

# Logica $\alpha$



- Long Volatility*
- Asymmetric Alpha
- Negatively Correlated Alpha
- Convex Crisis Alpha



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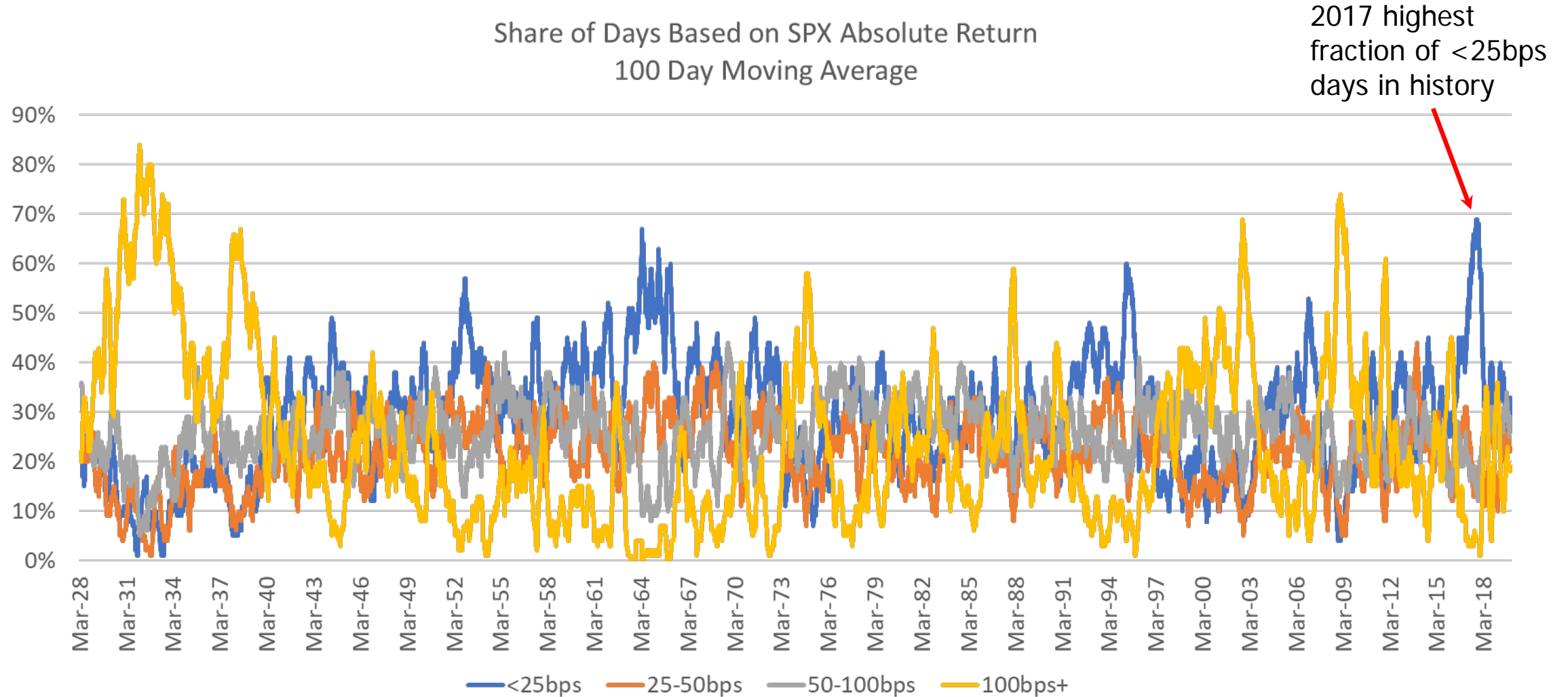
## What is Correlation?

Correlation measures the fraction of the movement of Variable Y explained by the movement of Variable X

Two reasons why correlation can be low:

