

200 Years Of The U.S. Stock Market

Professor John McConnell

Krannert School of Management
Purdue University

September 25, 2018

200 Years Of The U.S. Stock Market

- Market Overview
 - The long term
 - The averages
 - Crashes
 - Bulls
- Some Simple Strategies
 - Small vs. Big
 - Value vs. Growth
- Some Market Regularities
 - January Barometer
 - Turn-of-the-Month
 - January Effect
 - Republicans vs. Democrats
- The Evolving Market
 - Number of Listings
 - Market Cap of Listings

201 Years

The Long Term: Common Stocks (1817 – 2017)

(US Dollars)

\$100,000,000

\$10,000,000

\$1,000,000

\$100,000

\$10,000

\$1,000

\$100

\$10

\$1

\$0

\$13,479,594

1817 1824 1831 1838 1846 1853 1860 1867 1875 1882 1889 1896 1904 1911 1918 1925 1933 1940 1947 1954 1962 1969 1976 1983 1991 1998 2005 2012

— Common Stocks

201 Years

The Long Term: Stocks vs. T-bills

(1817 – 2017)

(US Dollars)

\$100,000,000

\$10,000,000

\$1,000,000

\$100,000

\$10,000

\$1,000

\$100

\$10

\$1

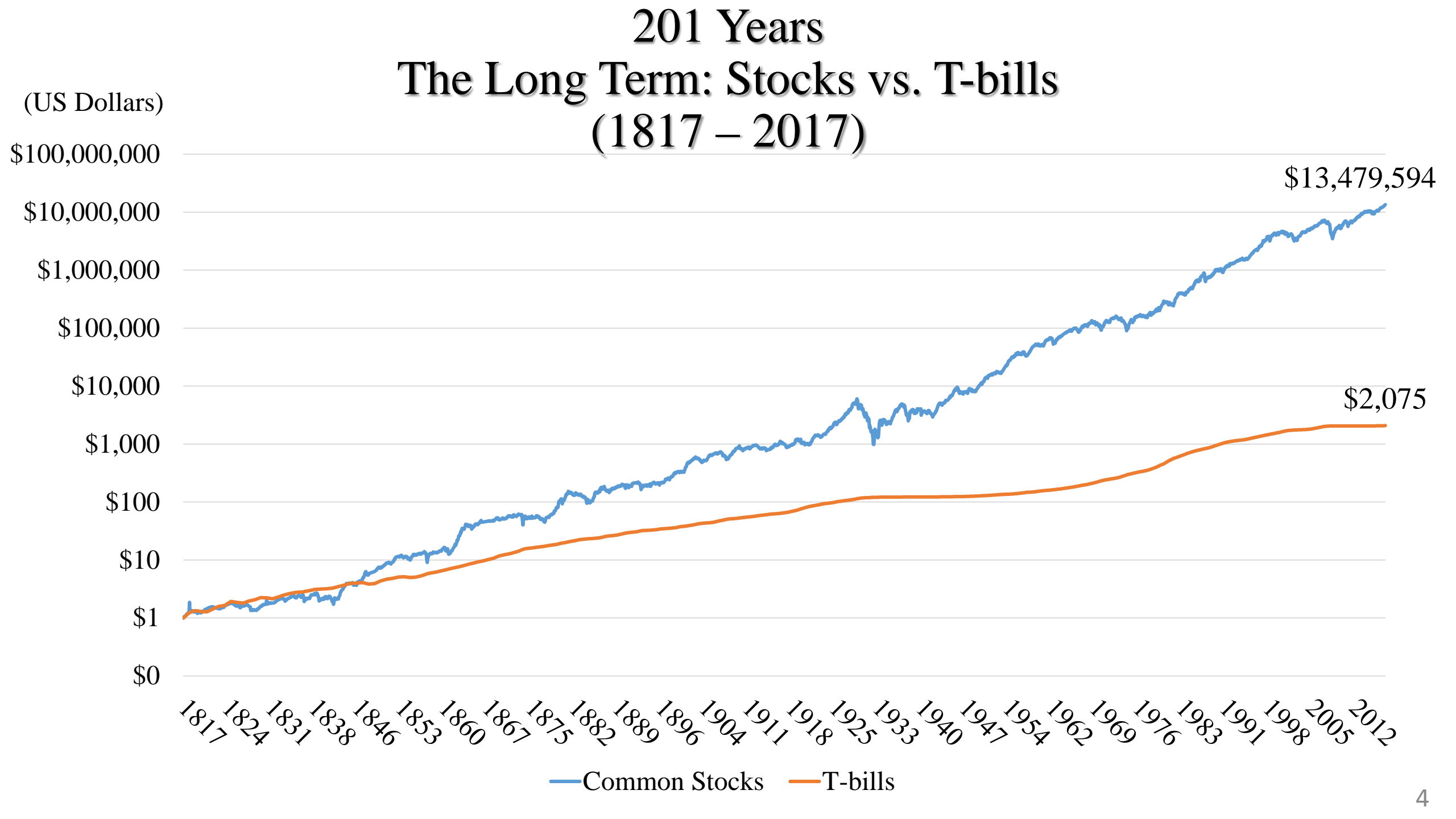
\$0

\$13,479,594

\$2,075

1817 1824 1831 1838 1846 1853 1860 1867 1875 1882 1889 1896 1904 1911 1918 1925 1933 1940 1947 1954 1962 1969 1976 1983 1991 1998 2005 2012

— Common Stocks — T-bills



201 Years

The Long Term: Stocks, Bills & Inflation (1817 – 2017)

(US Dollars)

