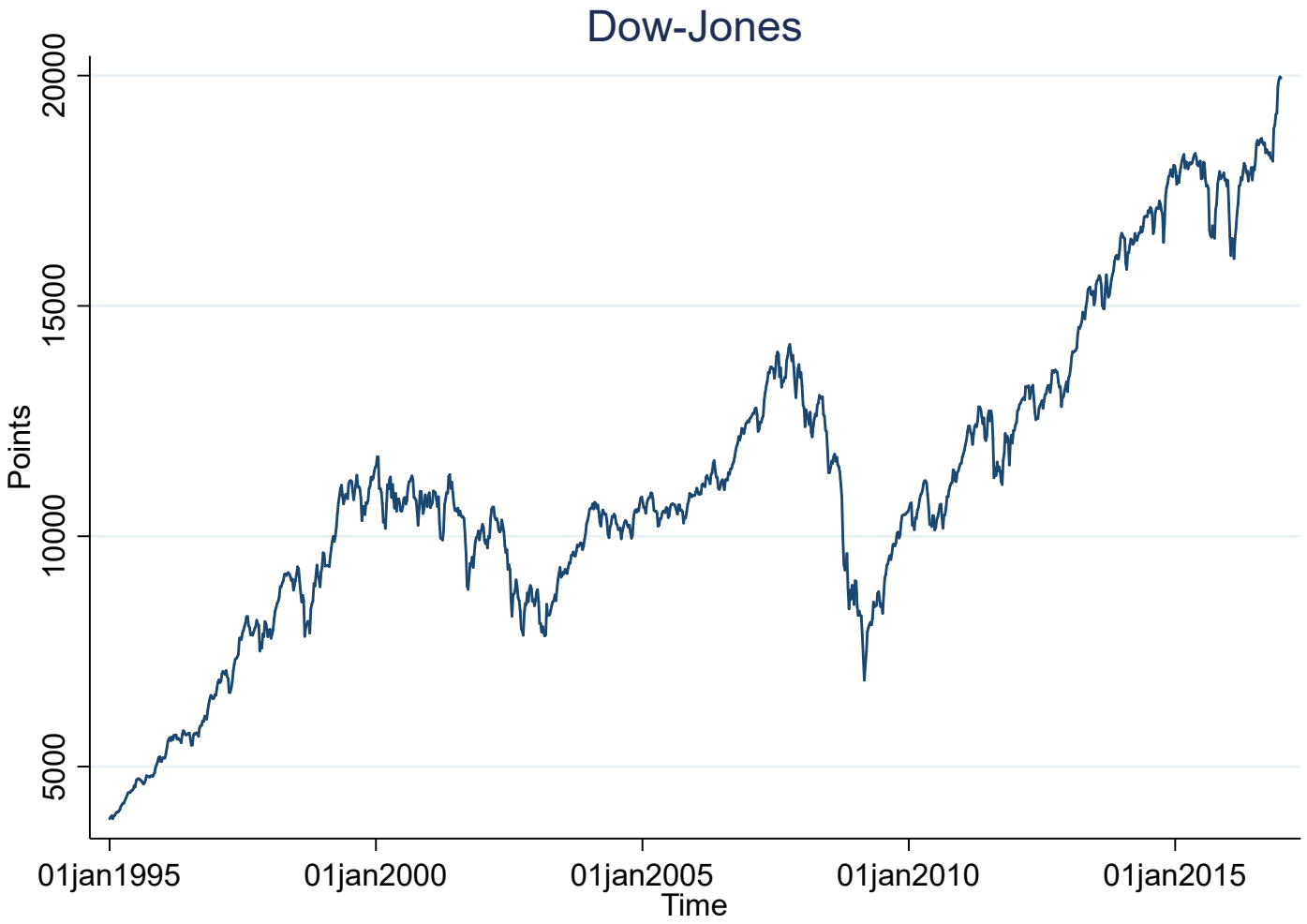
The views in this paper are solely the responsibility of the authors and should not be interpreted as reflecting the views of the Board of Governors of the Federal Reserve System

Dow-Jones Index

1995-2016



Dow 10,000

THE WALL STREET JOURNAL.

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What's News—

Business and Finance

THE DOW JONES INDUSTRIALS closed above 10000 for the first time, marking a milestone in the long bull market. Blue-chip stocks surged 184.54 points, or 1.88%, to 10006.78, in a broad advance driven by oil and financial stocks. The Nasdaq composite rose 3.05%, and the S&P 500 climbed 2.13%. The average now stands more than 300% above its level of October 1990, reflecting both rare economic health and rich stock valuations. (Article on Page C1 and in Column 6)

* * *

Computer Associates agreed to acquire competitor Platinum Technology for $3.5 billion, in a deal that will combine two large makers of software for big corporate computer systems. (Article on Page A3)

* * *

Coke said world-wide case volume in the first quarter is expected to decline amid foreign turmoil and tough year-to-year comparisons, jarring analysts who expected a slight rise. (Article on Page A3)

* * *

BP Amoco and Arco confirmed they are in merger talks, and a deal could be unveiled as soon as tomorrow, according to people close to the negotiations. Both firms' shares jumped. (Article on Page B4)

* * *

A computer virus called Melissa doesn't appear to have caused any serious damage, but it spread considerable alarm quickly, and security experts are warning of future threats. (Article on Page B1)

* * *

Microsoft will split into five new divisions that will be given increased independence in responding to customers and attacking competitors.

Talks between Microsoft and federal and state governments aren't likely to yield a quick settlement. (Articles on Page B1)

* * *

Bank One is eliminating as many

World-Wide

NATO CAME UNDER pressure to do more as the slaughter in Kosovo worsened. Albania and Macedonia appealed for help as refugees, bearing tales of atrocities amid the forced expulsion, flooded in. NATO said Serbs are targeting the ethnic Albanian leadership for executions and the U.S. accused Milosevic of "crimes against humanity." The Pentagon sent B-1 bombers to the region; tank-killing aircraft were reported taking off from Italy. Belgrade says it has shot down seven planes so far, but allies say they have lost one, the F-117 that went down Saturday. (Articles on Pages A18 and A21)

Yeltsin sent Primakov to Serbia to seek talks, but Western leaders see it as a bid to split allied unity. Russia said the IMF agreed to restart its aid program.

* * *

The U.S. trade representative begins a series of meetings in Beijing today on concessions that could open the door to Chinese membership in the WTO. Some administration officials are ambivalent about the effort, fearing a deal may anger Congress and labor. (Article on Page A2)

* * *

A Lockheed antimissile system failed its sixth test in a row, throwing an unflattering light on the Theater High-Altitude Area Defense program during a political debate on building a national missile defense. The firm also announced it plans to cut 1,200 jobs at its rocket unit. (Article on Page A3)

* * *

Paraguay's ousted president was given asylum by Brazil after a would-be coup leader blamed in last week's killing of Paraguay's vice president was given asylum in Argentina. Raul Cubas quit as president Sunday amid mounting unrest. Senate chief Luis Gonzalez Macchi has succeeded him.

* * *

A Marine navigator pleaded guilty to obstruction and conspiracy charges for destroying a videotape made during a flight aboard an EA-6B Prowler that clipped a ski-lift cable in Italy last year, killing 20 people. Manslaughter charges against Capt. Joseph Schweitzer were thrown out earlier.

* * *

Terry Nichols was charged with first-degree murder by Oklahoma and could face the death penalty for his role in the 1995 Oklahoma City bombing that killed 168. Nichols is serving a life sentence following his conviction on federal charges arising from the

Dow Industrials Top 10000

Longest Bull Market On Record Smashes A Historic Barrier

Yes, the Values Are Dizzying. But They Also Reflect Economy's Rare Strength

By Greg Ip
Staff Reporter of The Wall Street Journal

The Dow Jones Industrial Average closed above 10000 for the first time yesterday, capturing in a single number both the astonishing success and giddy exuberance of the U.S. economy this decade.

In reaching the once-unthinkable milestone, the industrial average now stands more than 300% above its level of October 1990, when by common reckoning the current bull market began. It is up nearly 1,200% since 1982, when the taming of inflation unleashed a long-term rise in stock prices.

In the Dow's 103-year history, there has never been another bull market so long and

The Economy

If This Is a Bubble, It Sure Is Hard to Pop

But for Gains to Continue, Inflation, Unemployment Must Remain in Balance

By David Wessel
Staff Reporter of The Wall Street Journal

Maybe the stock market isn't crazy.

Oh, it's easy enough to make the case that the market is ridiculously high. By almost any measure devised by man or computer, stocks are pricier than they've been in decades.

Compare stock prices to corporate earnings or dividends or the book value of assets, and they are at levels not seen in more than 100 years. A chart of almost any market gauge "looks like a geyser erupting,"

this out for years. And they have been spectacularly wrong—so far.

The manager of the world's largest mutual fund, Fidelity Magellan Fund, bet billions that the bull market was over at the end of 1995. The Dow Jones Industrial Average has doubled since then, and he is no longer at Fidelity. Prof. Shiller declared in July 1996, "We appear to be flying at the wrong altitude, and a correction could be substantial and lasting." The Dow has risen 87% since then. Federal Reserve Chairman Alan Greenspan uttered the most memorable phrase of his career—"irrational exuberance"—in December 1996. Since then, the industrial average has climbed 55%.

Perhaps those predictions were right, just very premature. Or maybe we have entered a new era of prosperity and profits that represents such an extraordinary

sity economist who thought up index mutual funds. "This is essentially unpredictable."

Maybe it's better to pose the question this way: What would have to happen for the Dow to make sense at 10000, and for stocks to keep climbing from here?

The short answer: Everything has to go right.

The U.S. economy has to keep cruising along without hitting a recessionary pothole or overheating in a burst of inflation that prompts the Fed to slam on the interest-rate brakes. Long-term interest rates have to stay down. And global investors—from mega-money managers to ordinary folks salting away $20 a week in mutual funds—have to maintain their affection for U.S. stocks.

"We've had a run in the stock market that is unprecedented," says John J. Brennan, chief executive of Vanguard Group,

The First 10,000 Points

Once considered unlikely in this century, the Dow industrials' climb past 10000 yesterday came less than 3½ years after the first close above 5000. On page C1, see a chart of the average starting with its birth in 1896. In related coverage:

- **Market bulls predict further gains from here. Heard on the Street, C1.**
- **How the prices of the 30 Dow stocks add up to the 10000-plus finish, C14.**
- **Mutual funds had a big role in the long run to yesterday's milestone, C14.**
- **Voices in the crowd, from Sandy Weill to a day trader, speak out, C14-15.**
- **The roots of the index include Messrs. Dow and Jones and a third man, C15.**

only one so powerful, the one that ended i 1929. It has smashed through every stan dard benchmark for valuing stocks, inspi ing awe but also no little anxiety.

In doing so, the market has penetrated fa more than the trading rooms of Wall Street; has become woven into the fabric of U.S. life A record share of Americans participate the market, either directly with stocks or directly through mutual funds, and a reco share of their wealth is tied up in stocks.

Dow 20,000

THE WALL STREET JOURNAL.