- 1) No relationship
- 2) No movement in X

## In 2017, low implied correlation was driven by Reason #2

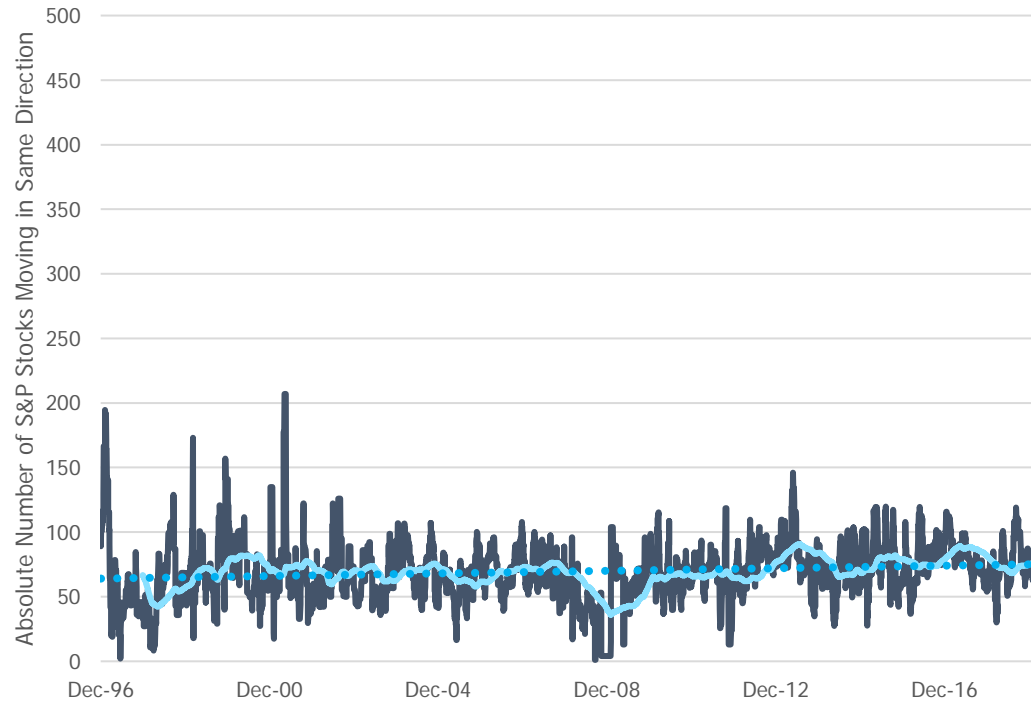


Source: Bloomberg, Logica calculations

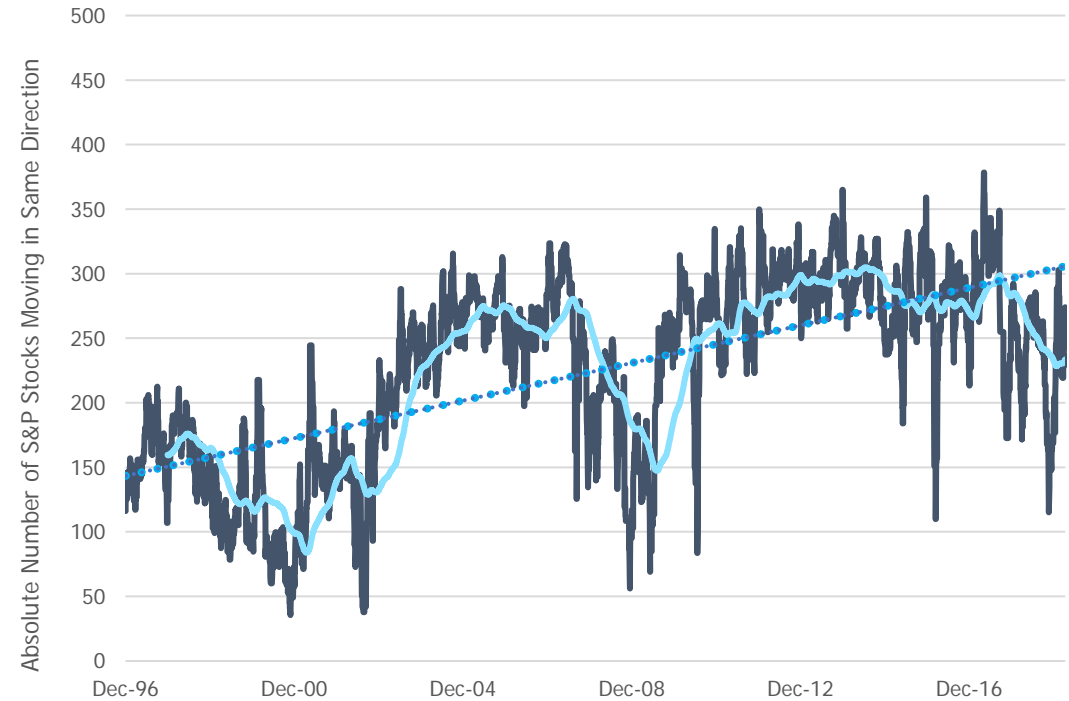
## Conditional Correlation – A Measure of Fragility

Holding Volatility constant, over the last 25 years, correlation has increased dramatically

Comovement on <25bps Moves in S&P



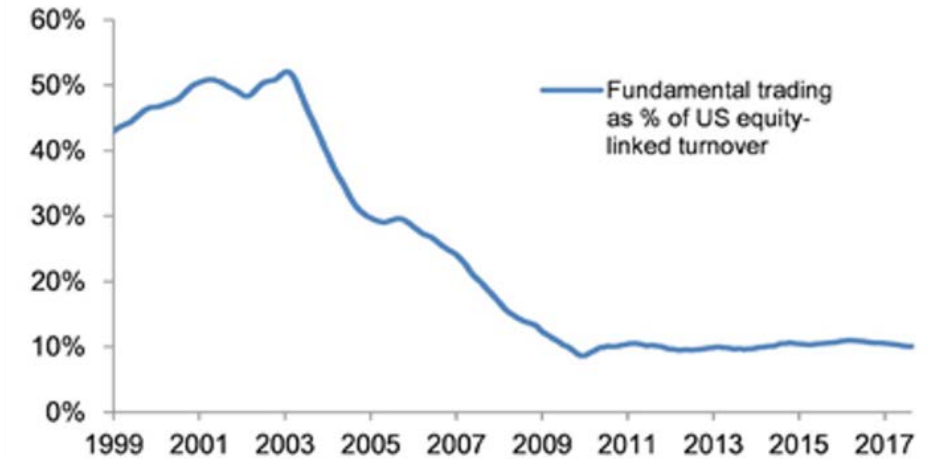
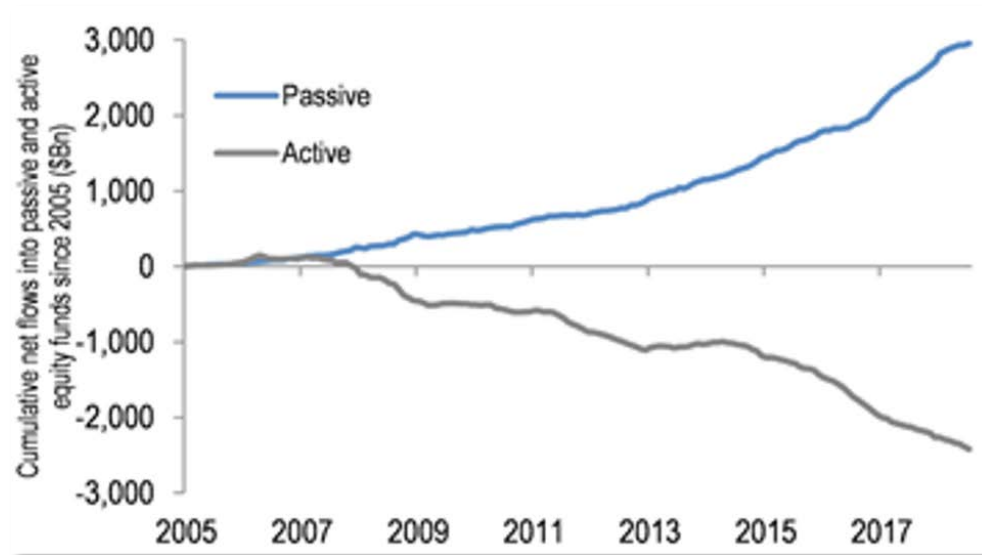
Comovement on 50-100bps Moves in S&P 500