\$100,000,000

\$10,000,000

\$1,000,000

\$100,000

\$10,000

\$1,000

\$100

\$10

\$1

\$0

\$13,479,594

\$2,075

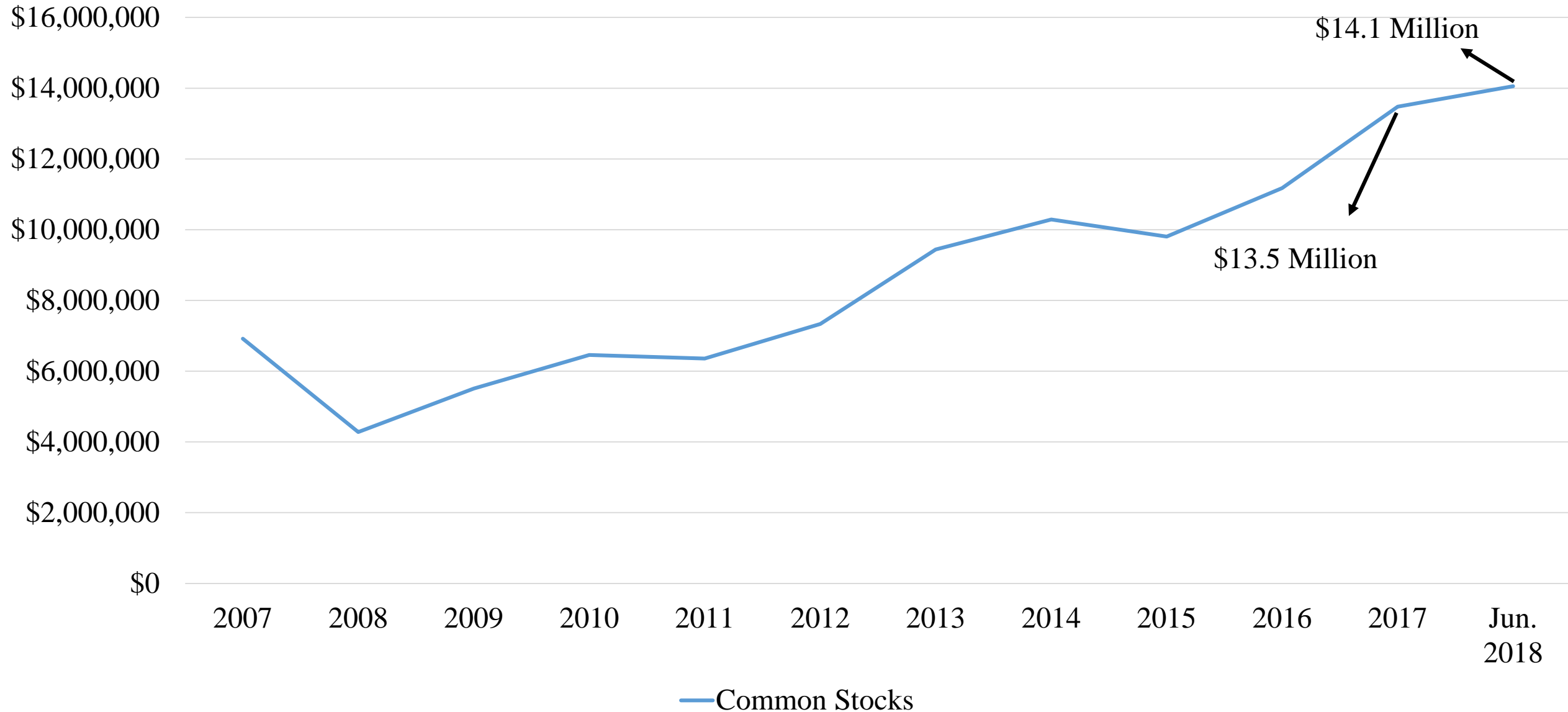
\$20.11

1817 1824 1831 1838 1846 1853 1860 1867 1875 1882 1889 1896 1904 1911 1918 1925 1933 1940 1947 1954 1962 1969 1976 1983 1991 1998 2005 2012

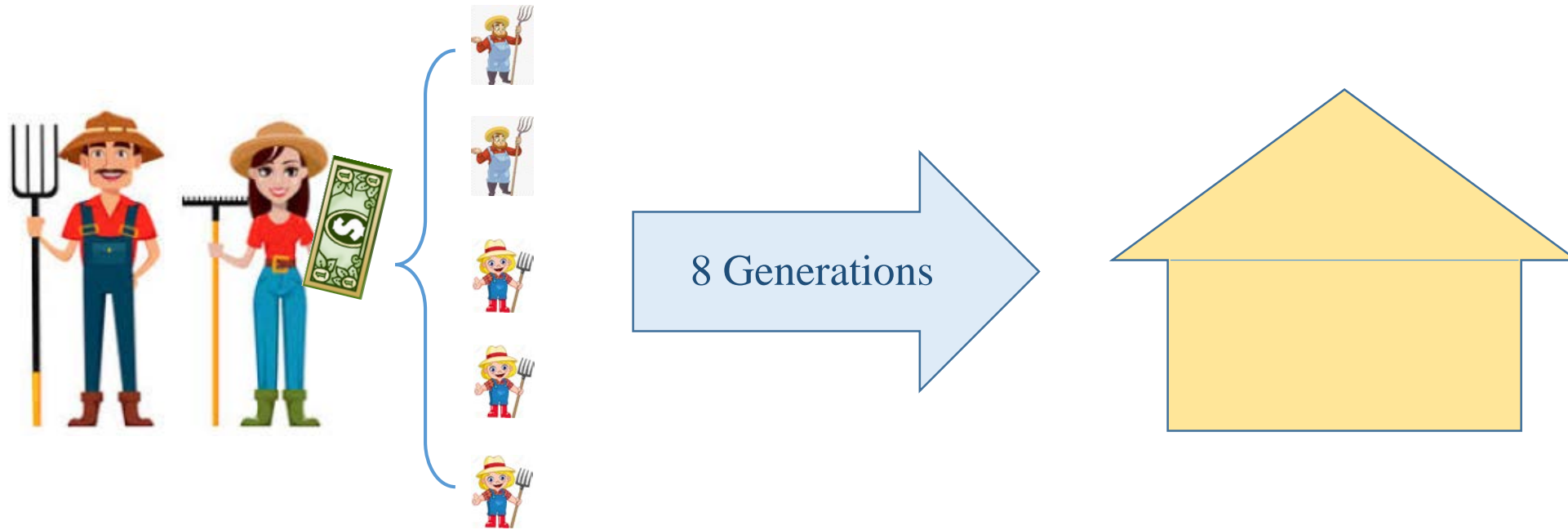
— Common Stocks — T-bills — Inflation

201.5 Years To Jun. 2018

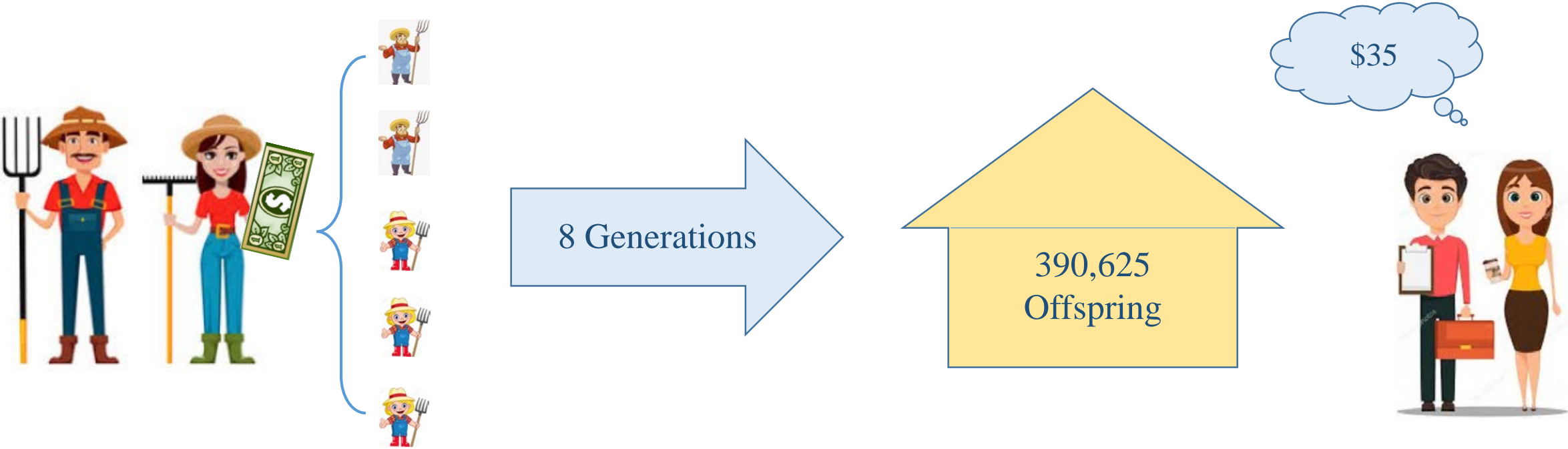
(US Dollars)



My Great, Great, Great ... Grandpa or Grandma



My Great, Great, Great ... Grandpa or Grandma



The Averages



Periods	Average Stock Return (Nominal)	Average Stock Return (Real)
1817 - 2017	9.93%	8.29%
1817 - 1866	9.30%	8.68%
1867 - 1916	7.67%	8.15%
1917 - 1966	11.60%	9.31%
1967 - 2017	11.53%	7.19%



The **Best** 50 Years For Stocks

	Period	Strategy	Stock Market	T-bill
Best 50 Years	Jul. 1949 to Jun. 1999	For \$1 Invested	\$542.8	\$11.1



The **Best** 50 Years For Stocks

	Period	Strategy	Stock Market	T-bill
Best 50 Years	Jul. 1949 to Jun. 1999	For \$1 Invested	\$542.8	\$11.1
		Add \$1 Every Year	\$20,557.6	\$2,986.7



The **Worst** 50 Years For Stocks

	Period	Strategy	Stock Market	T-bill
Worst 50 Years	Jul. 1882 to Jun. 1932	For \$1 Invested	\$6.4	\$5.6



The **Worst** 50 Years For Stocks

	Period	Strategy	Stock Market	T-bill
Worst 50 Years	Jul. 1882 to Jun. 1932	For \$1 Invested	\$6.4	\$5.6
		Add \$1 Every Year	\$1,603.3	\$1,647.6

Crashes (1817 – 2017)