DOW JONES | Newsstand

THURSDAY, JANUARY 26, 2017 - VOL. CCLXIX NO. 20 WSJ.com ★★★★ $3.00

DJIA 20068.51 ▲ 155.80 0.8% NASDAQ 5656.34 ▲ 1.0% STOXX 600 366.59 ▲ 1.3% 10-YR. TREAS. ▼ 14/32, yield 2.523% OIL $52.75 ▼ $0.43 GOLD $1,197.30 ▼ $13.00 EURO $1.0747 YEN 113.28

What's News

Business & Finance

The Dow industrials closed above 20000 for the first time, fueled by a rally that began in 2009 as a bounce from the depths of the financial crisis, grew into a steady ascent and was then turbocharged by November's presidential vote. **A1, A9-A12**

◆ **Harvard's endowment** plans to outsource management of most of its assets and lay off roughly half the staff, in a radical overhaul. **B1**

◆ **Snap is seeking** 2017 spending commitments of $100 million to $200 million each from several big advertising companies. **B1**

◆ **Amazon has begun** handling seaborne shipments to its U.S. warehouses from Chinese merchants selling on its site. **B1**

◆ **Apple is nearing** a deal to manufacture its products in India, as the company seeks to boost its sales there. **B4**

◆ **Boeing posted** forecast-beating quarterly earnings and signaled continuing momentum in cash flow and profit. **B3**

◆ **Novartis is considering** spinning off its ailing eye-care business Alcon. **B3**

◆ **Facebook is overhauling** its "trending topics" box, part of an effort to curb fake news and expose users to a broader range of information. **B4**

◆ **J.P. Morgan struck** a deal to be the custodian for more than $1 trillion of BlackRock's assets, poaching the business from State Street. **B5**

◆ **The NYSE is introducing** a "speed bump" on one of its marketplaces in a bid to target the same customers as upstart exchange IEX. **B11**

World-Wide

◆ **Trump ordered** stepped-up deportations and a rapid start on building a wall on

Dow Tops 20000

Milestone reached amid hopes for federal spending; Last 1,000 points come in just 42 days

By Aaron Kuriloff, Corrie Driebusch and Akane Otani

The Dow Jones Industrial Average closed above 20000 for the first time Wednesday, fueled by a remarkable rally that began in 2009 as a bounce from the depths of the financial crisis, grew into a steady ascent and was then turbocharged by November's presidential election.

President Donald Trump's moves during his first week in office to promote infrastructure projects and cut regulation helped propel the 120-year-old index of 30 stocks over its latest milestone, as investors bet that he would follow through with business-friendly plans like cutting taxes and increasing government spending.

The Dow industrials raced past 20000 when the market opened Wednesday and held on to the gains throughout the session, closing up 155.80 points, or 0.8%, at 20068.51. The S&P 500 and Nasdaq Composite also reached records Wednesday.

Applause, whoops and cheers erupted on the floor of the New York Stock Exchange as the market closed. "It's been a long time coming," said Peter Tuchman, a veteran floor broker at the NYSE, who wore a cap with "Dow 20,000" emblazoned on it for the occasion. "We're all excited, but exhausted."

The Dow took almost 103 years to reach 10000 in March 1999. Reaching 20000 required nearly 18 years more.

And the last part of that climb was swift: It took the blue-chip index just 42 trading days to jump from its first close above 19000 to 20000—the second-fastest thousand-point gain in the index's history, after its 24-day climb from 10000 to 11000 during the dot.com boom in 1999.

The Dow industrials notched

Please see DOW page A10

Resurgent Appetite for Risk Has Fragile Economic Foundation

By Greg Ip

Britain is leaving the European Union, a protectionist is in the White House, the front-runner in France's presidential election wants out of the euro. Yet paradoxically, investors have concluded the world is getting less risky, not more. The result: a hunger for shares that carried the Dow Jones Industrial Average over the 20000 mark Wednesday for the first time.

It is hard to explain this with economic fundamentals. They have improved since Donald Trump's improbable election victory in November, but not by much. After the election, economists surveyed by The Wall Street Journal added 0.3 percentage point to expected growth over the next two years. At their December meeting, Federal Reserve officials barely touched their growth forecast. Analysts' profit estimates haven't changed much either.

What has changed is how investors assess the balance between upside and downside risks. Their worries about Mr. Trump's protectionism or Euro-

Please see INVEST page A9

DOW 20000
An in-depth look at the latest market milestone
A9-A12

ANALYSIS

The Dow Jones Industrial Average From the Beginning
Official level of the DJIA since 1896

Dow 20,000

LIVE
NYSE
NYSE
NYSE
0.58%
NYSE
+115.21
DJI
20,027.92
BREAKING NEWS
DOW HITS 20,000
CNBC

BUSINESS NEWS NOVEMBER 25, 2020 / 12:38 AM / UPDATED A YEAR AGO

Dow Jones hits 30,000 as Wall Street bets on 2021 bounce

By Reuters Staff

2 MIN READ

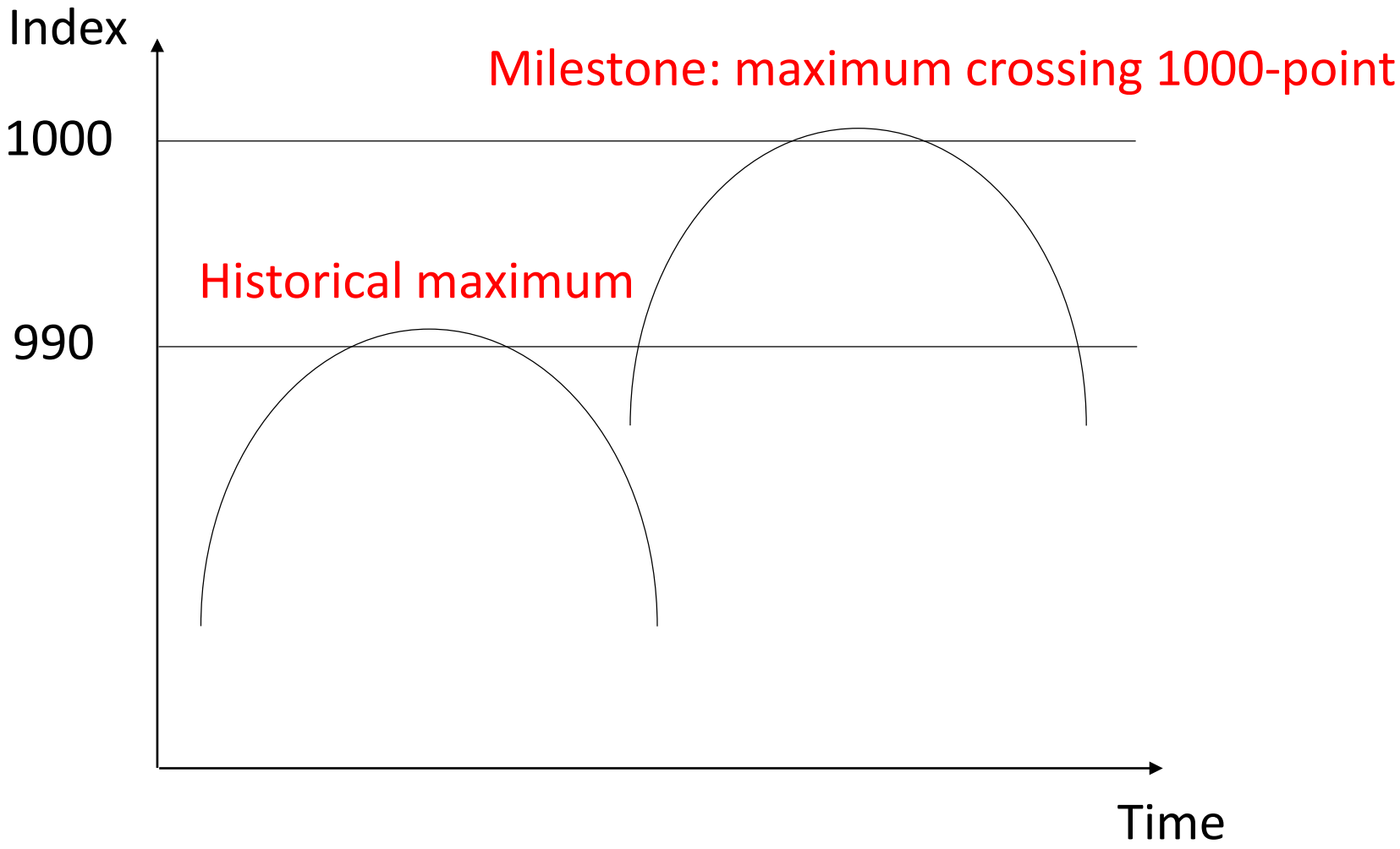
This Paper

- Question
  - How do stock market increases impact demand for housing?
- Challenge
  - Stock market and housing demand related with other factors (e.g. interest rate)
- What we do
  - We compare weeks in which stock-market indices reach a maximum and cross/not-cross a milestone (e.g. Dow 10000, S&P 2000)
  - Maximum-only and milestone weeks are indistinguishable on a series of economic indicators
  - While a milestone has no economic importance, it increases news—and therefore attention—of an increase in wealth

Our strategy

- Scenario A: Historical maximum
  - Stock index closes at 985, 995 and 990 at day -1, day 0, and day 1
  - It is the first time the stock index reaches 995.
- Scenario B: Milestone: maximum crossing 1000-point
  - Stock index closes at 995, 1005 and 1000 at day -1, day 0, and day 1
  - It is the first time the stock index reaches 1005
- Scenario A and B have similar return before reaching the maximum
- Key difference: milestone grabs more attention of investors
- The differential effects between the milestone and the historical maximum capture the attention effect in addition to the wealth effect.

Our strategy



Findings

- In the weeks stock-market indices reach milestones there is
  - Doubling of news and internet searches mentioning “stock market”
  - Individual investor bullishness rises by half standard deviation
  - Increase in demand for housing
    - More loan applications, larger loans
  - Change in the composition of housing applications
    - Increase in mortgage applications of higher income, high FICO, and in regions with higher equity holdings
  - Increase in leverage and worse loan performance
    - Loan-to-income and loan-to-value ratios rise, and higher likelihood of delinquency

- Mechanisms: these findings are consistent with attention affects rather than pure wealth effects.

Motivation

- Why should we care?
  - Mortgages are largest household liability and housing is biggest component of leverage (Mian and Sufi 2008)
  - Credit cycles impact real activity and restricting household leverage can improve financial stability and growth (DeFusco *et al* 2017, Mian *et al* 2017)

- Why could the stock market movements affect house purchasing decisions?
  - Wealth effects (Davis and Palumbo 2001, Di Maggio *et al* 2018)
  - Behavioral inattention/round number biases (Lacetera *et al* 2012, Gabaix 2018)
  - Overweighting front page news (Greenwood and Shleifer 2014, Fedyk 2018)

Contribution

- Factors affect housing demand:
  - Demographics, household income and wealth, credit supply and beliefs about future housing demand (Mian and Sufi 2009; Adelino et al., 2012; Favara and Imbs 2015; Kaplan et al. 2017; Liu et al., 2019)
- Relationship stock market wealth, housing wealth and household consumption:
  - Poterba 2000; Baker et al., 2007; Frydman et al., 2018; Chodorow-Reich et al. 2019; Di Maggio et al. 2020
- Salience and attention:
  - Round numbers effects (Johnson et al. 2007; Bhattacharya et al. 2012; Lacetera et al. 2012)

Roadmap

- Data
  - Dow Jones Index from 1990-2016: aggregate to weekly data
  - Comparison of milestone (treatment) and maximum (control) groups
- Impact of milestone on stock-market awareness
  - TV and Newspapers articles, internet searches and consumer confidence
- Impact of milestone in housing market:
  - Number of loan applications, loan value, and house prices
  - Composition of borrowers (Individual and region)
  - Risk-taking
- Mechanisms
- Conclusion

Data

- Stock-Market Awareness
  - TV mentions (Television News Archive)
  - Internet searches (Google trends)
  - Confidence data (Bloomberg)
  - Newspaper articles (Factiva)

- Housing Demand
  - Mortgage Applications (HMDA)
  - Loan Performance (McDash)

- Other Data
  - Household debt(Consumer Credit Panel-Equifax data)
  - Equity holdings per zip-income (IRS)
  - Demographics (Census)
  - Housing Price data (Corelogic)
  - Car price data (J.D. Power's Power Information Network)

Summary Statistics

	Observations	Average	p10	p50	p90	Std. Deviation
A. Stock Market Variables						
Max_w	1,371	0.19	0.00	0.00	1.00	0.39
$Milestone_w$	1,371	0.01	0.00	0.00	0.00	0.12
$PE\text{-}Ratio_w$	1,371	25.7	16.0	20.8	33.9	17.2
DJ Growth Previous Month	1,371	6.0	-3.9	1.0	4.5	3.7
DJ Growth Following Month	1,371	6.0	-3.9	1.0	4.5	3.7
B. Macroeconomic Variables						
$Bullish_w$	1,371	40.0	27.9	39.5	53	9.5
$Misery_m$	1,371	8.1	6.0	8.1	10.7	1.7
$Coincident_{s,m}$	16,200	90.5	72.4	90.8	106.6	14.0
$Leading_{s,m}$	16,200	1.25	0.13	1.52	2.48	1.03
$Uncertainty_m$	1,371	112	67	101	177	45
$Confidence_m$	1,371	35.8	10.0	35.0	71.0	19.5
30-year Mortgage $Rate_m$	1,371	5.9	3.8	6.0	7.9	1.5
C. Media Variables						
TV_w	685	9.3	5.5	8.0	14.0	4.2
$Newspapers_w$	403	0.1	0.0	0.1	0.2	0.1
$Searches_w$	1,155	63.7	32.0	63.0	94.0	26.0

Cont.