Source: Bloomberg, Logica calculations

## Why is Correlation Rising? Passive Investing

*“If everybody indexed, the only word you could use is chaos, catastrophe...The markets would fail.”*  
- John Bogle, May 2017



Fundamental Trading Source: J.P. Morgan SOURCE: J.P. MORGAN

## Why aren't Stock Indices Moving? Systematic Volatility Selling

Yield  
Enhancement  
Strategies

Call  
Overwriting

Asian  
retail

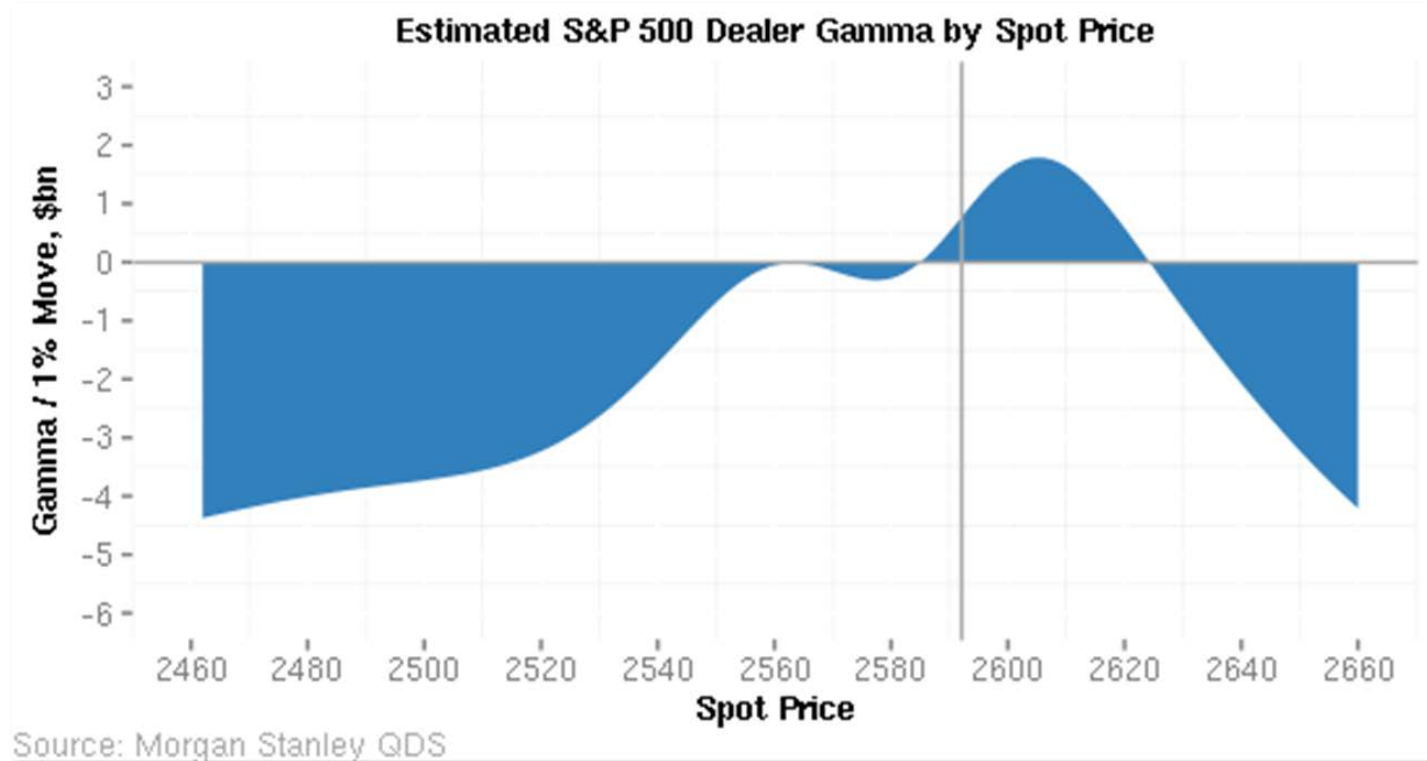
Canadian  
pensions

Retail VIX ETFs  
(like XIV)