Rank	Crash Periods	Crashes
1	Aug. 1929 – Jun. 1932	-83.8%
2	Oct. 2007 – Feb. 2009	-51.9%
3	Feb. 1937 – Mar. 1938	-49.3%
4	Dec. 1972 – Sep. 1974	-44.4%
5	Jan. 1873 – Oct. 1873	-35.5%
6	Apr. 1857 – Oct. 1857	-35.3%
7	Aug. 1882 – Dec. 1884	-33.5%
8	Nov. 1968 – Jun. 1970	-32.0%
9	Aug. 2000 – Sep. 2002	-32.0%
10	Jan. 1818 – Mar. 1818	-31.2%
11	Aug. 1987 – Nov. 1987	-29.0%

Crashes (1817 – 2017)



Rank	Crash Periods	Crashes	Prior Bull Periods	Prior Bulls
1	Aug. 1929 – Jun. 1932	-83.8%	Dec. 1920 – Aug. 1929	524.0%
2	Oct. 2007 – Feb. 2009	-51.9%	Sep. 2002 – Oct. 2007	128.7%
3	Feb. 1937 – Mar. 1938	-49.3%	Jul. 1934 – Feb. 1937	127.1%
4	Dec. 1972 – Sep. 1974	-44.4%	Jun. 1970 – Dec. 1972	76.2%
5	Jan. 1873 – Oct. 1873	-35.5%	Mar. 1865 – Jan. 1873	81.8%
6	Apr. 1857 – Oct. 1857	-35.3%	Dec. 1854 – Apr. 1857	40.4%
7	Aug. 1882 – Dec. 1884	-33.5%	May. 1882 – Aug. 1882	12.2%
8	Nov. 1968 – Jun. 1970	-32.0%	Sep. 1966 – Nov. 1968	58.7%
9	Aug. 2000 – Sep. 2002	-32.0%	Aug. 1998 – Aug. 2000	47.5%
10	Jan. 1818 – Mar. 1818	-31.2%	Jan. 1816 – Jan. 1818	94.1%
11	Aug. 1987 – Nov. 1987	-29.0%	Jul. 1982 – Aug. 1987	269.8% 15

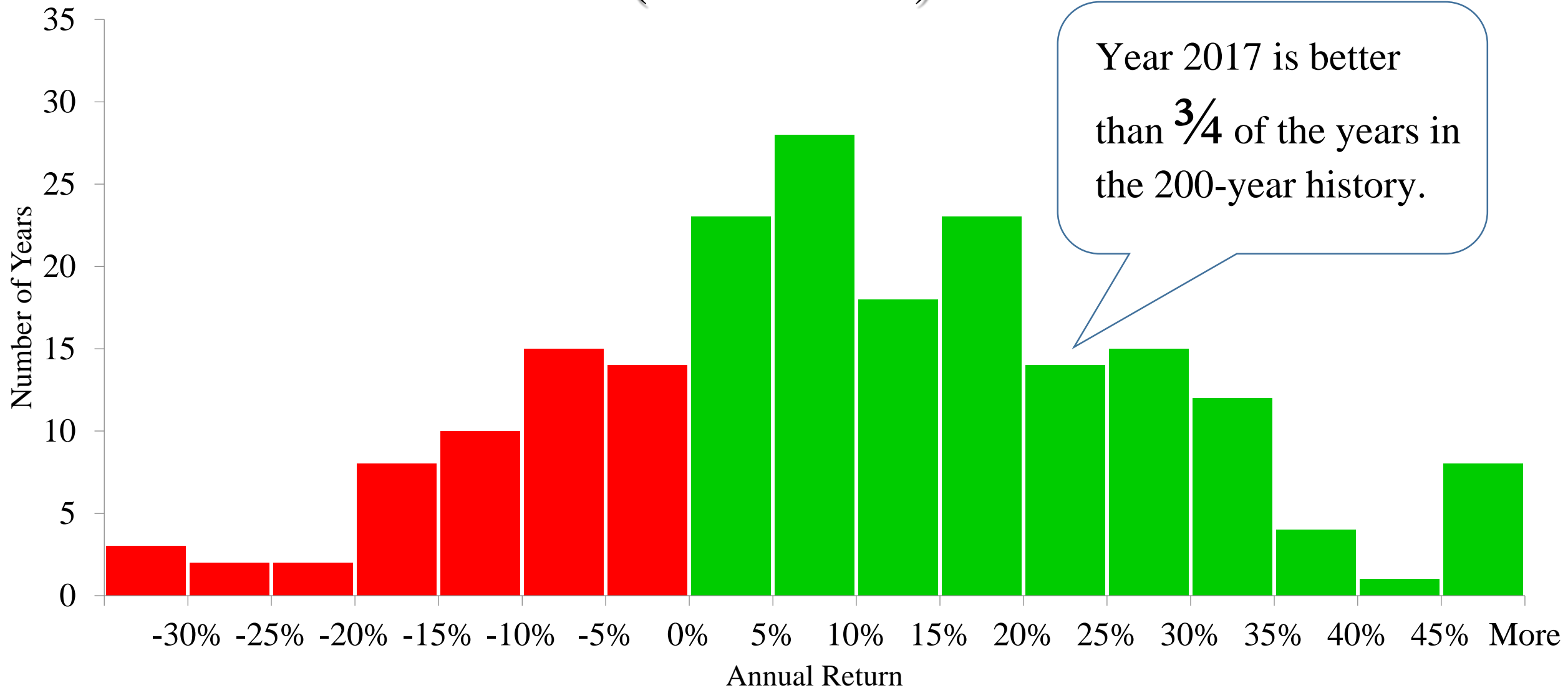
Bulls (1817 -2017)



Rank	Bull Periods	Biggest Bulls	Length (Months)
1	Jan. 1921 – Aug. 1929	524.0%	104
2	Jun. 1947 – Jul. 1957	434.9%	122
3	Nov. 1990 – Jun. 1998	321.3%	92
4	Aug. 1982 – Aug. 1987	269.8%	61
5	Jul. 1877 – May. 1881	243.6%	47
6	May. 1942 – May. 1946	228.7%	49
7	Sep. 1896 – Aug. 1902	205.7%	72
8	Jun. 1861 – Mar. 1864	229.9%	34
9	Mar. 1842 – May. 1845	136.5%	39
10	Oct. 2002 – Oct. 2007	128.7%	61
Current	Oct. 2011 – Jun. 2018	244.2%	81

201 Years

Frequency Distribution of Annual Stock Returns (1817 – 2017)