	Observations	Average	p10	p50	p90	Std. Deviation
Housing Variables						
$EquityHoldings_{z,y}$	86,253,490	0.27	0.07	0.23	0.60	0.19
$Approval_{i,b,w}$	79,548,740	85	0	100	100	35
$AppIncome_{i,b,w}$	86,253,490	96	34	75	165	90
$LoanValue_{i,b,w}$	86,253,490	194	48	155	378	166
$Loan\text{-}to\text{-}Income_{i,b,w}$	86,253,490	224	75	217	375	114
$HomeValue_{i,b,w}$	13,112,546	325	110	240	594	517
$Loan\text{-}to\text{-}Value_{i,b,w}$	13,112,546	79	60	80	95	14
$Non\text{-}Conventional_{i,b,w}$	13,112,546	34.2	0.0	0.0	100.0	47.4
$FICO_{i,b,w}$	10,014,270	723	630	735	795	62
$Late_{i,b,w}$	9,245,079	5.0	0.0	0.0	0.0	21.7
$Late\text{-}HighFICO_{i,b,w}$	4,396,359	1.1	0.0	0.0	0.0	10.3
$HousePriceIndex_{z,m}$	485,800	99.0	132.0	215.3	45.7	21.7
Car-Market Variables						
$CarSales_{m}$	956	1,580	991	1,558	2,162	441
$PriceNewCar_{m}$	956	29,772	28,629	29,726	31,079	1,013
$PriceUsedCar_{m}$	956	17,231	16,341	17,168	18,295	737
$Purchases_{m}$	956	24.5	17	25	32	5.4
$Cash_{m}$	956	79.5	71	80	87	5.4

Stock-Market Movement: Awareness and Confidence

Stock Market Movements

TV Mentions, Internet Searches, Consumer Confidence

- Specification

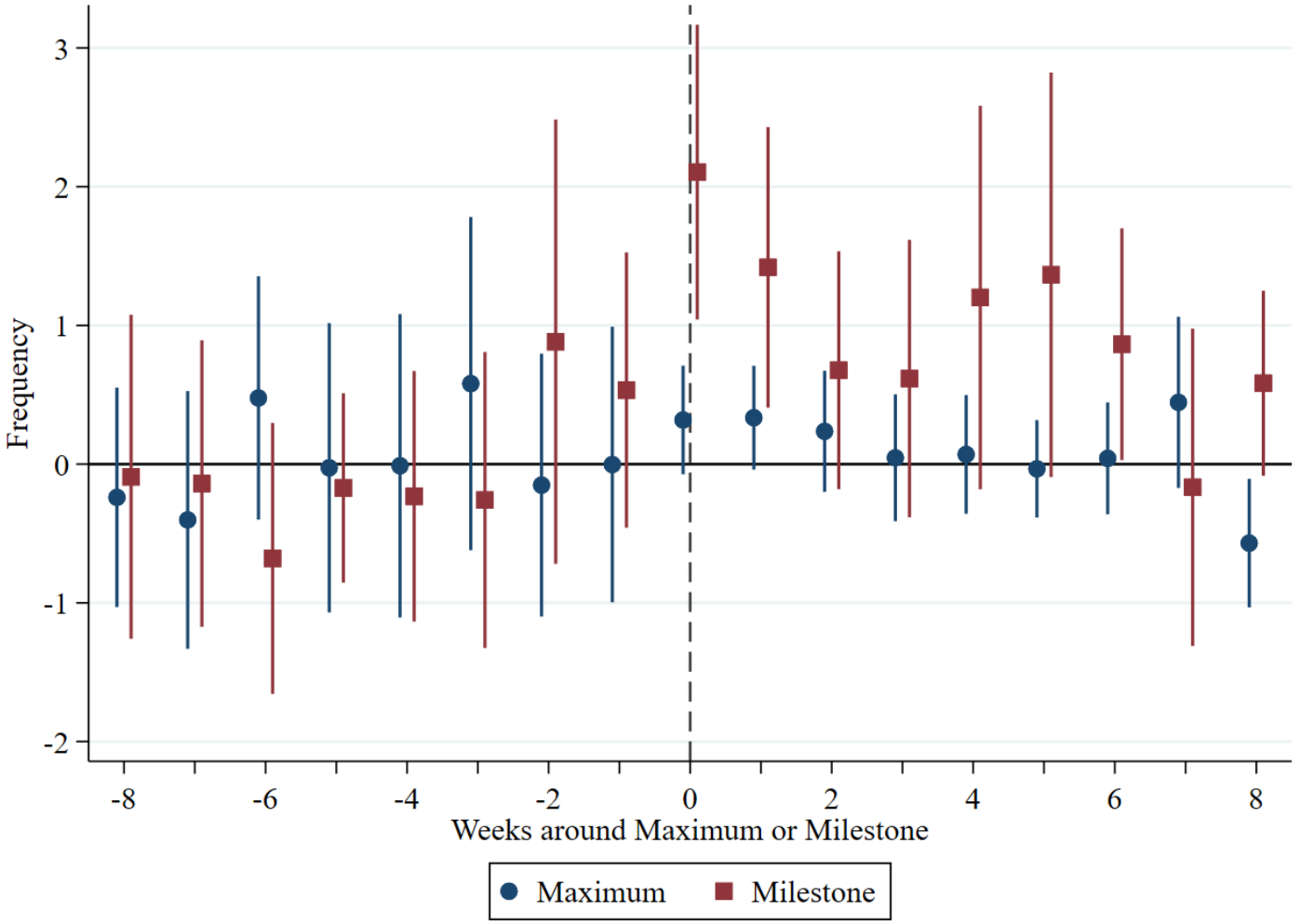
$$Y_t = \sum_w \beta_{max,w} Max_{w,t} + \sum_w \beta_{ms,w} MS_{w,t} + X_t + Qrt + \varepsilon_t$$

Y_t	-	Mentions/Searches/Confidence in week *t*
$Max_{w,t}$	-	Dummy of a maximum *w* weeks to/from week *t*
$MS_{w,t}$	-	Dummy of a milestone *w* weeks to/from week *t*
X_t	-	Stock-market and macro controls at time *t*
Qtr	-	Quarter fixed effects

- Milestone is also a maximum: $\beta_{ms,w}$ capture the additional effect of milestone
- Robust standard errors

Impact of Maximum and Milestones

News paper articles on "Stock Market"



Milestones and media exposure

	$Newspapers_w$ (1)	TV_w (2)	$Searches_w$ (3)	$Bullish_w$ (4)
$Pre_{5w-6w}*MS_w$	-5.14**	0.00	-0.08	2.54*
	(2.49)	(0.02)	(0.39)	(1.47)
$Pre_{3w-4w}*MS_w$	-1.61	0.01	-0.65	1.90
	(2.02)	(0.02)	(0.40)	(1.54)
$Pre_{1w-2w}*MS_w$	2.08	-0.01	0.39	0.69
	(3.05)	(0.02)	(0.64)	(1.53)
Max_w*MS_w	9.33***	0.08***	0.80***	2.67*
	(2.71)	(0.03)	(0.31)	(1.55)
$Post_{1w-2w}*MS_w$	5.61**	-0.00	0.35	3.61**
	(2.48)	(0.02)	(0.40)	(1.69)
$Post_{3w-4w}*MS_w$	5.44*	0.03	0.52	2.33*
	(3.10)	(0.02)	(0.45)	(1.39)
$Post_{5w-6w}*MS_w$	7.80**	0.09***	-0.03	3.03**
	(3.17)	(0.03)	(0.34)	(1.53)
$Post_{7w-8w}*MS_w$	1.89	-0.00	-0.65**	1.36
	(2.39)	(0.02)	(0.30)	(1.30)
$Post_{9w-10w}*MS_w$	1.17	0.05***	0.12	-0.41
	(2.24)	(0.02)	(0.48)	(1.25)
$Post_{11w-12w}*MS_w$	0.62	0.03*	0.23	-1.76
	(2.44)	(0.02)	(0.30)	(1.27)
Observations	1,115	415	697	1,113
R-squared	0.66	0.28	0.62	0.41
Macro Controls	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes
Average Dependent Variable	9.3	0.1	63.7	40.0

Impact on Debt and Mortgage Market

Stock Market Movements

Impact on Mortgage Market

- In this section, we ask
- Do stock milestones impact household debt and mortgage demand?
  - Extensive margin: loan applications, second home
  - Intensive margin: loan value
- Does the impact depend on exposure to stock markets?
- Do stock milestones affect the borrowers' composition, risk-taking, and loan performance?

Impact of milestones on household debt

	$Credit_{i,q}$			$Revolving\ Credit_{i,q}$		
	(1)	(2)	(3)	(4)	(5)	(6)
$Pre_{1q}*MS_q$	-0.28	-0.30	0.20	0.88	0.91	1.45
	(0.85)	(1.10)	(1.22)	(0.63)	(0.80)	(0.99)
Max_q*MS_q	1.93*	2.43*	2.00	2.77***	2.98***	2.97***
	(1.05)	(1.25)	(1.46)	(1.00)	(1.09)	(1.12)
$Post_{1q}*MS_q$	0.95	1.76	2.22*	0.78	1.16	1.47
	(1.21)	(1.31)	(1.32)	(1.00)	(1.09)	(0.99)
Observations	9,824,110	9,774,309	7,797,229	9,824,110	9,774,309	7,797,229
R-squared	0.18	0.92	0.92	0.19	0.94	0.94
Macro Controls	Yes	Yes	Yes	Yes	Yes	Yes
Zip*Year FE	Yes	-	-	Yes	-	-
Borrower*Year FE	No	Yes	Yes	No	Yes	Yes
Borrowers	All	All	FICO>580	All	All	FICO>580

Stock Market Movements

Impact on Mortgage Market - Specification

- Specification

$$Y_{i,z,b,t} = \alpha + \sum_w \beta_{max,w} Max_{w,t} + \sum_w \beta_{ms,w} MS_{w,t} + X_t + Zip*Qtr + Bank*Qtr + \varepsilon_{i,z,b,t}$$

$Y_{i,z,b,t}$	-	loan value *i,* in Zip *z,* by bank *b*, in week *t*
$Max_{w,t}$	-	Dummy of a maximum *w* weeks to/from week *t*
$MS_{w,t}$	-	Dummy of a milestone *w* weeks to/from week *t*
X_t	-	Stock-market and macro controls at time *t*
*Zip*Qtr*	-	Zip*Quarter fixed-effects
*Bank*Qtr*	-	Bank*Quarter fixed-effects

- Milestone is also a maximum: $\beta_{ms,w}$ capture the additional effect of milestone

Impact of milestones on housing market

Extensive margin: number of mortgage

	$NumberLoans_{w,g}$			
	(1)	(2)	(3)	(4)
$Pre_{2m}*MS_m$	0.01	0.02	0.00	0.00
	(0.03)	(0.03)	(0.03)	(0.03)
$Pre_{1m}*MS_m$	-0.01	-0.00	-0.04*	-0.04*
	(0.03)	(0.03)	(0.03)	(0.03)
Max_m*MS_m	0.08*	0.09*	-0.02	-0.02
	(0.05)	(0.05)	(0.03)	(0.03)
$Post_{1m}*MS_m$	0.11*	0.11*	-0.03	-0.03
	(0.06)	(0.06)	(0.03)	(0.03)
$Post_{2m}*MS_m$	-0.01	-0.00	-0.00	-0.01
	(0.05)	(0.05)	(0.03)	(0.03)
$Post_{3m}*MS_m$	0.11***	0.11**	0.03*	0.03
	(0.04)	(0.04)	(0.02)	(0.02)
Observations	975	975	851	851
R-squared	0.97	0.97	0.92	0.92
Year FE	Yes	Yes	Yes	Yes
Weekly Controls	No	Yes	No	Yes
Sample	High Equity	High Equity	Low Equity	Low Equity