Corporate share  
buybacks

Systematic  
investment  
programs (401Ks)

Systematic  
rebalancing



*Dealer trading creates a boundary around S&P prices within which price is more likely to mean revert.*

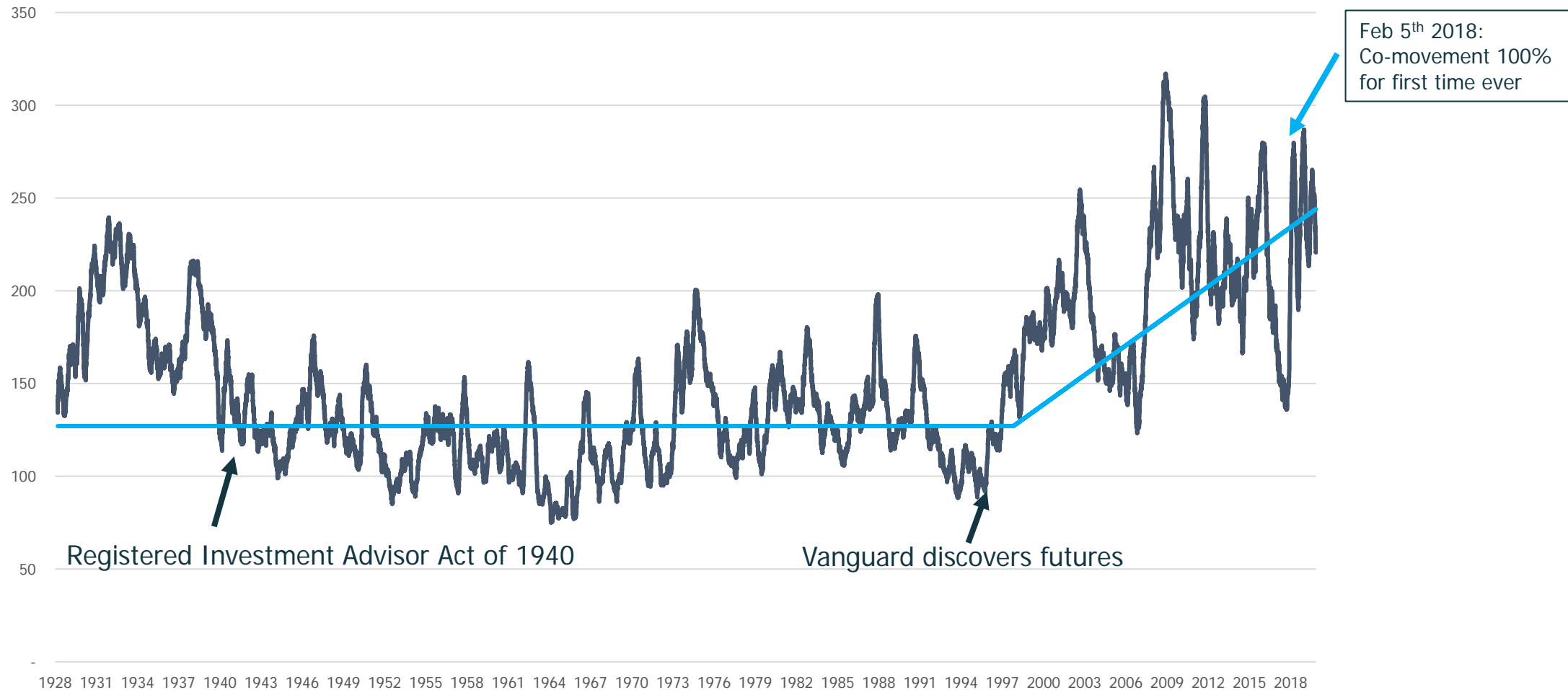
*When the boundary is broken, however, dealer trading exacerbates volatility instead of cushioning it.*