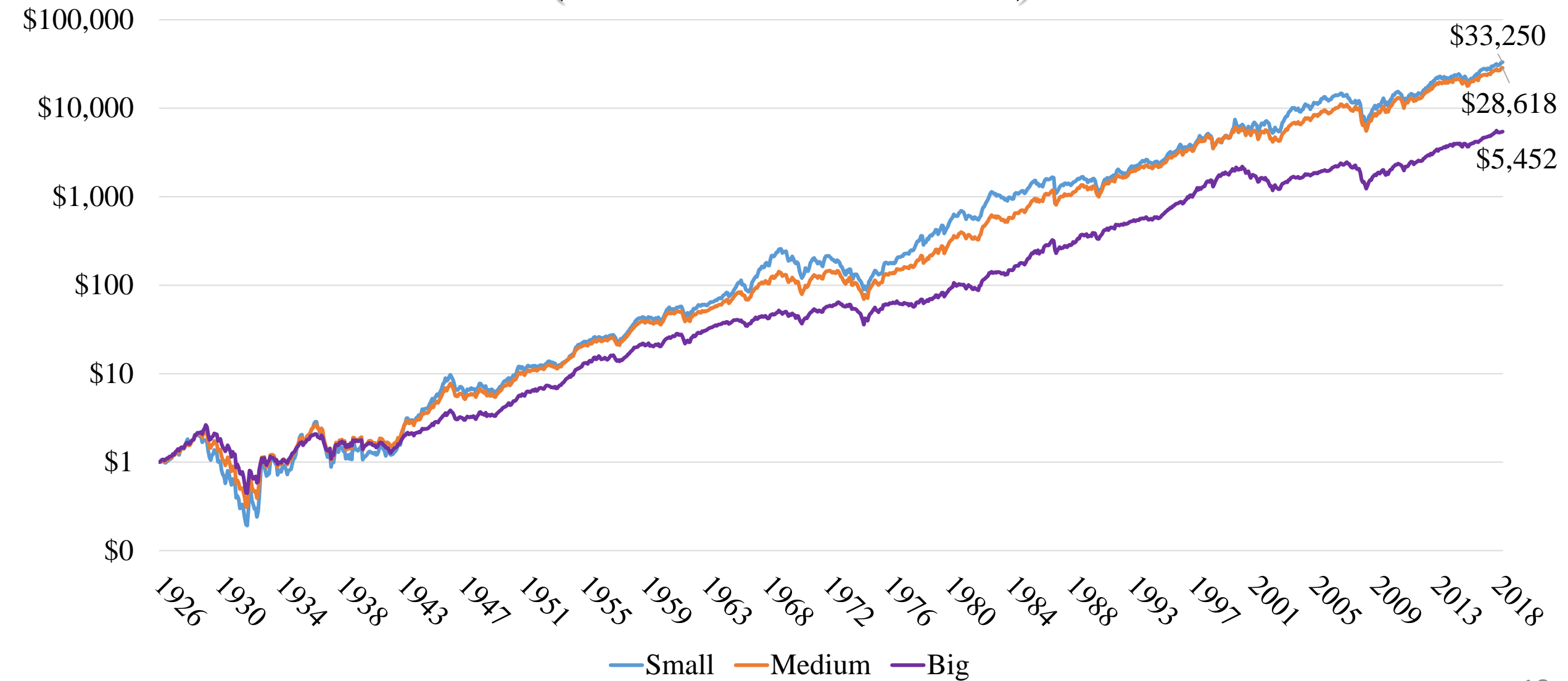


92 Years

Simple Strategy 1: **Small** vs. **Big** Stocks

(Jul. 1926 – Jun. 2018)

(US Dollars)

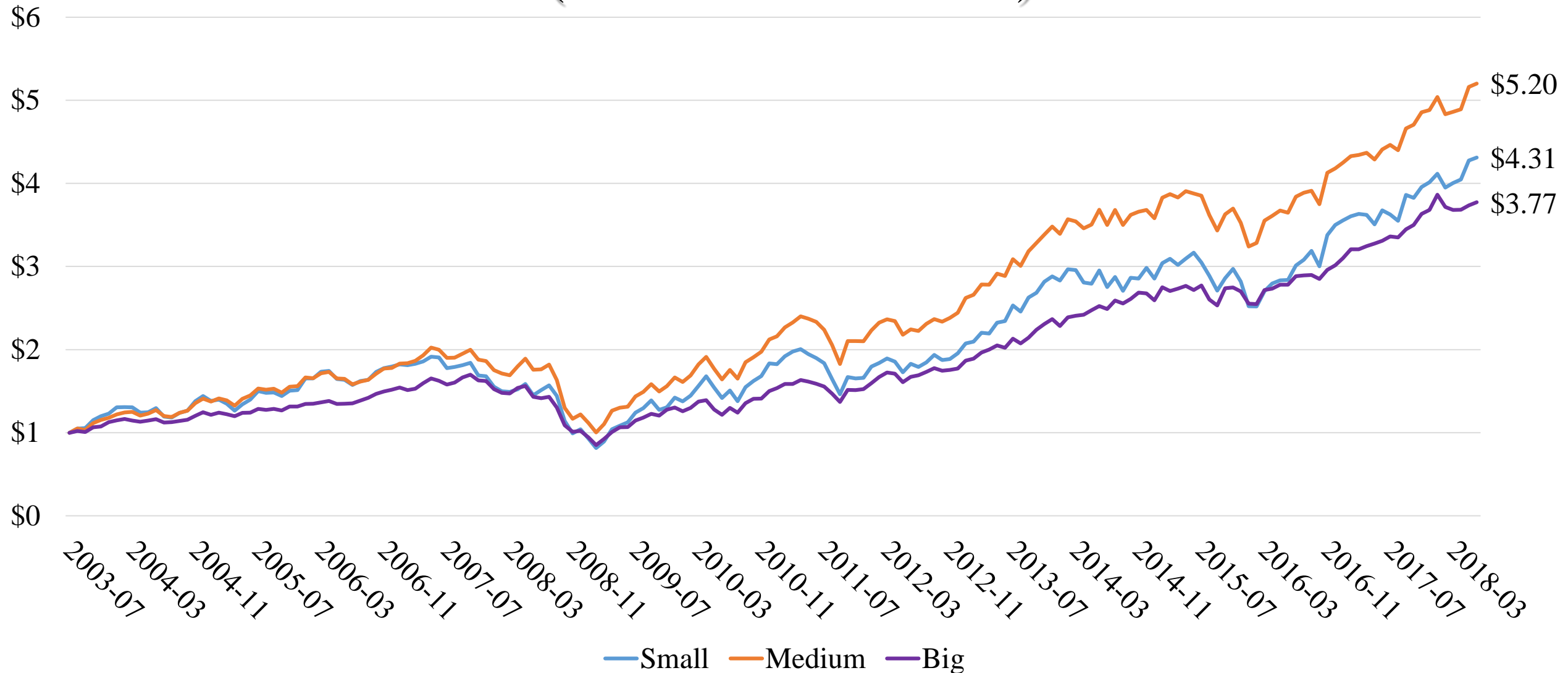


15 Recent Years

Simple Strategy 1: **Small** vs. **Big Stocks**

(Jul. 2003 – Jun. 2018)

(US Dollars)

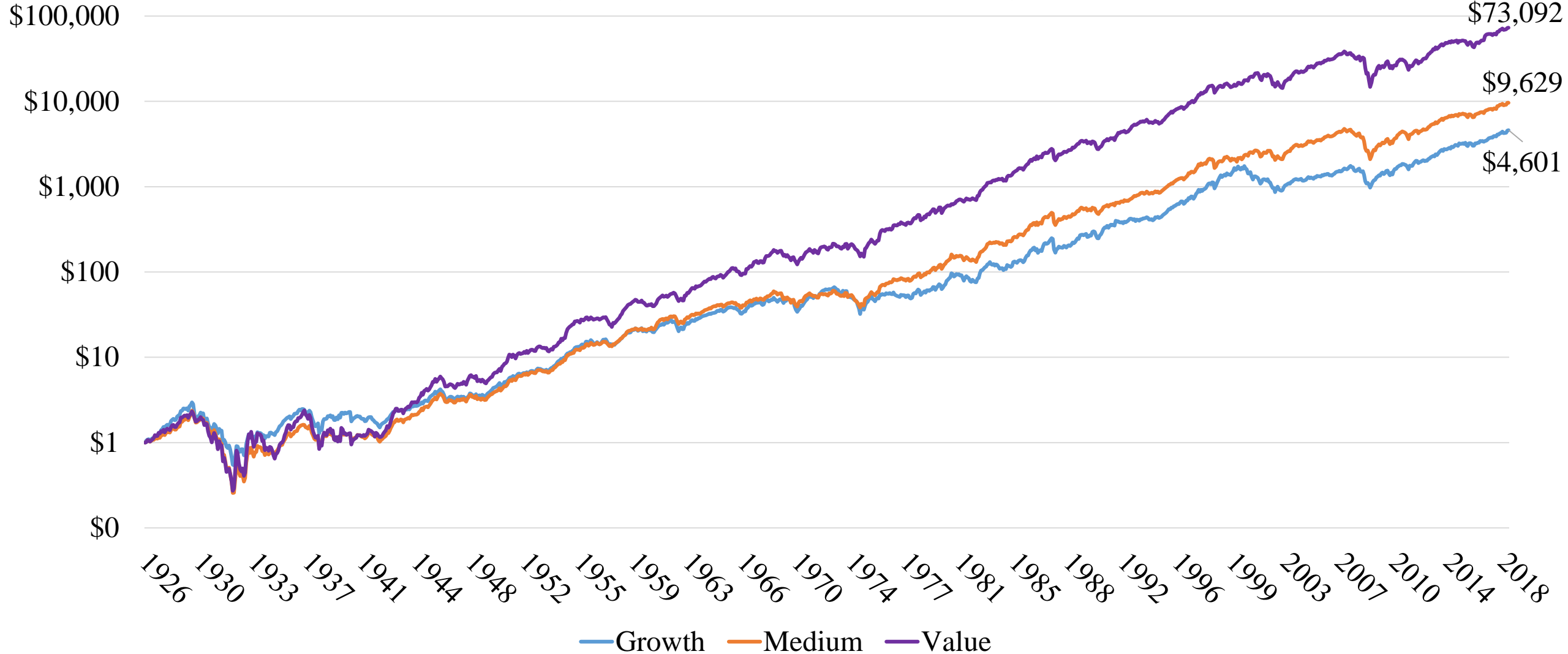


92 Years

Simple Strategy 2: Value vs. Growth Stocks

(Jul. 1926 – Jun. 2018)