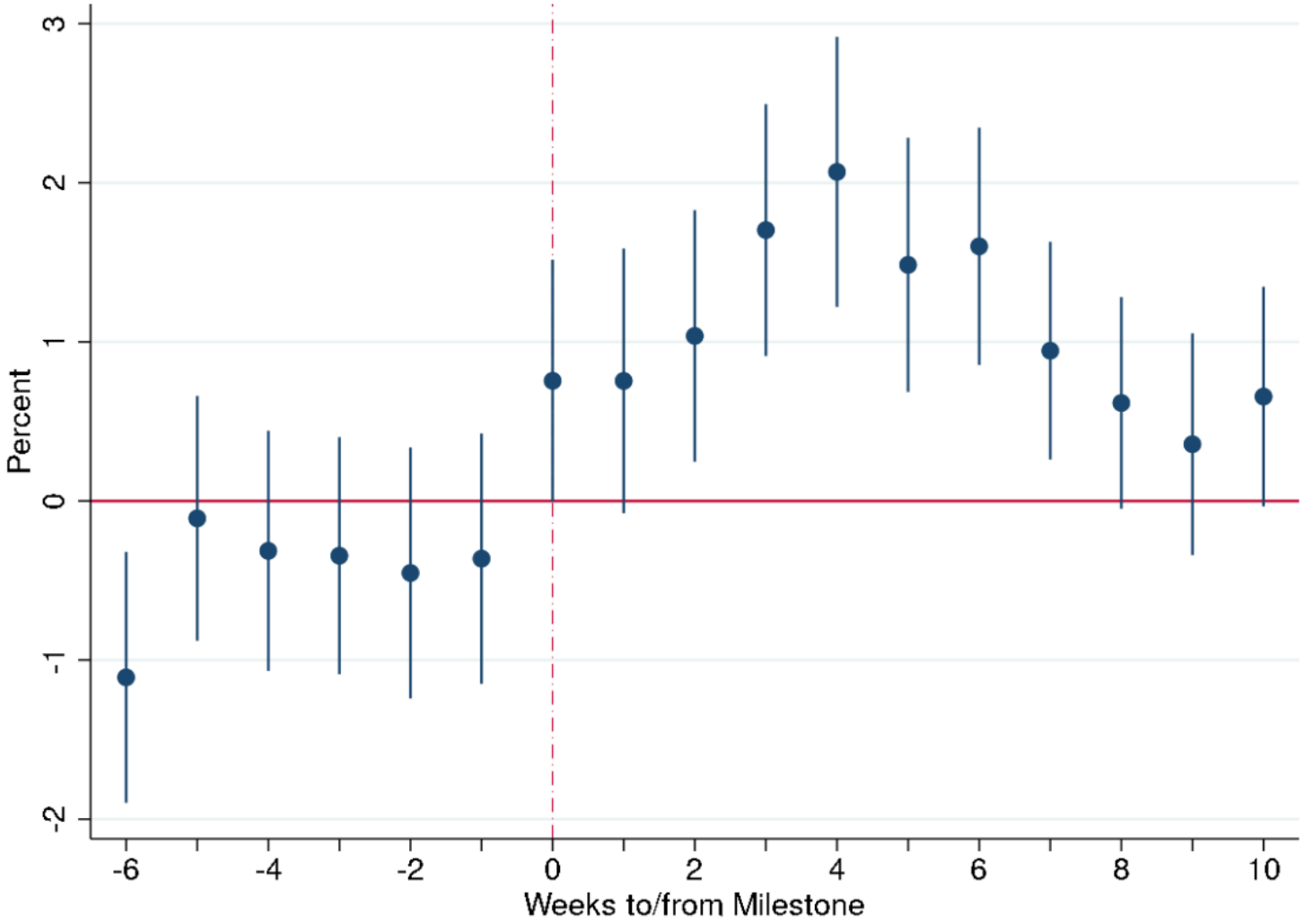
Impact of milestones on housing market

Intensive margin: Sample in zips with high equity holdings

	Loan Amount$_{i,b,w}$ (1)	Second Home$_{i,b,w}$ (2)	Home Value$_{i,b,w}$ (3)
$Pre_{5w-6w}*MS_w$	-1.10***	0.07	0.11
	(0.42)	(0.14)	(0.33)
$Pre_{3w-4w}*MS_w$	-0.52	0.17	-0.22
	(0.34)	(0.15)	(0.33)
$Pre_{1w-2w}*MS_w$	-0.39	0.32*	0.02
	(0.36)	(0.17)	(0.31)
Max_w*MS_w	0.07	0.37***	0.50*
	(0.41)	(0.12)	(0.31)
$Post_{1w-2w}*MS_w$	0.51	0.35***	0.14
	(0.41)	(0.12)	(0.32)
$Post_{3w-4w}*MS_w$	1.05**	0.38***	0.25
	(0.47)	(0.10)	(0.36)
$Post_{5w-6w}*MS_w$	0.99**	0.33***	0.52*
	(0.41)	(0.11)	(0.34)
$Post_{7w-8w}*MS_w$	0.44	0.39***	0.43
	(0.39)	(0.08)	(0.35)
$Post_{9w-10w}*MS_w$	0.23	0.44***	0.39
	(0.42)	(0.10)	(0.33)
$Post_{11w-12w}*MS_w$	-0.02	0.35***	0.55*
	(0.49)	(0.08)	(0.33)
Observations	62,857,797	62,857,797	6,871,703
R-squared	0.17	0.40	0.37
Macro Controls	Yes	Yes	Yes
MSA*Year FE	Yes	Yes	Yes
Bank*Year FE	Yes	Yes	Yes

Impact of milestones on housing market

Intensive margin: Sample in zips with high equity holdings



Milestone and Mortgage Application

Composition of Borrowers

- Is the composition of mortgage applicants affected by the milestone?
  - Income of applicants
  - FICO
- Does the risk-taking of mortgage applicants affected by milestones?
  - Loan to value
  - Interest rate
  - Delinquencies

Stock Market Movements

Impact on Mortgage Market - Specification

- Specification

$$Y_{i,m,b,t} = \alpha + \sum_w \beta_{max,w} Max_{w,t} + \sum_w \beta_{ms,w} MS_{w,t} + X_t + Zip*Qtr + Bank*Qtr + \varepsilon_{i,m,b,t}$$

$Y_{i,m,b,t}$	-	Characteristics of borrower *i* in region *m* of a loan given by bank *b*, in week *t*
$Max_{w,t}$	-	Dummy of a maximum *w* weeks to/from week *t*
$MS_{w,t}$	-	Dummy of a milestone *w* weeks to/from week *t*
X_t	-	Stock-market and macro controls at time *t*
*Zip*Qtr*	-	Zip*Quarter fixed-effects
*Bank*Qtr*	-	Bank*Quarter fixed-effects

- Milestone is also a maximum: $\beta_{ms,w}$ capture the additional effect of milestone

Impact of milestones on housing market

Risk characteristics of loans (loan-to-value ratio)

	Applicant Income$_{i,b,w}$	FICO$_{i,b,w}$	High LTV$_{i,b,w}$	Interest Rate$_{i,b,w}$	Default$_{i,b,w}$
	(1)	(2)	(3)	(4)	(5)
Pre$_{5w-6w}$*MS$_w$	0.26	0.78	-0.10	0.02	0.06
	(0.30)	(0.48)	(0.41)	(0.02)	(0.08)
Pre$_{3w-4w}$*MS$_w$	0.43	0.40	-0.03	0.02	0.23
	(0.32)	(0.54)	(0.32)	(0.02)	(0.16)
Pre$_{1w-2w}$*MS$_w$	0.04	0.93*	-0.18	0.04*	0.25
	(0.25)	(0.50)	(0.28)	(0.02)	(0.20)
Max$_w$*MS$_w$	-0.13	1.23***	0.22	0.02**	0.20**
	(0.22)	(0.47)	(0.35)	(0.01)	(0.08)
Post$_{1w-2w}$*MS$_w$	0.15	1.17**	0.67*	0.02**	0.26***
	(0.18)	(0.52)	(0.39)	(0.01)	(0.08)
Post$_{3w-4w}$*MS$_w$	0.33*	1.07**	1.03**	0.02**	0.27***
	(0.20)	(0.46)	(0.42)	(0.01)	(0.07)
Post$_{5w-6w}$*MS$_w$	0.42***	0.62	0.91**	0.02**	0.32***
	(0.16)	(0.47)	(0.38)	(0.01)	(0.09)
Post$_{7w-8w}$*MS$_w$	0.29*	0.47	0.98**	0.01	0.32***
	(0.16)	(0.36)	(0.40)	(0.01)	(0.07)
Post$_{9w-10w}$*MS$_w$	0.25	0.42	0.93***	0.01	0.39***
	(0.18)	(0.29)	(0.35)	(0.01)	(0.10)
Post$_{11w-12w}$*MS$_w$	0.25	-0.29	-0.03	0.02**	0.30***
	(0.17)	(0.36)	(0.44)	(0.01)	(0.07)
Observations	62,857,797	6,871,703	8,090,364	8,143,307	2,553,882
R-squared	0.26	0.15	0.07	0.79	0.07
Macro Controls	Yes	Yes	Yes	Yes	Yes
MSA*Year FE	Yes	Yes	Yes	Yes	Yes
Bank*Year FE	Yes	Yes	Yes	Yes	Yes

Impact on car market

	$CarSales_w$ (1)	$PriceNewCar_w$ (2)	$Purchases_w$ (3)	$Cash_w$ (4)	$PriceUsedCar_w$ (5)
$Pre_{3m}*MS_m$	0.05	0.33	0.21	-0.06	-0.86**
	(0.06)	(0.26)	(0.17)	(0.21)	(0.36)
$Pre_{2m}*MS_m$	0.13*	0.36	0.11	-0.33	-0.39
	(0.07)	(0.27)	(0.23)	(0.21)	(0.36)
$Pre_{1m}*MS_m$	0.08	0.29	0.08	0.17	-0.07
	(0.07)	(0.30)	(0.18)	(0.21)	(0.36)
Max_m*MS_m	0.14***	0.74***	0.36**	0.20	0.27
	(0.05)	(0.25)	(0.17)	(0.19)	(0.36)
$Post_{1m}*MS_m$	0.12*	0.70**	0.41*	0.43*	0.21
	(0.07)	(0.30)	(0.21)	(0.23)	(0.47)
$Post_{2m}*MS_m$	0.14**	0.08	0.45**	0.24	-0.15
	(0.07)	(0.26)	(0.20)	(0.22)	(0.46)
$Post_{3m}*MS_m$	-0.01	0.32	0.47**	0.17	-1.32***
	(0.06)	(0.24)	(0.21)	(0.22)	(0.41)
Observations	730	938	938	938	878
R-squared	0.57	0.80	0.95	0.93	0.82
Controls	Yes	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes	Yes
Avg(Dependent Variable)	-	-	79.5	24.5	-

Summary

- Stock market milestones
  - Increase in demand for housing
    - More loan applications, more likely to be second home, larger loans
  - Change in the composition of housing applications
    - Increase in mortgage applications of higher income, higher FICO, and in regions with higher equity holdings
  - Increase in leverage and worse loan performance
    - Loan-to-income and loan-to-value ratios rise, and higher likelihood of delinquency
  - Increase housing price index

Mechanisms

1. Wealth effect vs attention effect

- **Wealth effect:** Stock market milestones indicating historical maxima increase equity holders' wealth. With larger amounts of wealth, equity holders tend to buy houses, increasing mortgage demand.
- **Attention effect:** Stock market milestone is an attention-grabbing event, reminding equity holders about wealth increase.