Note: data as of 12/2017



## A Period of Record Correlation

Historical Comovement for S&P 500



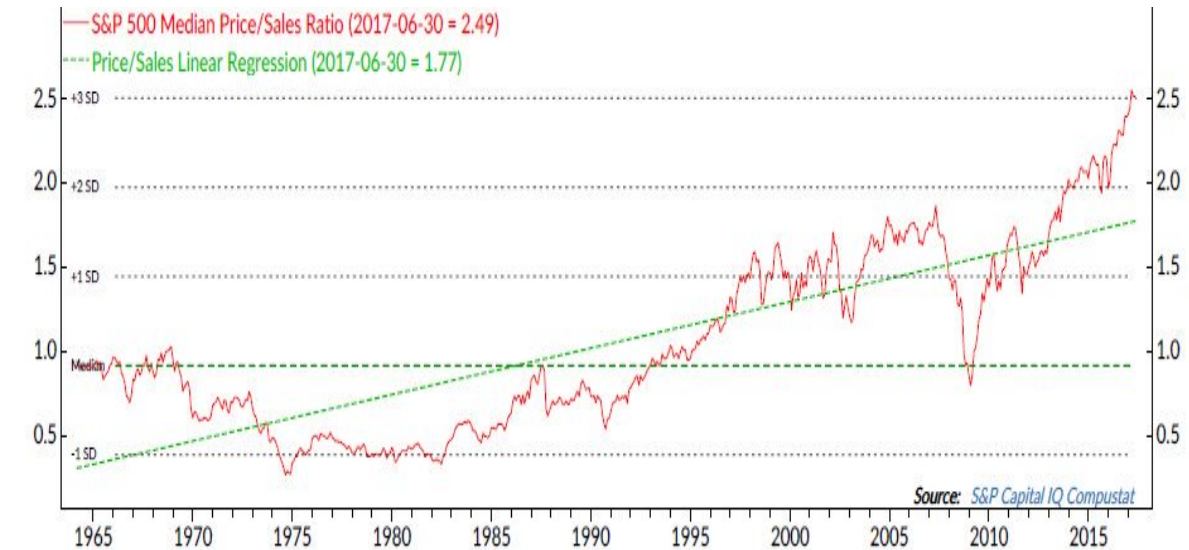
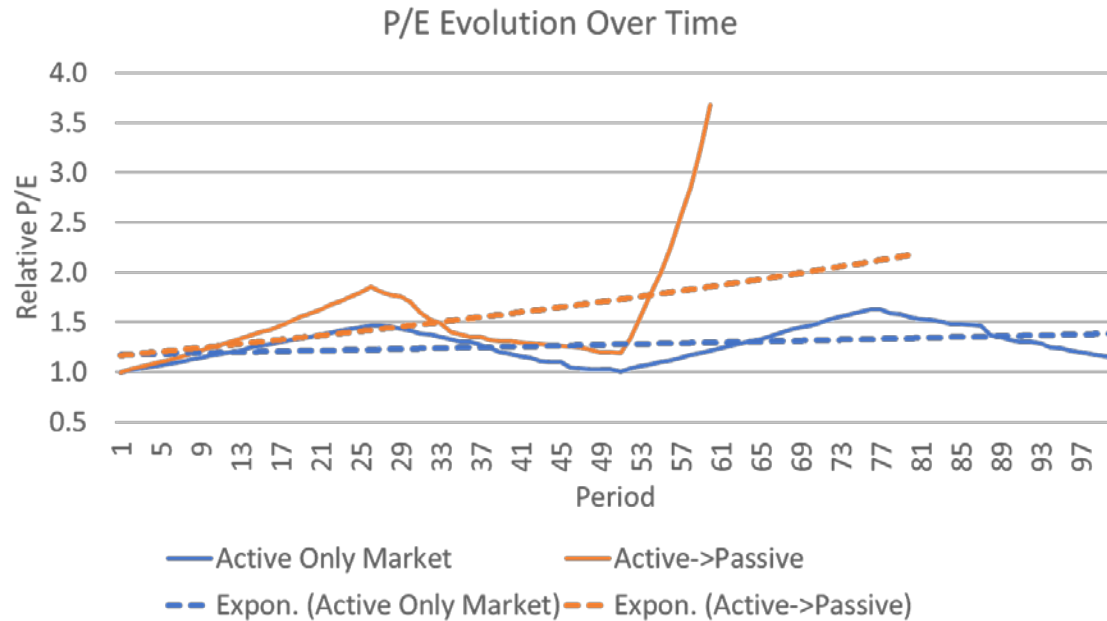
Feb 5<sup>th</sup> 2018:  
Co-movement 100%  
for first time ever