(US Dollars)

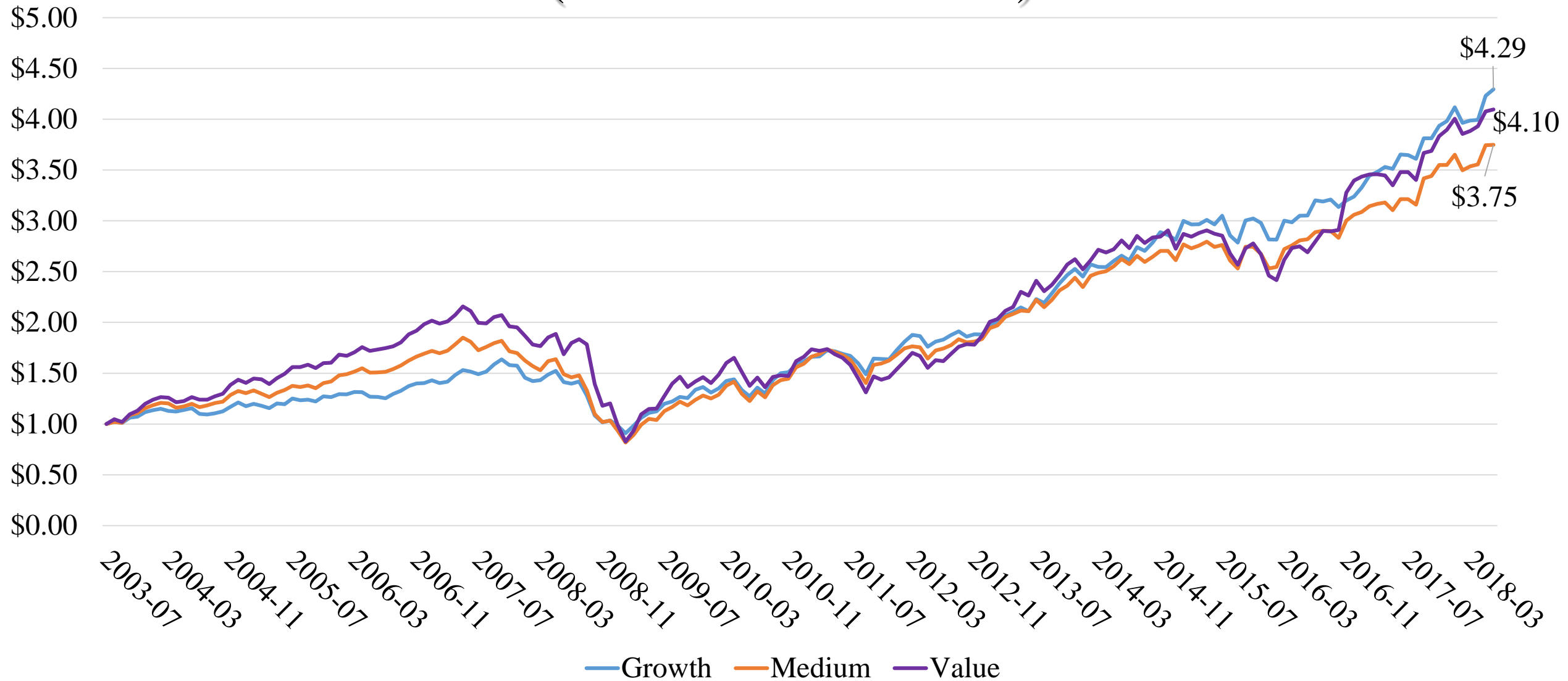


15 Recent Years

Simple Strategy 2: Value vs. Growth Stocks

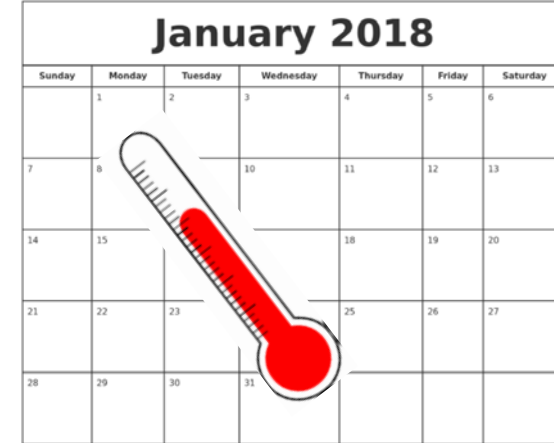
(Jul. 2003 – Jun. 2018)

(US Dollars)

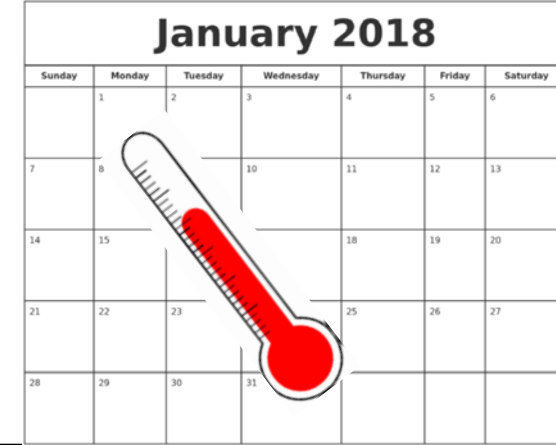


Market Regularity 1: January Barometer

- Shell, Adam. “*Best January for stocks since 1997 bodes well for continued bull market.*” USA Today, Feb. 2, 2018
- “There’s an old saying on Wall Street, made famous by *The Stock Trader’s Almanac*: ‘As January goes, so goes the rest of the year.’ And given that the first month of the year went well (the Standard & Poor’s 500 stock index gained 5.62%, its best January since 1997), investors fearing a market meltdown might have less to worry about, history says.....”



147 Years Market Regularity 1: January Barometer (1857 – 2003)



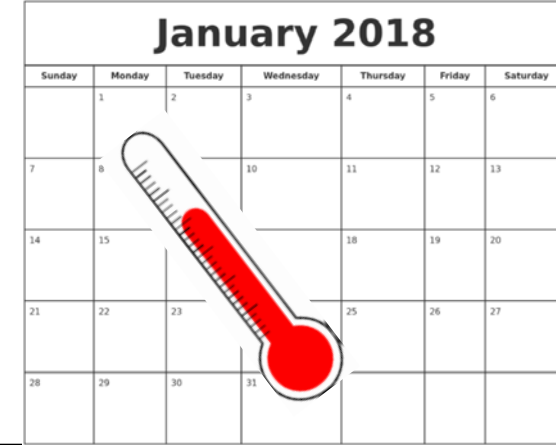
	Positive January	Negative January
Number of Years	101	46
Average 11-month Return	10.94%	3.83%

Trading Strategy: \$1 Invested in 1857

January Barometer	\$1,017,519
Common Stocks All the Time	\$847,260
Difference	\$170,259

13 Recent Years

Market Regularity 1: January Barometer (2004 – 2017)