- The attention effect amplify the wealth effect:
  - Implication: milestone events would have larger effects on housing demand than other historical maximum events

Recall: Difference between milestone event and non-milestone historical maximum

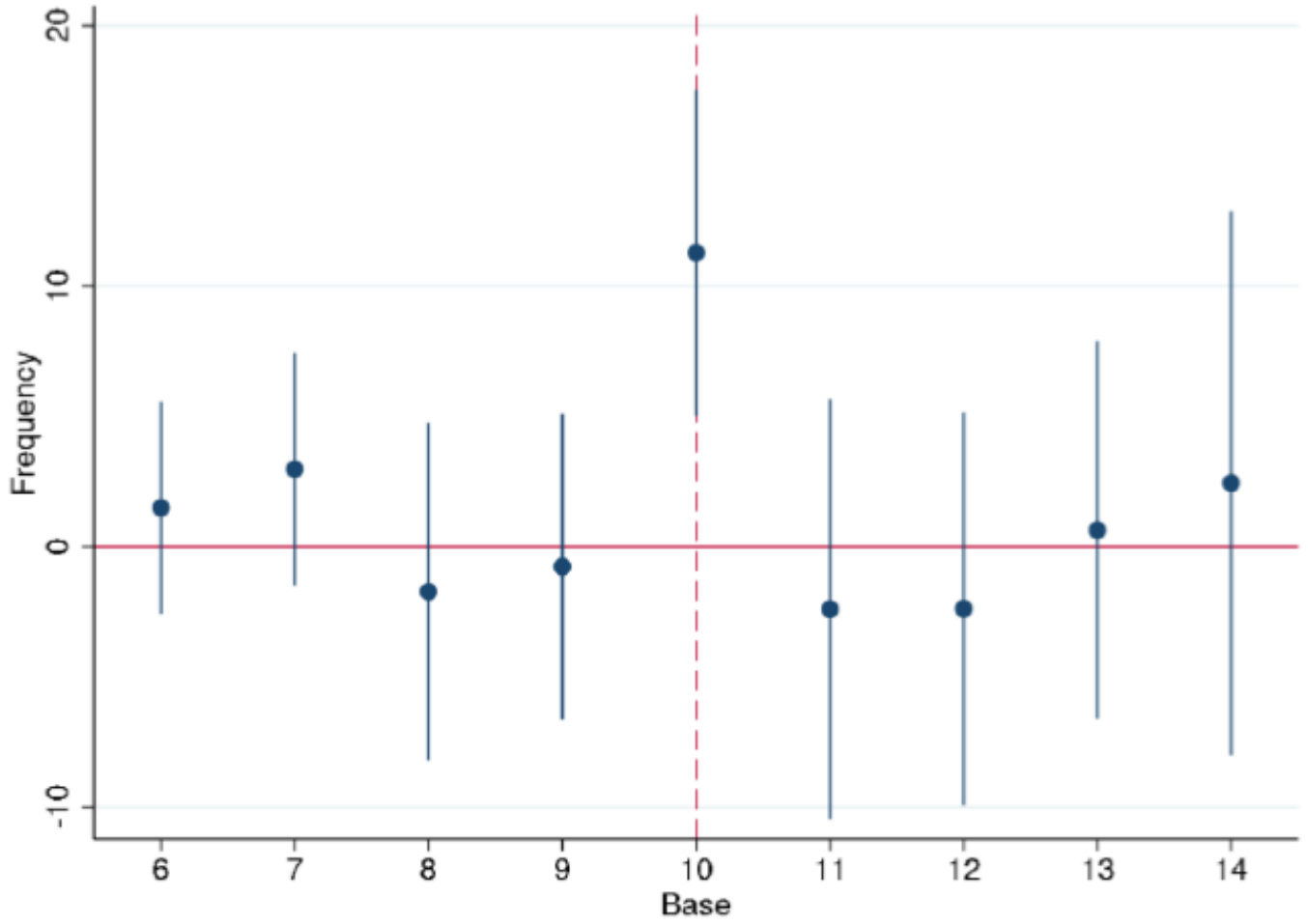
Attention effect

- The additional effect of milestone event while controlling for the effect of non-milestone historical maximum event is attention effect.

	TV_w (1)	$Newspapers_w$ (2)	$Searches_w$ (3)	$Bullish_w$ (4)
$Pre_{5w-6w}*MS_w$	-5.14**	0.00	-0.08	2.54*
	(2.49)	(0.02)	(0.39)	(1.47)
$Pre_{3w-4w}*MS_w$	-1.61	0.01	-0.65	1.90
	(2.02)	(0.02)	(0.40)	(1.54)
$Pre_{1w-2w}*MS_w$	2.08	-0.01	0.39	0.69
	(3.05)	(0.02)	(0.64)	(1.53)
Max_w*MS_w	9.33***	0.08***	0.80***	2.67*
	(2.71)	(0.03)	(0.31)	(1.55)
$Post_{1w-2w}*MS_w$	5.61**	-0.00	0.35	3.61**
	(2.48)	(0.02)	(0.40)	(1.69)
$Post_{3w-4w}*MS_w$	5.44*	0.03	0.52	2.33*
	(3.10)	(0.02)	(0.45)	(1.39)
$Post_{5w-6w}*MS_w$	7.80**	0.09***	-0.03	3.03**
	(3.17)	(0.03)	(0.34)	(1.53)
$Post_{7w-8w}*MS_w$	1.89	-0.00	-0.65**	1.36
	(2.39)	(0.02)	(0.30)	(1.30)
$Post_{9w-10w}*MS_w$	1.17	0.05***	0.12	-0.41
	(2.24)	(0.02)	(0.48)	(1.25)
$Post_{11w-12w}*MS_w$	0.62	0.03*	0.23	-1.76
	(2.44)	(0.02)	(0.30)	(1.27)
Observations	1,115	415	697	1,113
R-squared	0.66	0.28	0.62	0.41
Macro Controls	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes
Average Dependent Variable	9.3	0.1	63.7	40.0

Difference between milestone event and non-milestone historical maximum

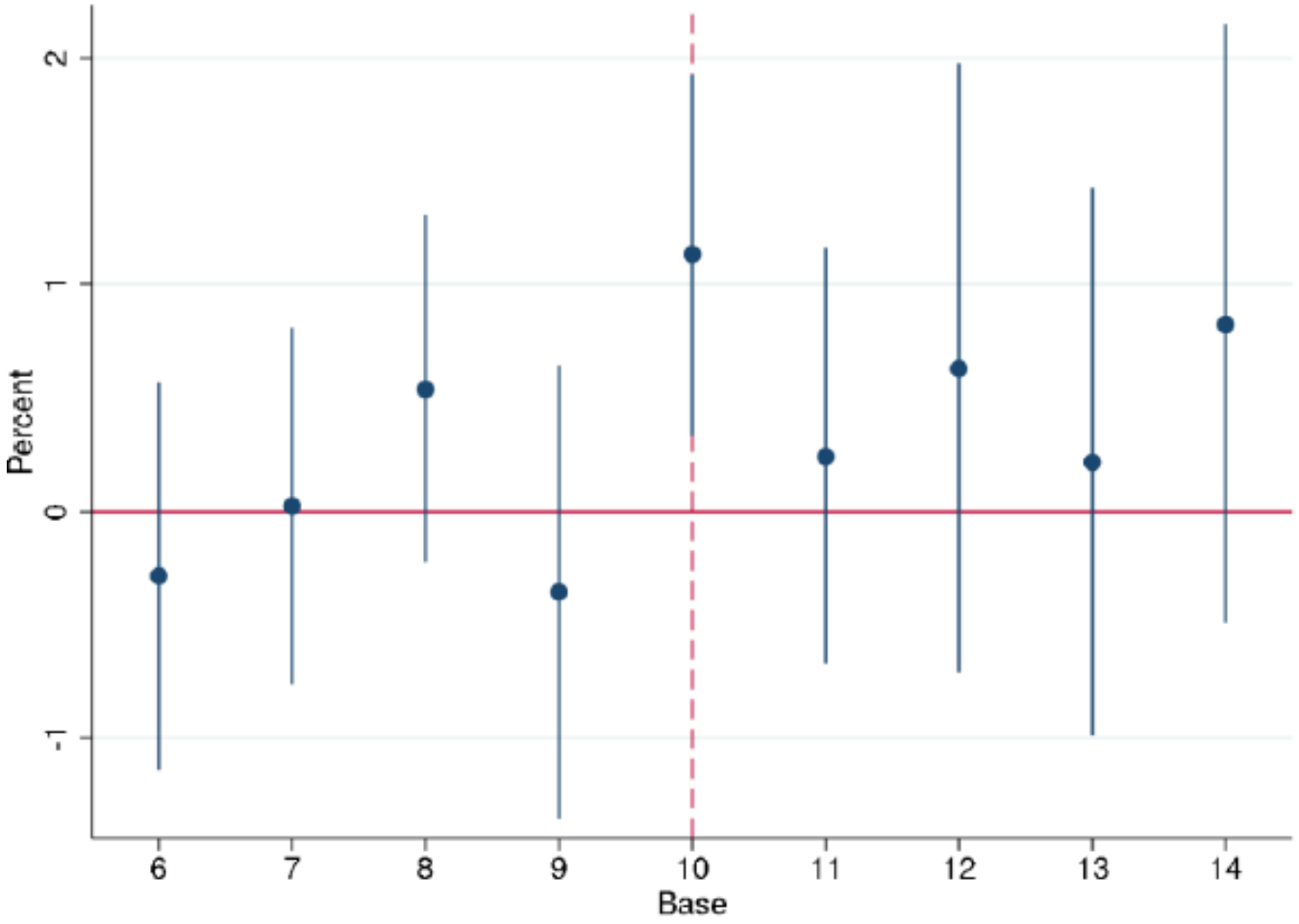
Attention effect: Milestone and media exposure - Placebo



Note: In base 9, the first round number "1000" is 9^3 = 729 in base 10. In base 11, the first round number "1000" is 11^3=1331 in base 10.

Difference between milestone event and non-milestone historical maximum

Attention effect: Milestone and loan value - Placebo



Note: In base 9, the first round number "1000" is 9^3 = 729 in base 10. In base 11, the first round number "1000" is 11^3=1331 in base 10.

2. Other policies: Interest rate expectation and macro prediction

- The stock milestone might be corelated with the change in expectations of interest rate or macroeconomics affects housing demand.
- Two additional tests:
- If our results are driven by the stock market, the increase in stock market should have different impact on households with varying degrees of exposure to the stock market.
  - We show it is driven by zips with high equity holdings
- The expectation of future interest should also affect home refinance
  - We show that there is no effect on refinance

Recall: Impact of milestones on housing market

Extensive margin: number of mortgage

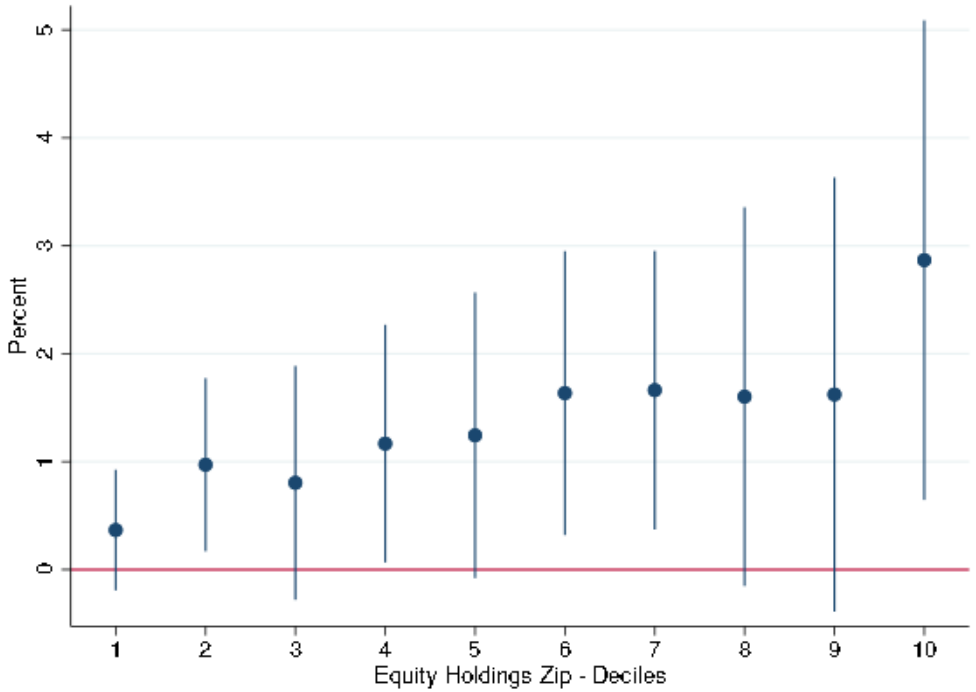
	$NumberLoans_{w,g}$			
	(1)	(2)	(3)	(4)
$Pre_{2m}*MS_m$	0.01	0.02	0.00	0.00
	(0.03)	(0.03)	(0.03)	(0.03)
$Pre_{1m}*MS_m$	-0.01	-0.00	-0.04*	-0.04*
	(0.03)	(0.03)	(0.03)	(0.03)
Max_m*MS_m	0.08*	0.09*	-0.02	-0.02
	(0.05)	(0.05)	(0.03)	(0.03)
$Post_{1m}*MS_m$	0.11*	0.11*	-0.03	-0.03
	(0.06)	(0.06)	(0.03)	(0.03)
$Post_{2m}*MS_m$	-0.01	-0.00	-0.00	-0.01
	(0.05)	(0.05)	(0.03)	(0.03)
$Post_{3m}*MS_m$	0.11***	0.11**	0.03*	0.03
	(0.04)	(0.04)	(0.02)	(0.02)
Observations	975	975	851	851
R-squared	0.97	0.97	0.92	0.92
Year FE	Yes	Yes	Yes	Yes
Weekly Controls	No	Yes	No	Yes
Sample	High Equity	High Equity	Low Equity	Low Equity