Source: Bloomberg, Logica calculations

— Share Based Comovement — Constant Share Comovement

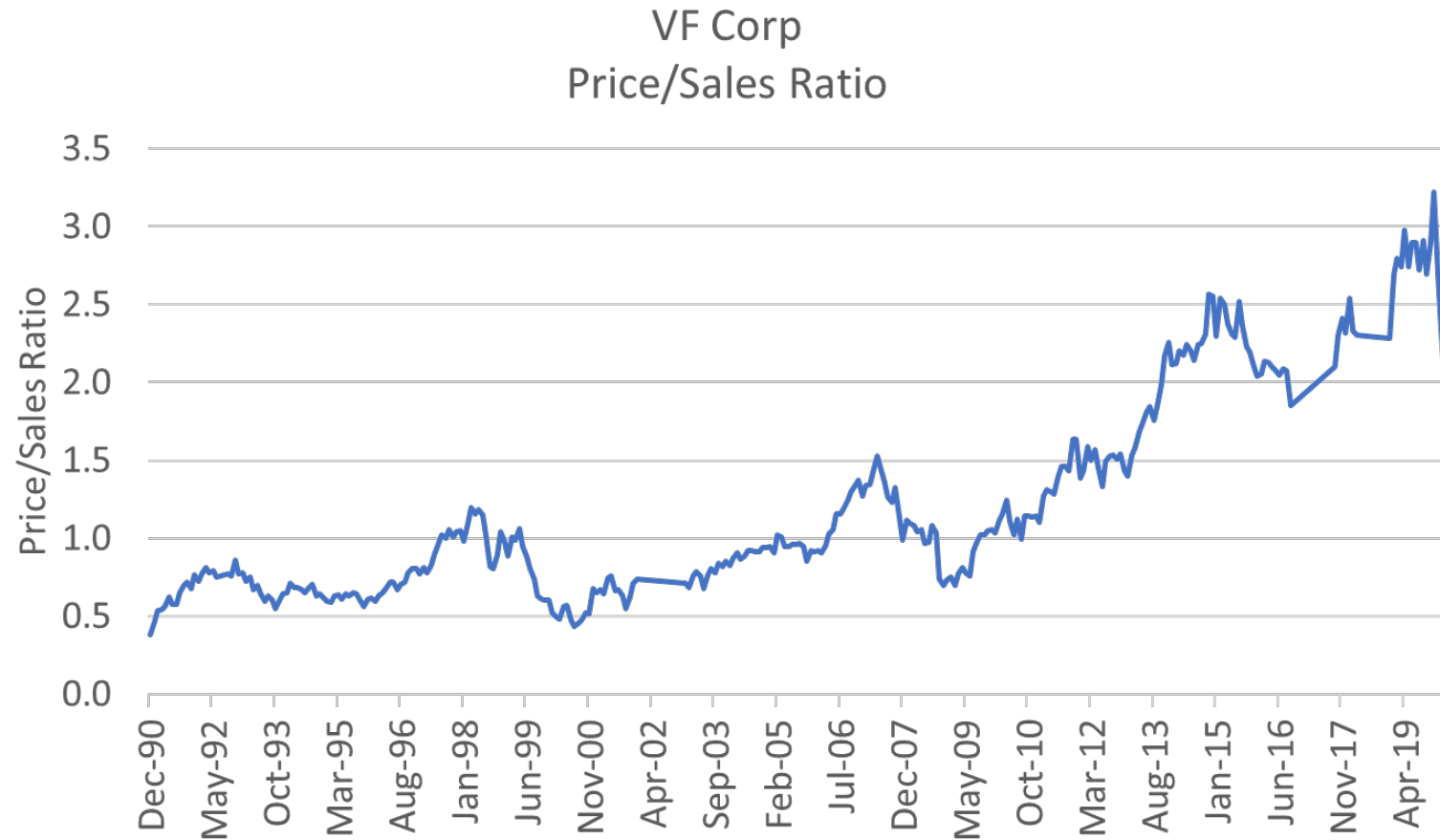


## A theoretical model of Active->Passive transition shows rising valuations over time Empirical results show the same



Source: Proprietary survey of 452 investors subscribing to RealVision, Logica calculations, Compustat

**"The median company is getting better over time"... no, it's not**



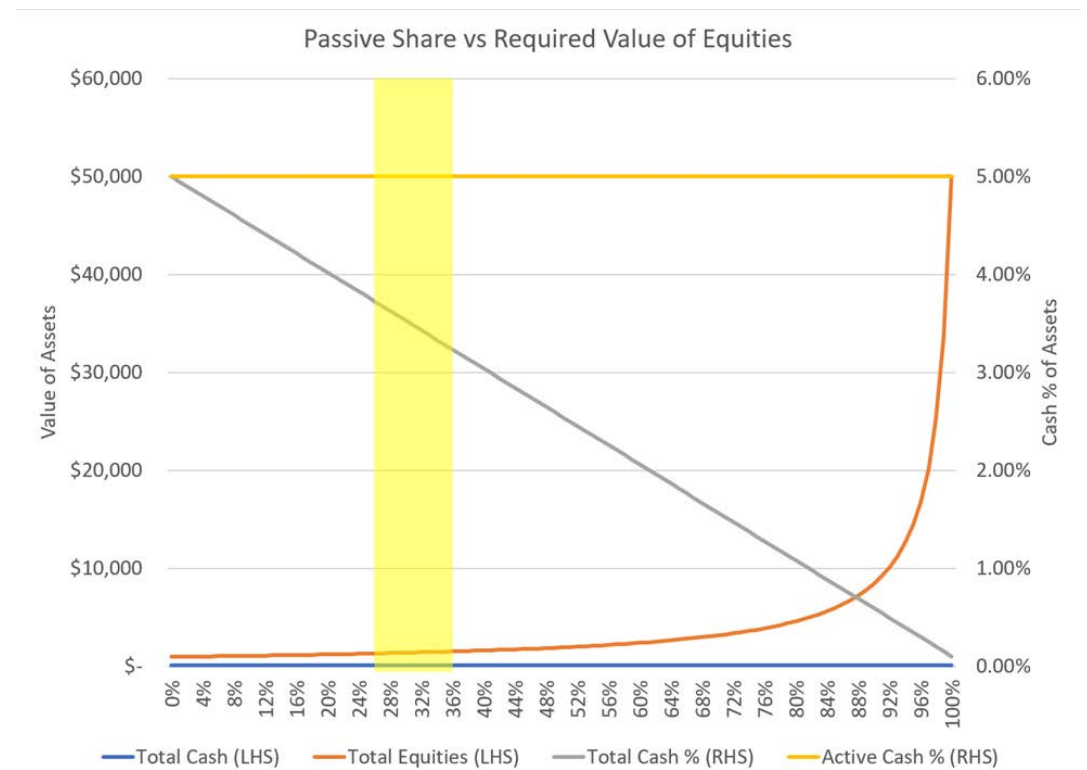
Source: Bloomberg, Logica calculations

## Unfortunately that's not the only way "passive" changes markets

Not only does passive have a higher marginal propensity to transact, it hates cash...