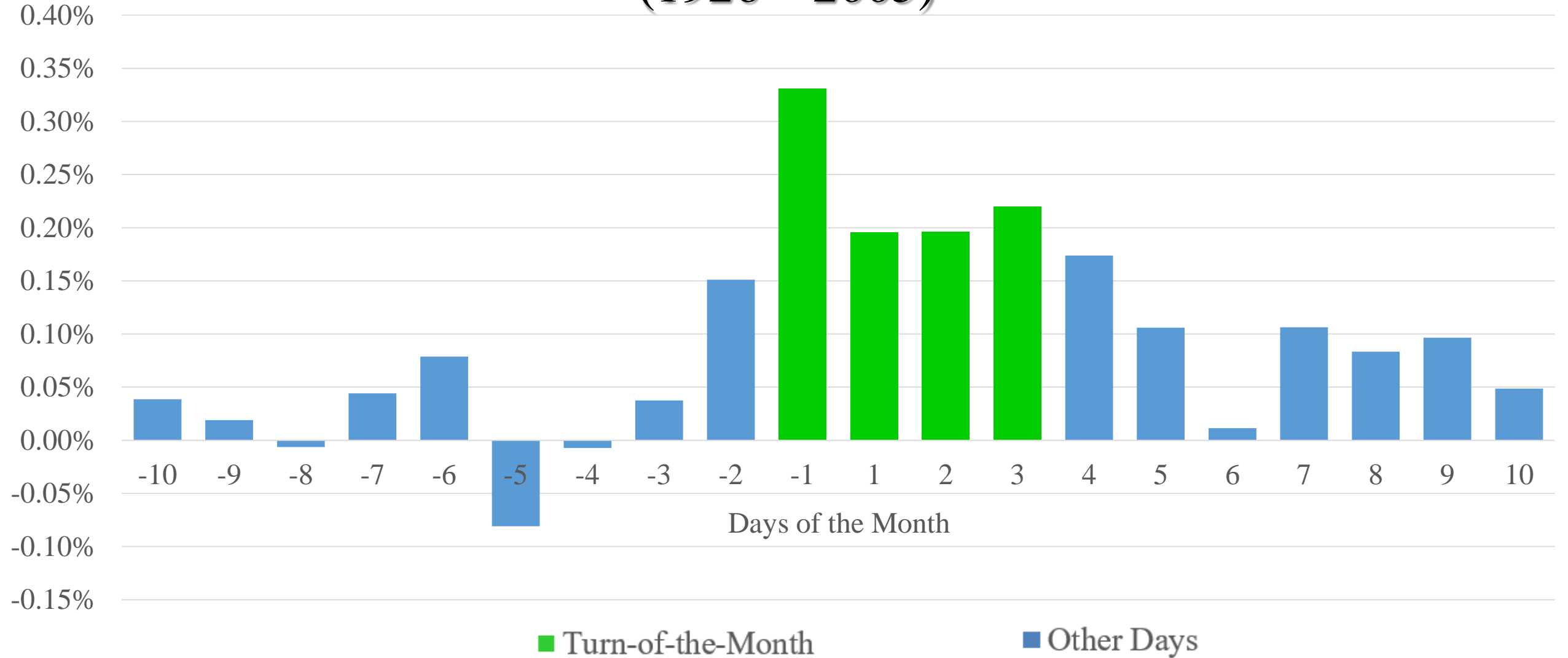
	Positive January	Negative January
Number of Years	7	7
Average 11-month Return	11.00%	9.89%

Trading Strategy: \$1 Invested in 2004

January Barometer	\$1.91
Common Stocks All the Time	\$3.01
Difference	-\$1.10

80 Years Market Regularity 2: Turn-of-the-Month (1926 – 2005)

(Daily Return)



80 Years

Market Regularity 2: Turn-of-the-Month

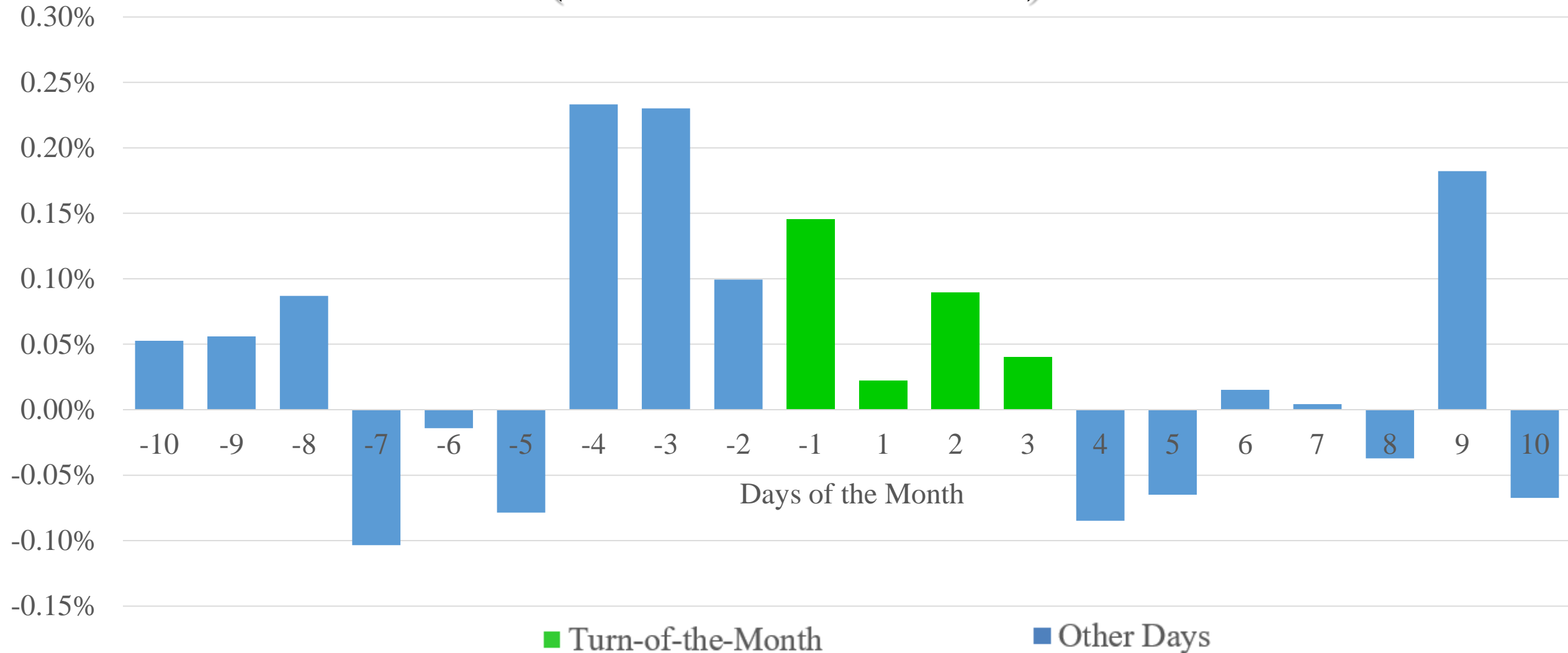
Daily Average Return

	1926 -2005
Days (-1, +3)	0.16%
Other Days	0.01%

12 Recent Years

Market Regularity 2: Turn-of-the-Month (Jan. 2006 – Jun. 2018)

(Daily Return)



11 Years

Market Regularity 2: Turn-of-the-Month

Daily Average Return

Jan. 2006 – Jun. 2018

Days (-1, +3)

0.04%

Other Days

0.03%

201.5 Years

Market Regularity 4: January Returns (Jan.1817 – Jun. 2018)