Difference between milestone event and non-milestone historical maximum

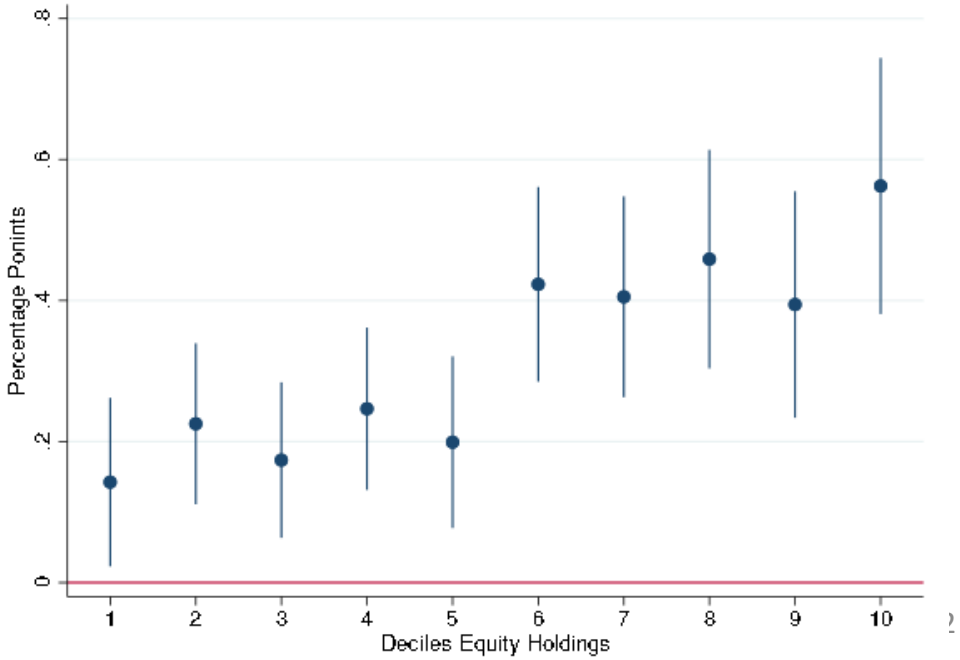
Mortgage applicants: equity holders

	Equity Holdings$_{i,b,w}$				
	(1)	(2)	(3)	(4)	(5)
Pre_{5w-6w}*MS_w	-0.05	-0.07	-0.07	-0.01	0.01
	(0.06)	(0.06)	(0.08)	(0.04)	(0.04)
Pre_{3w-4w}*MS_w	0.01	0.01	-0.00	0.02	-0.04
	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)
Pre_{1w-2w}*MS_w	0.02	0.02	-0.03	-0.05	-0.08
	(0.07)	(0.06)	(0.07)	(0.05)	(0.05)
Max_w*MS_w	0.06	0.05	-0.01	-0.02	-0.01
	(0.08)	(0.08)	(0.07)	(0.05)	(0.05)
$Post_{1w-2w}$*MS_w	0.23***	0.17**	0.14*	0.08	0.08*
	(0.08)	(0.07)	(0.07)	(0.05)	(0.04)
$Post_{3w-4w}$*MS_w	0.31***	0.25***	0.21***	0.12**	0.12***
	(0.08)	(0.08)	(0.07)	(0.05)	(0.04)
$Post_{5w-6w}$*MS_w	0.28***	0.25***	0.19***	0.12**	0.09*
	(0.06)	(0.07)	(0.07)	(0.05)	(0.05)
$Post_{7w-8w}$*MS_w	0.21***	0.19***	0.11*	0.10**	0.06
	(0.06)	(0.07)	(0.06)	(0.04)	(0.05)
$Post_{9w-10w}$*MS_w	0.12**	0.09	0.02	0.04	0.01
	(0.05)	(0.06)	(0.06)	(0.05)	(0.05)
$Post_{11w-12w}$*MS_w	0.22***	0.20***	0.13*	0.09**	0.02
	(0.06)	(0.06)	(0.07)	(0.05)	(0.05)
Observations	62,131,007	62,131,007	62,130,144	62,113,854	30,371,906
R-squared	0.16	0.16	0.18	0.26	0.24
Macro Controls	No	Yes	Yes	Yes	Yes
MSA FE	Yes	Yes	-	-	-
Year FE	Yes	Yes	-	-	-
MSA*Year FE	No	No	Yes	Yes	Yes
Bank*Year FE	No	No	No	Yes	Yes
Borrower Controls	No	No	No	Yes	Yes
Applicant Income	All	All	All	All	>$75,000
Average(EquityHoldings$_{i,b,w}$)	27.1	27.1	27.1	27.1	40.2

Home Equity Loan:
Results driven by zips with high equity holdings



Second Home Application:
Results driven by zips with high equity holdings



Difference between milestone event and non-milestone historical maximum

Mortgage mortgage loan value for refinancing

	Loan Amount$_{i,b,w}$			
	(1)	(2)	(3)	(4)
Pre_{5w-6w}*MS_w	-1.00	-0.26	-0.24	-0.08
	(0.83)	(0.61)	(0.60)	(0.41)
Pre_{3w-4w}*MS_w	-2.54	-0.55	-0.49	0.08
	(1.86)	(0.80)	(0.85)	(0.51)
Pre_{1w-2w}*MS_w	-1.89**	-0.71	-0.65	0.17
	(0.87)	(0.65)	(0.71)	(0.45)
Max_w*MS_w	-2.26**	-0.87	-0.87	-0.28
	(0.90)	(0.71)	(0.78)	(0.47)
$Post_{1w-2w}$*MS_w	-2.52***	-0.94	-0.95	-0.31
	(0.96)	(0.61)	(0.68)	(0.50)
$Post_{3w-4w}$*MS_w	-1.95*	0.33	0.21	0.35
	(1.03)	(0.69)	(0.76)	(0.56)
$Post_{5w-6w}$*MS_w	-2.33**	-0.19	-0.15	0.13
	(1.04)	(0.63)	(0.71)	(0.45)
$Post_{7w-8w}$*MS_w	-2.14*	-0.17	-0.16	0.26
	(1.22)	(0.79)	(0.87)	(0.55)
$Post_{9w-10w}$*MS_w	-1.61	-0.17	-0.09	0.28
	(1.05)	(0.73)	(0.79)	(0.45)
$Post_{11w-12w}$*MS_w	-1.08	0.06	0.15	0.05
	(1.03)	(0.68)	(0.71)	(0.39)
Observations	124,471,259	124,471,259	124,471,186	120,398,330
R-squared	0.26	0.26	0.27	0.42
Controls	Yes	Yes	Yes	Yes
MSA FE	Yes	Yes	-	-
Time FE	Yes	Yes	-	-
MSA*Time FE	No	No	Yes	Yes
Bank*Time FE	No	No	No	Yes

3. Bank credit supply and demand

HMDA data include both loan application and loan approval

	$Approval_{i,b,w}$			
	(1)	(2)	(3)	(4)
$Pre_{5w-6w}*MS_w$	-0.71**	-0.45**	-0.36	-0.50**
	(0.32)	(0.20)	(0.24)	(0.22)
$Pre_{3w-4w}*MS_w$	-0.45	-0.53*	-0.62**	-0.50*
	(0.37)	(0.29)	(0.29)	(0.30)
$Pre_{1w-2w}*MS_w$	-0.38	-0.47*	-0.38	-0.48
	(0.41)	(0.28)	(0.33)	(0.30)
Max_w*MS_w	-0.23	-0.20	0.02	-0.33
	(0.43)	(0.27)	(0.30)	(0.27)
$Post_{1w-2w}*MS_w$	-0.11	-0.22	0.11	-0.39**
	(0.35)	(0.16)	(0.20)	(0.16)
$Post_{3w-4w}*MS_w$	0.01	-0.39***	-0.06	-0.56***
	(0.37)	(0.15)	(0.22)	(0.15)
$Post_{5w-6w}*MS_w$	0.42	-0.17	0.05	-0.32**
	(0.30)	(0.13)	(0.21)	(0.15)
$Post_{7w-8w}*MS_w$	0.24	-0.31*	-0.34	-0.31*
	(0.27)	(0.16)	(0.23)	(0.18)
$Post_{9w-10w}*MS_w$	0.13	-0.38*	-0.26	-0.46**
	(0.23)	(0.22)	(0.26)	(0.23)
$Post_{11w-12w}*MS_w$	0.03	0.20	0.17	0.24
	(0.19)	(0.21)	(0.22)	(0.22)
Observations	62,267,349	62,197,018	62,435,503	59,701,120
R-squared	0.07	0.25	0.31	0.18
Controls	Yes	Yes	Yes	Yes
MSA FE	Yes	Yes	-	-
Time FE	Yes	Yes	-	-
MSA*Time FE	No	No	Yes	Yes
Bank*Time FE	No	No	No	Yes

Conclusion

- Crossing milestones increase demand for housing in the extensive and intensive margin
- Composition of borrowers:
  - Have high equity holdings, high income, and high FICO scores
  - Are riskier with higher interest rate, LTV, and DTI, and more likely to default in the two years after loan originations.
- Increase in housing demand leads to rise in housing price
- These findings are consistent with attention affects rather than pure wealth effects.
  - Stock-market milestones increase news and awareness on equity performance