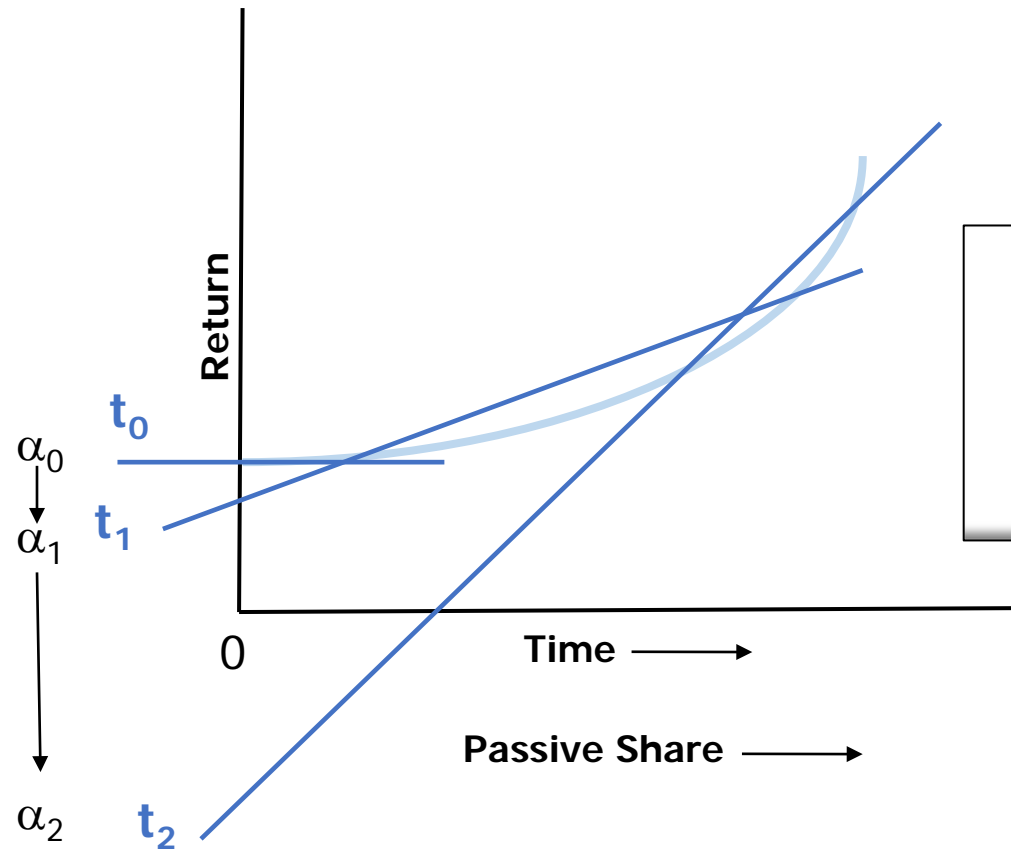
		Equity	Cash	Cash %
t=0	Active	950	50	5%
	Passive	0	0	
	Total	950	50	5%
Step 1: Mike Green wants to move \$10 from Active to Passive				
t=1a	Active	950	40	4.0404%
	Mike Green	0	10	100%
	Passive	0	0	
	Total	950	50	5.0000%
t=1b	Active	950	40	4.0404%
	Mike Green	0	0	100%
	Passive	0	10	
	Total	950	50	5.0000%
Step 2: Active needs to get back to 5% cash + Passive needs to get to 0.1% Cash Active must sell \$9.50 (1% of \$950) Passive must buy \$9.99 (99.9% of \$10) Buying outweighs selling, so prices must rise. Solve iteratively				
t=2	Active	\$949.81	\$ 49.99	5.0000%
	Passive	\$ 10.09	\$ 0.01	0.1000%
	Total	\$959.90	50	4.9510%

Since cash has zero variance, the only "flex" is in equity prices... we are still too low to see most effects clearly



Source: Logica Capital Advisers, LLC

## When Time becomes a proxy for Passive penetration, Alpha vanishes for Active Management



### IN SEARCH OF THE ORIGINS OF FINANCIAL FLUCTUATIONS

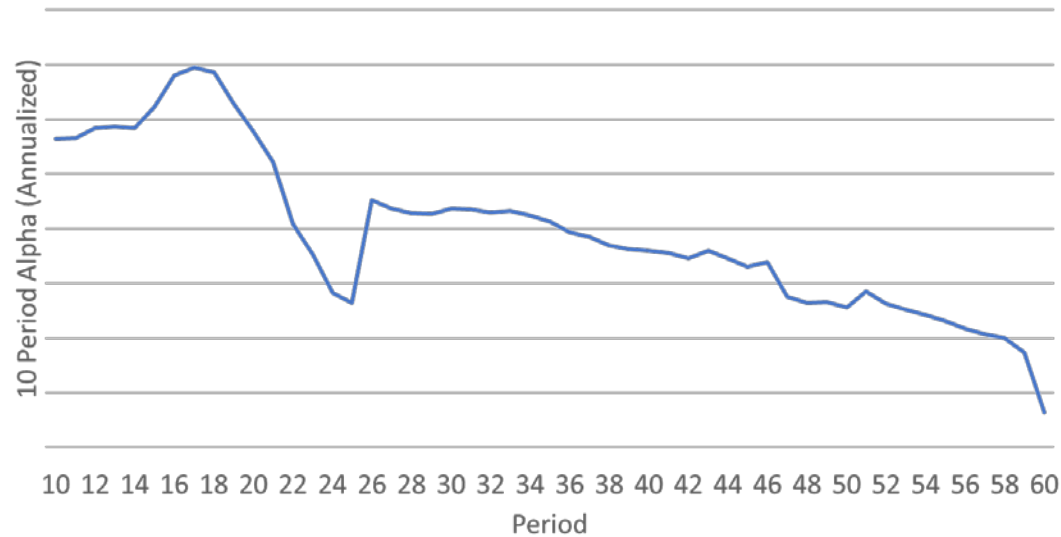
Xavier Gabaix (Harvard) and Ralph Koijen (Chicago Booth)