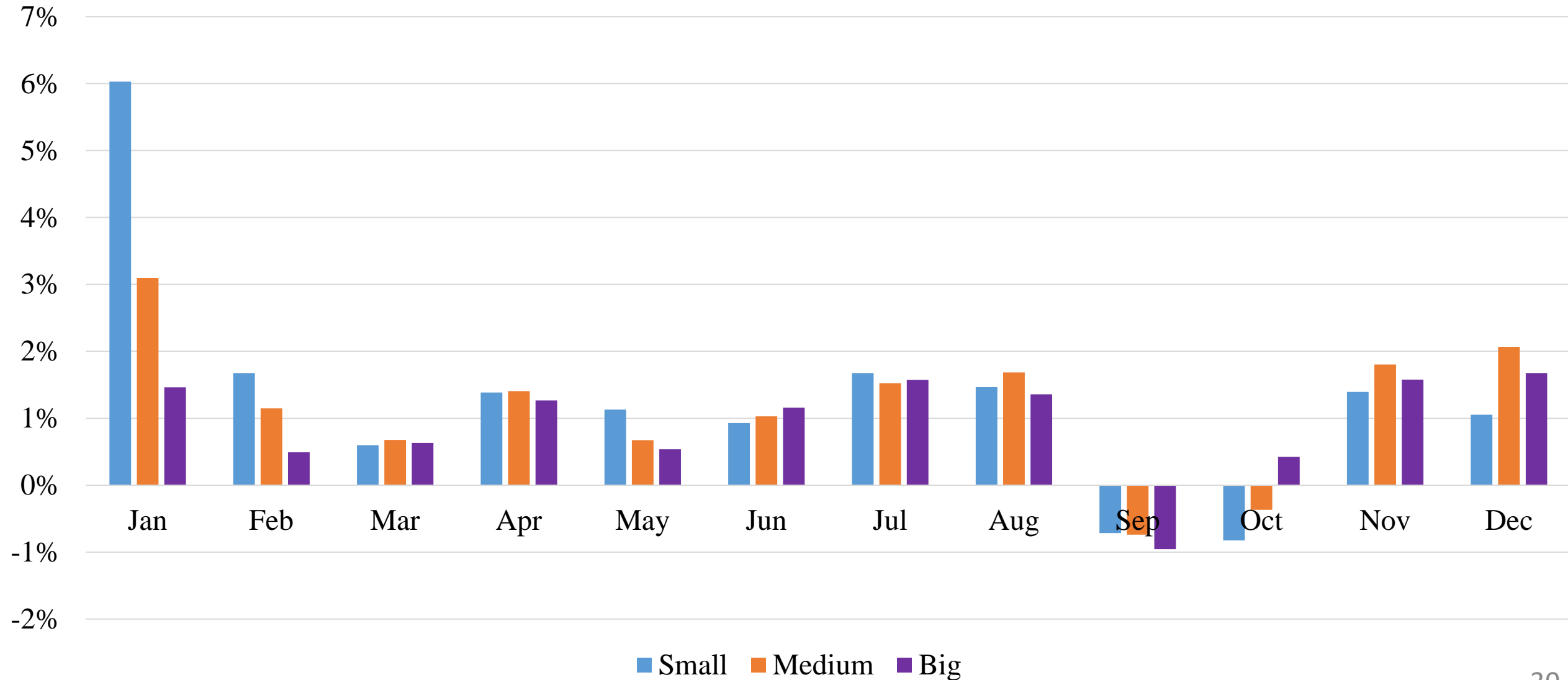
Average Monthly Return					
	January		Other Months		Diff
Excess Return	1.54%		0.72%		0.82%

77 Years

Market Regularity 4: January By Size

(Jul. 1926 – Jun. 2003)

(Average Return)

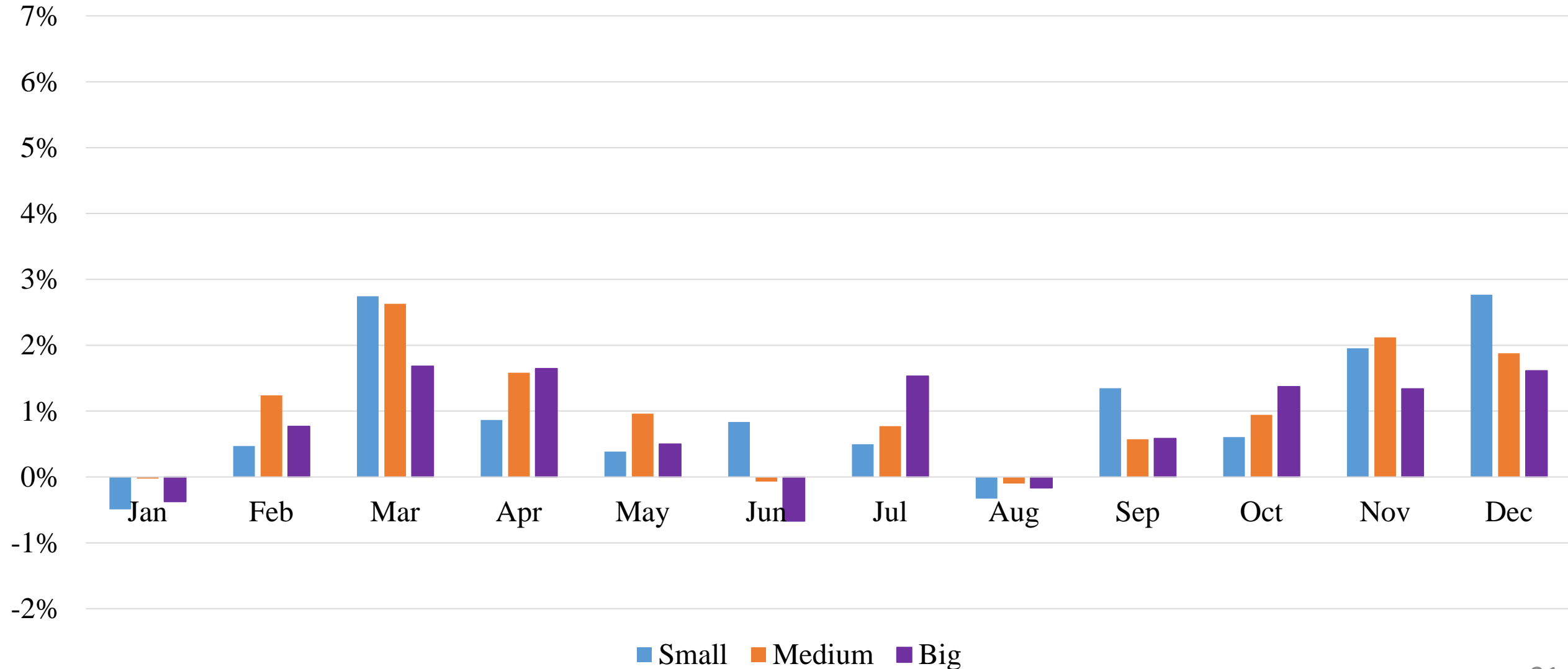


15 Recent Years

Market Regularity 4: January By Size

(Jul. 2003 – Jun. 2018)

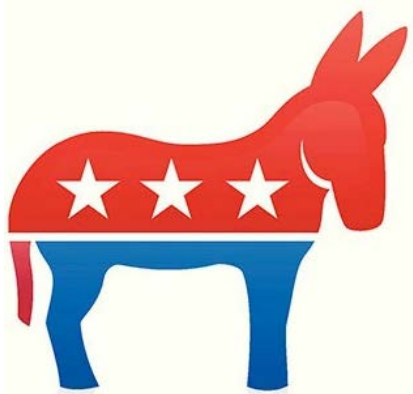
(Average Return)



129 Years

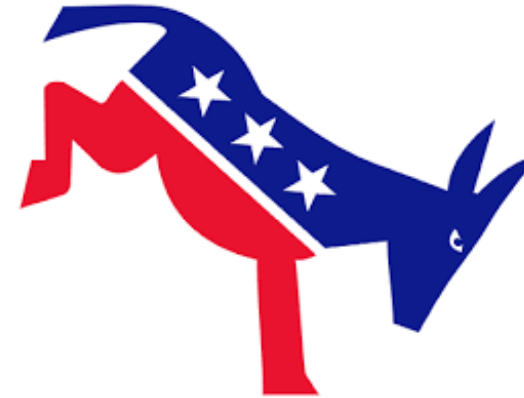
Market Regularity 3: Democrats vs. Republicans