Appendix

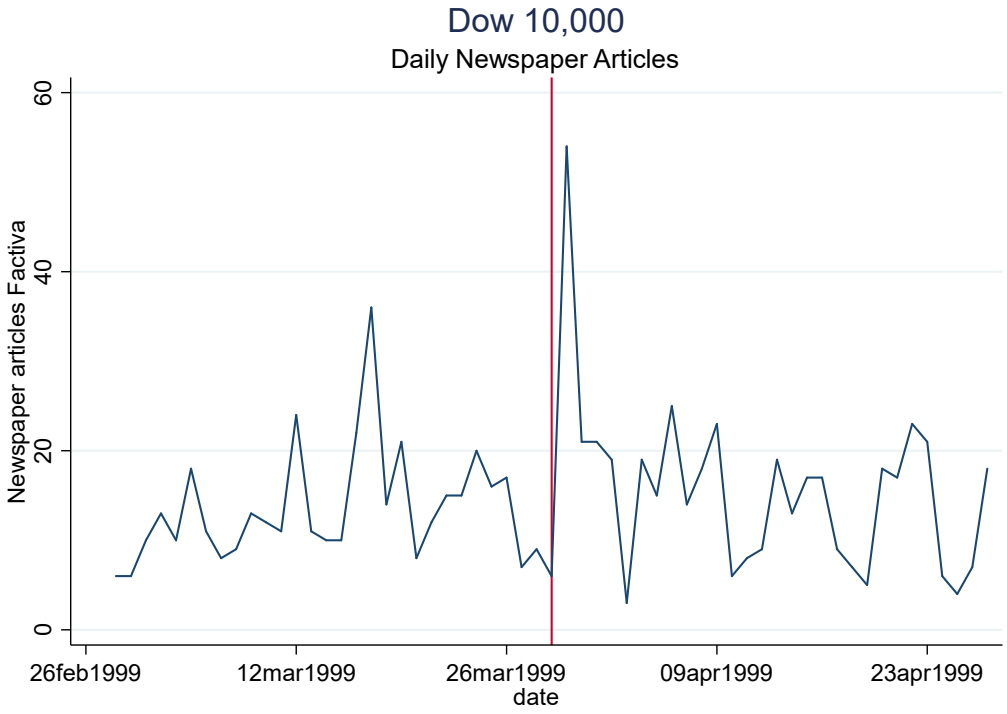
Mentions in Media	
$Newspapers_w$	Number of mentions in week *w* for mentions of "Dow Jones Industrial Average" and related queries, for six newspapers (Boston Globe, Chicago Tribune, New York Times, Wall Street Journal, LA Times, and Washington Post). Data obtained from ProQuest.
TV_w	Frequency of mentions in week *w* in CNN, Fox, and MSNBC of the terms "Stock Market" or "Dow". Data obtained from GDELT Project.
$Searches_w$	Frequency of searches in of the term "Stock Market" or "Dow" in week *w*. Data obtained from Google Trends
Stock Market Variables	
Max_w	Indicator that the Dow-Jones Index reached an historical maximum in week *w*.
MS_w	Indicator that the Dow-Jones Index reached a maximum and a milestone in week *w*.
$PE\text{-}Ratio_w$	Price-to-Earnings ratio of Dow-Jones index in week w
$PreGrowth\text{-}z_w$	Growth rate of the Dow-Jones Index in week w over the previous z weeks.
$PostGrowth\text{-}z_w$	Growth rate of the Dow-Jones Index in week w over the following z weeks.
$Equity_{m,y}$	Share of households in MSA m in year y that have taxable returns from equities, from IRS.
Housing Variables	
$Approval_{i,b,w}$	Indicator of whether loan application *i* made to bank *b* in week *w* was approved. Data obtained from HMDA.
$AppIncome_{i,b,w}$	Household income of applicant of loan *i* to bank *b* in week w (in logs). Data collected from HMDA.
$LoanValue_{i,b,w}$	Value of the loan i extended by bank b in week w (in logs). Data collected from HMDA.
$Loan\text{-}to\text{-}Income_{i,b,w}$	Ratio of loan to income of loan *i* extended by bank *b* in week w. Data collected from HMDA.
$Non\text{-}Conventional_{i,b,w}$	Indicator of loan with less than 20 percent of down payment
$Late_{i,b,w}$	Indicator that loan i extended by bank b in week w will become delinquent within two years of its origination.
$Late\text{-}HighFICO_{i,b,w}$	Indicator of loan late in the 2 years following start for individuals FICO above 720
$HomeValue_{i,b,w}$	Appraisal value of the home of loan *i* extended by bank *b* in week w (in logs). Data obtained from McDash.
$HousePriceIndex_{z,m}$	Repeat sales, value weighted, econometric Home Price Model Index of zipcode z in month m obtained from CoreLogic.
Equifax Variables	
$Credit_{i,m}$	Total outstanding credit (in logs) of individual *i* in quarter *q*. It is the sum of mortgage loan, home-equity loan, HELOC, credit card, auto loan and retail credit.
$Revolving\ Credit_{i,m}$	Total revolving credit (in logs) of individual *i* in quarter *q*. It is the sum of HELOC, credit card debt, and retail credit.

Stock-Market Movements: House Prices

- If there is an increase in demand for housing, we should observe an increase in prices
- We use monthly information on prices from CoreLogic
- Information is at the month-zipcode level
- Specification as before, but controls and coefficients at monthly frequency

	$HousePriceIndex_{z,m}$			
	(1)	(2)	(3)	(4)
$Pre_{1m}*MS_m$	-0.16	-0.38	-0.18	-0.07
	(0.47)	(0.58)	(0.47)	(0.44)
Max_m*MS_m	0.55*	0.65*	0.58*	0.48
	(0.32)	(0.39)	(0.32)	(0.31)
$Post_{1m}*MS_m$	0.15	0.12	0.15	0.16
	(0.36)	(0.41)	(0.36)	(0.35)
Observations	330,537	43,259	142,205	145,073
R-squared	1.00	1.00	1.00	1.00
Controls	Yes	Yes	Yes	Yes
Zip-Year FE	Yes	Yes	Yes	Yes
Sample	All	Low Equity	Mid Equity	High Equity

Dow 10,000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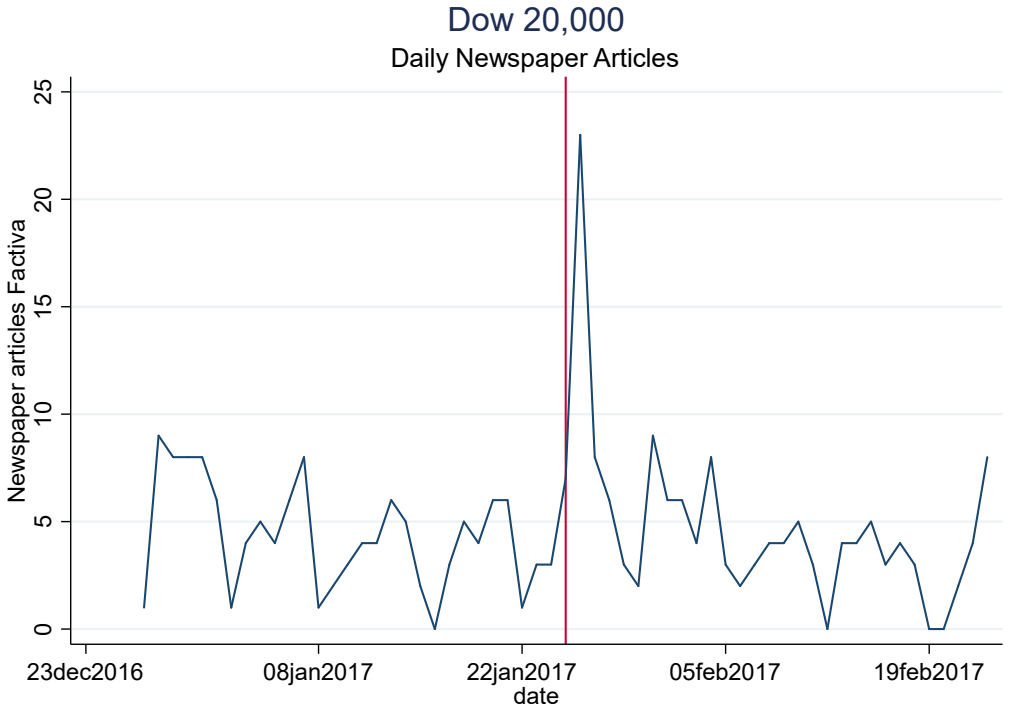
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Dow 10,000

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What's News—

Business and Finance

THE DOW JONES INDUSTRIALS closed above 10000 for the first time, marking a milestone in the long bull market. Blue-chip stocks surged 184.54 points, or 1.88%, to 10006.78, in a broad advance driven by oil and financial stocks. The Nasdaq composite rose 3.05%, and the S&P 500 climbed 2.13%. The average now stands more than 300% above its level of October 1990, reflecting both rare economic health and rich stock valuations. (Article on Page C1 and in Column 6)

* * *

Computer Associates agreed to acquire competitor Platinum Technology for $3.5 billion, in a deal that will combine two large makers of software for big corporate computer systems. (Article on Page A3)

* * *

Coke said world-wide case volume in the first quarter is expected to decline amid foreign turmoil and tough year-to-year comparisons, jarring analysts who expected a slight rise. (Article on Page A3)

* * *

BP Amoco and Arco confirmed they are in merger talks, and a deal could be unveiled as soon as tomorrow, according to people close to the negotiations. Both firms' shares jumped. (Article on Page B4)

* * *

A computer virus called Melissa doesn't appear to have caused any serious damage, but it spread considerable alarm quickly, and security experts are warning of future threats. (Article on Page B1)

* * *

Microsoft will split into five new divisions that will be given increased independence in responding to customers and attacking competitors.

Talks between Microsoft and federal and state governments aren't likely to yield a quick settlement. (Articles on Page B1)

* * *

Bank One is eliminating as many

World-Wide

NATO CAME UNDER pressure to do more as the slaughter in Kosovo worsened. Albania and Macedonia appealed for help as refugees, bearing tales of atrocities amid the forced expulsion, flooded in. NATO said Serbs are targeting the ethnic Albanian leadership for executions and the U.S. accused Milosevic of "crimes against humanity." The Pentagon sent B-1 bombers to the region; tank-killing aircraft were reported taking off from Italy. Belgrade says it has shot down seven planes so far, but allies say they have lost one, the F-117 that went down Saturday. (Articles on Pages A18 and A21)

Yeltsin sent Primakov to Serbia to seek talks, but Western leaders see it as a bid to split allied unity. Russia said the IMF agreed to restart its aid program.

* * *

The U.S. trade representative begins a series of meetings in Beijing today on concessions that could open the door to Chinese membership in the WTO. Some administration officials are ambivalent about the effort, fearing a deal may anger Congress and labor. (Article on Page A2)

* * *

A Lockheed antimissile system failed its sixth test in a row, throwing an unflattering light on the Theater High-Altitude Area Defense program during a political debate on building a national missile defense. The firm also announced it plans to cut 1,200 jobs at its rocket unit. (Article on Page A3)

* * *

Paraguay's ousted president was given asylum by Brazil after a would-be coup leader blamed in last week's killing of Paraguay's vice president was given asylum in Argentina. Raul Cubas quit as president Sunday amid mounting unrest. Senate chief Luis Gonzalez Macchi has succeeded him.

* * *

A Marine navigator pleaded guilty to obstruction and conspiracy charges for destroying a videotape made during a flight aboard an EA-6B Prowler that clipped a ski-lift cable in Italy last year, killing 20 people. Manslaughter charges against Capt. Joseph Schweitzer were thrown out earlier.

* * *

Terry Nichols was charged with first-degree murder by Oklahoma and could face the death penalty for his role in the 1995 Oklahoma City bombing that killed 168. Nichols is serving a life sentence following his conviction on federal charges arising from the

Dow Industrials Top 10000

Longest Bull Market On Record Smashes A Historic Barrier

Yes, the Values Are Dizzying. But They Also Reflect Economy's Rare Strength

By Greg Ip
Staff Reporter of The Wall Street Journal

The Dow Jones Industrial Average closed above 10000 for the first time yesterday, capturing in a single number both the astonishing success and giddy exuberance of the U.S. economy this decade.

In reaching the once-unthinkable milestone, the industrial average now stands more than 300% above its level of October 1990, when by common reckoning the current bull market began. It is up nearly 1,200% since 1982, when the taming of inflation unleashed a long-term rise in stock prices.

In the Dow's 103-year history, there has never been another bull market so long and

The Economy

If This Is a Bubble, It Sure Is Hard to Pop

But for Gains to Continue, Inflation, Unemployment Must Remain in Balance

By David Wessel
Staff Reporter of The Wall Street Journal

Maybe the stock market isn't crazy.

Oh, it's easy enough to make the case that the market is ridiculously high. By almost any measure devised by man or computer, stocks are pricier than they've been in decades.

Compare stock prices to corporate earnings or dividends or the book value of assets, and they are at levels not seen in more than 100 years. A chart of almost any market gauge "looks like a geyser erupting,"

this out for years. And they have been spectacularly wrong—so far.

The manager of the world's largest mutual fund, Fidelity Magellan Fund, bet billions that the bull market was over at the end of 1995. The Dow Jones Industrial Average has doubled since then, and he is no longer at Fidelity. Prof. Shiller declared in July 1996, "We appear to be flying at the wrong altitude, and a correction could be substantial and lasting." The Dow has risen 87% since then. Federal Reserve Chairman Alan Greenspan uttered the most memorable phrase of his career—"irrational exuberance"—in December 1996. Since then, the industrial average has climbed 55%.

Perhaps those predictions were right, just very premature. Or maybe we have entered a new era of prosperity and profits that represents such an extraordinary

sity economist who thought up index mutual funds. "This is essentially unpredictable."

Maybe it's better to pose the question this way: What would have to happen for the Dow to make sense at 10000, and for stocks to keep climbing from here?

The short answer: Everything has to go right.

The U.S. economy has to keep cruising along without hitting a recessionary pothole or overheating in a burst of inflation that prompts the Fed to slam on the interest-rate brakes. Long-term interest rates have to stay down. And global investors—from mega-money managers to ordinary folks salting away $20 a week in mutual funds—have to maintain their affection for U.S. stocks.

"We've had a run in the stock market that is unprecedented," says John J. Brennan, chief executive of Vanguard Group,

The First 10,000 Points

Once considered unlikely in this century, the Dow industrials' climb past 10000 yesterday came less than 3½ years after the first close above 5000. On page C1, see a chart of the average starting with its birth in 1896. In related coverage:

- **Market bulls predict further gains from here. Heard on the Street, C1.**
- **How the prices of the 30 Dow stocks add up to the 10000-plus finish, C14.**
- **Mutual funds had a big role in the long run to yesterday's milestone, C14.**
- **Voices in the crowd, from Sandy Weill to a day trader, speak out, C14-15.**
- **The roots of the index include Messrs. Dow and Jones and a third man, C15.**

only one so powerful, the one that ended i 1929. It has smashed through every stan dard benchmark for valuing stocks, inspi ing awe but also no little anxiety.

In doing so, the market has penetrated fa more than the trading rooms of Wall Street; has become woven into the fabric of U.S. life A record share of Americans participate the market, either directly with stocks or directly through mutual funds, and a reco share of their wealth is tied up in stocks.

Dow 15,000

Market Week Pullout
After Banks' $25 Billion Settlement, JPMorgan Looks Good Page M3
BARRON'S
The Dow Jones Business and Financial Weekly
www.barrons.com
February 13, 2012
$5.00
SPECIAL PULLOUT
ETF ROUNDTABLE
ALAN ABELSON • 4
No arguing with this Gallup Poll
MICHAEL SANTOLI • 9
The market rerun you wouldn't enjoy
BREAKING THE BUCK? • 16
Regulation jitters roil money funds
REBORN, RETOOLED • 19
Auto supplier Dana gets back in gear
OVERPRICED • 20
Is Caesars a sucker's bet?
BANK STRESS TESTS • 28
Be aware of the ides of March
CEO SPOTLIGHT • 40
The man who reshaped AmEx
DOW 15,000
If Europe gets its debt crisis under control and the U.S. economy keeps growing, we could easily see Dow 15,000 by the end of next year. American companies are in terrific shape, and history strongly suggests that stocks are ready to break to new highs.
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Dow 20,000

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DOW JONES | Newsstand

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What's News

Business & Finance

The Dow industrials closed above 20000 for the first time, fueled by a rally that began in 2009 as a bounce from the depths of the financial crisis, grew into a steady ascent and was then turbocharged by November's presidential vote. **A1, A9-A12**

◆ **Harvard's endowment** plans to outsource management of most of its assets and lay off roughly half the staff, in a radical overhaul. **B1**

◆ **Snap is seeking** 2017 spending commitments of $100 million to $200 million each from several big advertising companies. **B1**

◆ **Amazon has begun** handling seaborne shipments to its U.S. warehouses from Chinese merchants selling on its site. **B1**

◆ **Apple is nearing** a deal to manufacture its products in India, as the company seeks to boost its sales there. **B4**

◆ **Boeing posted** forecast-beating quarterly earnings and signaled continuing momentum in cash flow and profit. **B3**

◆ **Novartis is considering** spinning off its ailing eye-care business Alcon. **B3**

◆ **Facebook is overhauling** its "trending topics" box, part of an effort to curb fake news and expose users to a broader range of information. **B4**

◆ **J.P. Morgan struck** a deal to be the custodian for more than $1 trillion of BlackRock's assets, poaching the business from State Street. **B5**

◆ **The NYSE is introducing** a "speed bump" on one of its marketplaces in a bid to target the same customers as upstart exchange IEX. **B11**

World-Wide

◆ **Trump ordered** stepped-up deportations and a rapid start on building a wall on

Dow Tops 20000

Milestone reached amid hopes for federal spending; Last 1,000 points come in just 42 days

By Aaron Kuriloff, Corrie Driebusch and Akane Otani

The Dow Jones Industrial Average closed above 20000 for the first time Wednesday, fueled by a remarkable rally that began in 2009 as a bounce from the depths of the financial crisis, grew into a steady ascent and was then turbocharged by November's presidential election.

President Donald Trump's moves during his first week in office to promote infrastructure projects and cut regulation helped propel the 120-year-old index of 30 stocks over its latest milestone, as investors bet that he would follow through with business-friendly plans like cutting taxes and increasing government spending.

The Dow industrials raced past 20000 when the market opened Wednesday and held on to the gains throughout the session, closing up 155.80 points, or 0.8%, at 20068.51. The S&P 500 and Nasdaq Composite also reached records Wednesday.

Applause, whoops and cheers erupted on the floor of the New York Stock Exchange as the market closed. "It's been a long time coming," said Peter Tuchman, a veteran floor broker at the NYSE, who wore a cap with "Dow 20,000" emblazoned on it for the occasion. "We're all excited, but exhausted."

The Dow took almost 103 years to reach 10000 in March 1999. Reaching 20000 required nearly 18 years more.

And the last part of that climb was swift: It took the blue-chip index just 42 trading days to jump from its first close above 19000 to 20000—the second-fastest thousand-point gain in the index's history, after its 24-day climb from 10000 to 11000 during the dot.com boom in 1999.

The Dow industrials notched

Please see DOW page A10

Resurgent Appetite for Risk Has Fragile Economic Foundation

By Greg Ip

DOW 20000

An in-depth look at the latest market milestone

A9-A12

ANALYSIS

Britain is leaving the European Union, a protectionist is in the White House, the front-runner in France's presidential election wants out of the euro. Yet paradoxically, investors have concluded the world is getting less risky, not more. The result: a hunger for shares that carried the Dow Jones Industrial Average over the 20000 mark Wednesday for the first time.

It is hard to explain this with economic fundamentals. They have improved since Donald Trump's improbable election victory in November, but not by much. After the election, economists surveyed by The Wall Street Journal added 0.3 percentage point to expected growth over the next two years. At their December meeting, Federal Reserve officials barely touched their growth forecast. Analysts' profit estimates haven't changed much either.

What has changed is how investors assess the balance between upside and downside risks. Their worries about Mr. Trump's protectionism or Euro-

Please see INVEST page A9

The Dow Jones Industrial Average From the Beginning

Official level of the DJIA since 1896

Note: Chart shows monthly data except most recent close. Source: WSJ Market Data Group

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Dow 20,000

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NYSE
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Dow 23,000

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Another Milestone
Dow Jones Industrial Average crosses sixth round-number threshold in 12 months
Dow Jones Industrial Average
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Source: Bloomberg
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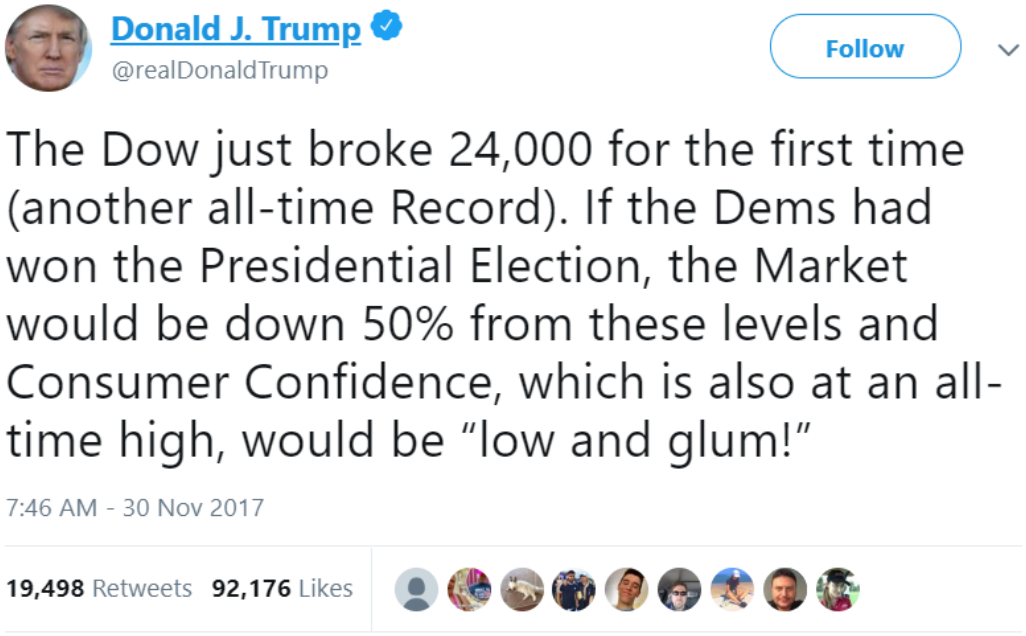
Dow 24,000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The Dow just broke 24,000 for the first time (another all-time Record). If the Dems had won the Presidential Election, the Market would be down 50% from these levels and Consumer Confidence, which is also at an all-time high, would be "low and glum!"
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Dow 25,000…x2

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Dow just broke 25,000. Tremendous news!
107K 4:54 PM - Jan 30, 2019
28,000
25,000
22,000
20,000
Jan. 2018
Jul. 2018
Jan. 2019

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Dow Jones hits 30,000 as Wall Street bets on 2021 bounce

By Reuters Staff

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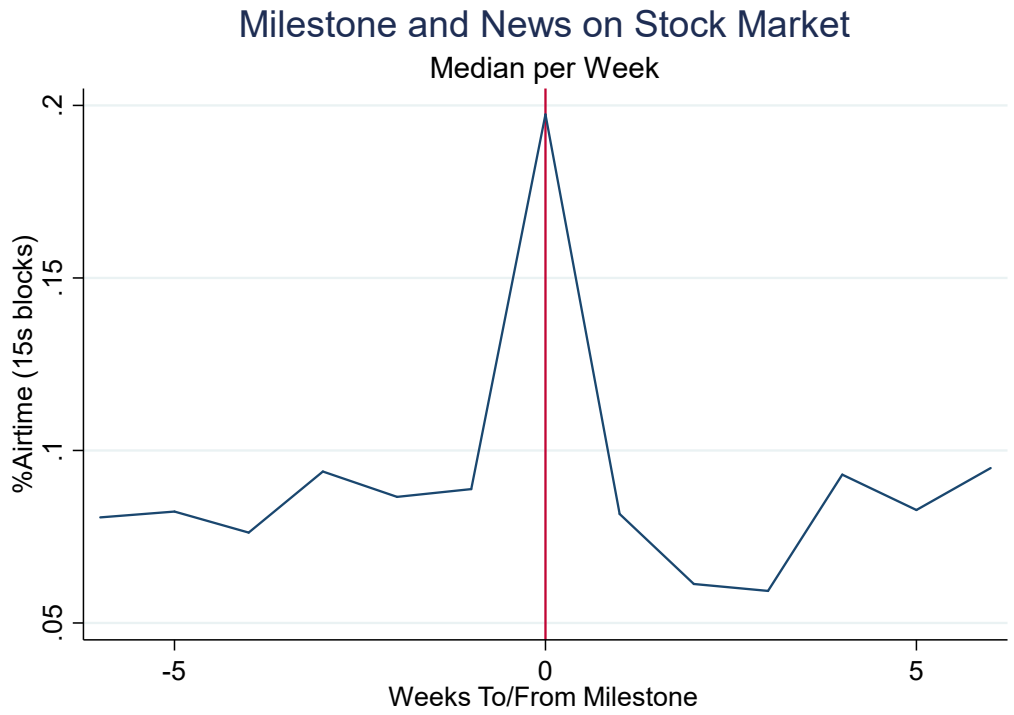
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