Version 0.8, May 2020 – Virtual Finance seminar

## Again, little difference between Theory and Practice

### Theory

10 Year Rolling Alpha for Active Segment (pre-fees)



### Practice

HFRI Alpha vs SPX

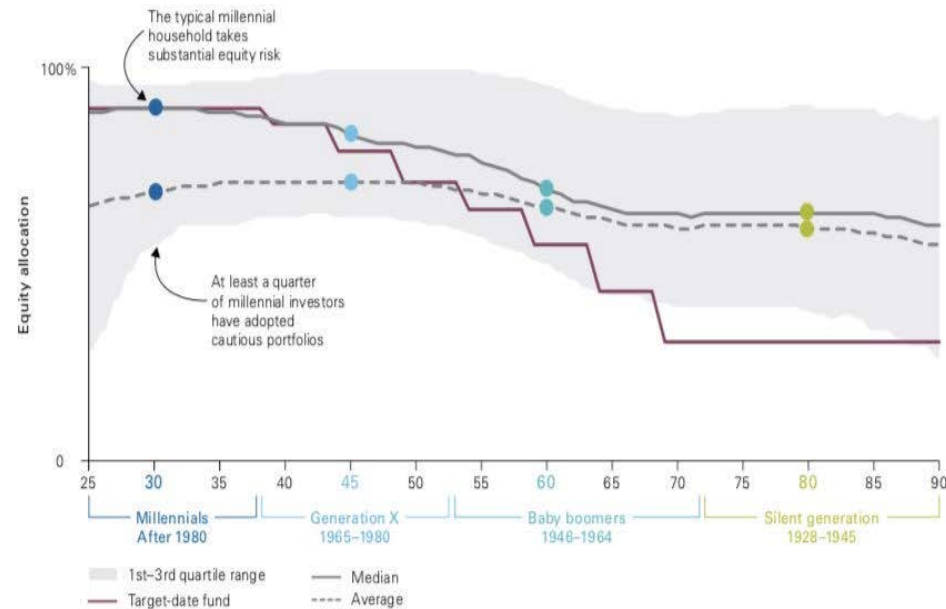


Source: Bloomberg, Proprietary survey of 452 investors subscribing to RealVision, Logica calculations

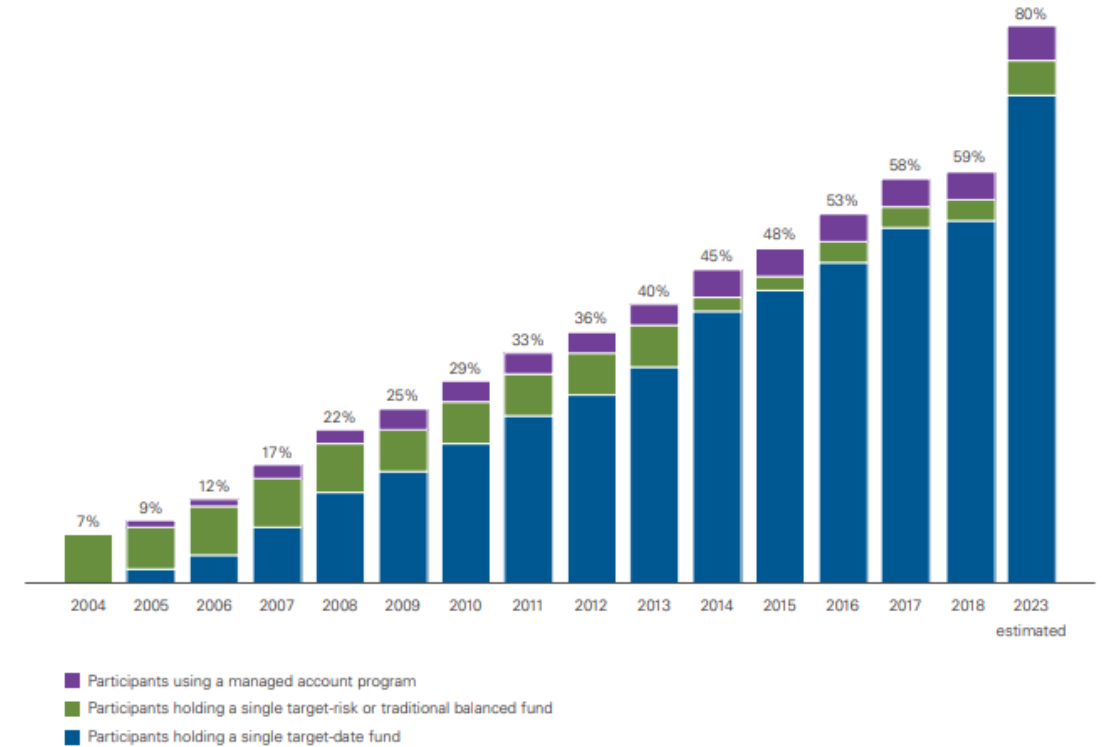
## Tesla is not the only company offering autopilot...

Figure 1. Age-based equity allocations among Vanguard retail investors

Taxable-account and/or IRA investors as of December 31, 2017



Source: Vanguard, 2018.



Slightly more than 60% of all contributing participants in 2018 were in plans with automatic enrollment.



Two-thirds of automatic enrollment plans have implemented automatic annual deferral rate increases.



Source: Vanguard

“Those who can make you believe absurdities,  
can make you commit atrocities.”  
Voltaire