Nov. 1888 – Jun. 2018



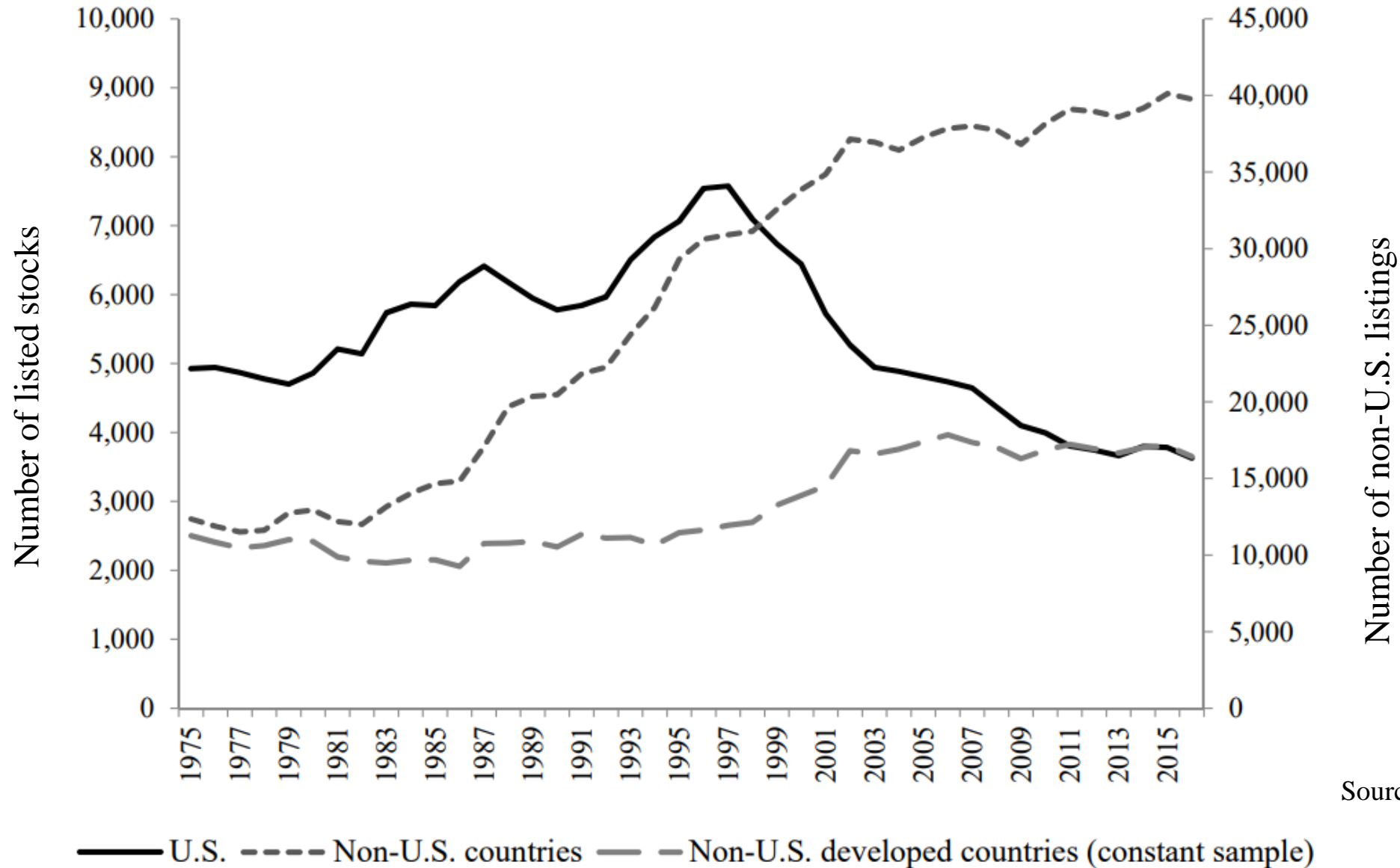
	Democrats	Republicans
Number of Months	720	836
Average Stock Return (Nominal)	12.0%	9.4%
Average Stock Return (Real)	8.0%	7.6%
Donald Trump		
Annualized Return	18.38%	

92 Years
 Market Regularity 3: Democrats vs. Republicans
 Jul. 1926 – Jun. 2018



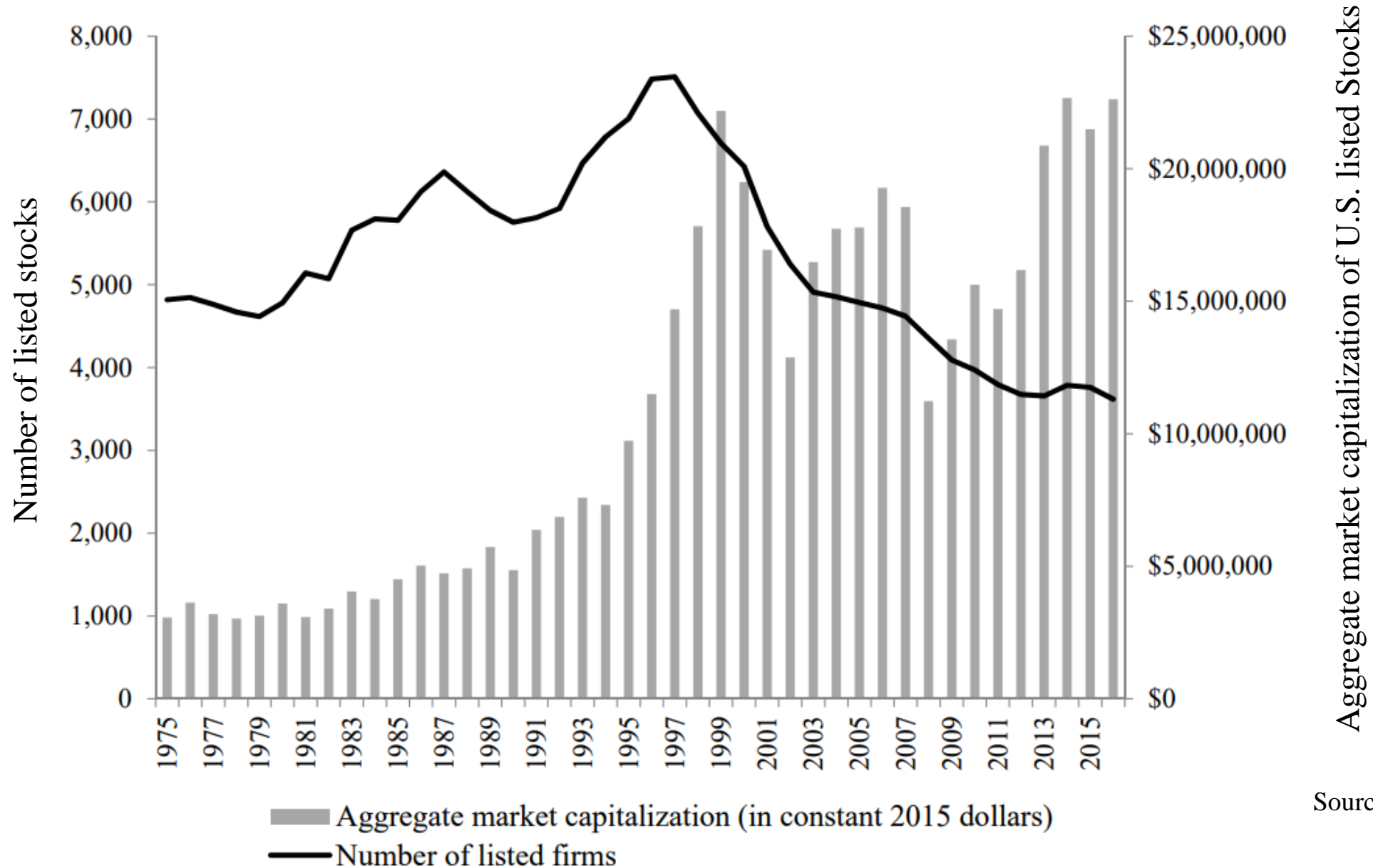
	Democrats	Republicans
Number of Months	576	534
Average Stock Return (Nominal)	14.7%	8.3%
Average Stock Return (Real)	11.0%	5.8%
Donald Trump		
Annualized Return	18.38%	

The Evolving Market: Number of Listings



Source: Doidge et al. (2018)

The Evolving Market: Listings and Market Cap



Source: Doidge et al. (2018)

What to do?

Value of stocks:

Maybe



What to do?

Value of stocks:

Maybe



Small stocks:

Too Late



What to do?

Value of stocks:

Maybe



Small stocks:

Too Late



Republicans:

Shaky



What to do?

Value of stocks:

Maybe



Small stocks:

Too Late



Republicans:

Shaky



Turn-of-the-month:

No Luck



What to do?

Value of stocks:

Maybe



Small stocks:

Too Late



Republicans:

Shaky



Turn-of-the-month:

No Luck



January Barometer:

Yikes



What to do?

Bottom Line:

