



Investment Policy Committee (IPC) Meeting

VRS Board Room - 3rd Floor

Pavilion Building

1111 East Main Street

Richmond, VA 23219

Thursday, 2/13/2020

12:00 - 1:00 PM ET

Brown Bag Lunch Education

I. Global Equity: Long/Short Overview

IPC BBL Global Equity - Long-Short Feb 13 2020 - Page 2

Investment Policy Committee

Brown Bag Lunch Education Series

Global Equity: Long/Short Overview

February 13, 2020

Internal Equity Management:

Matt Lacy, Program Director

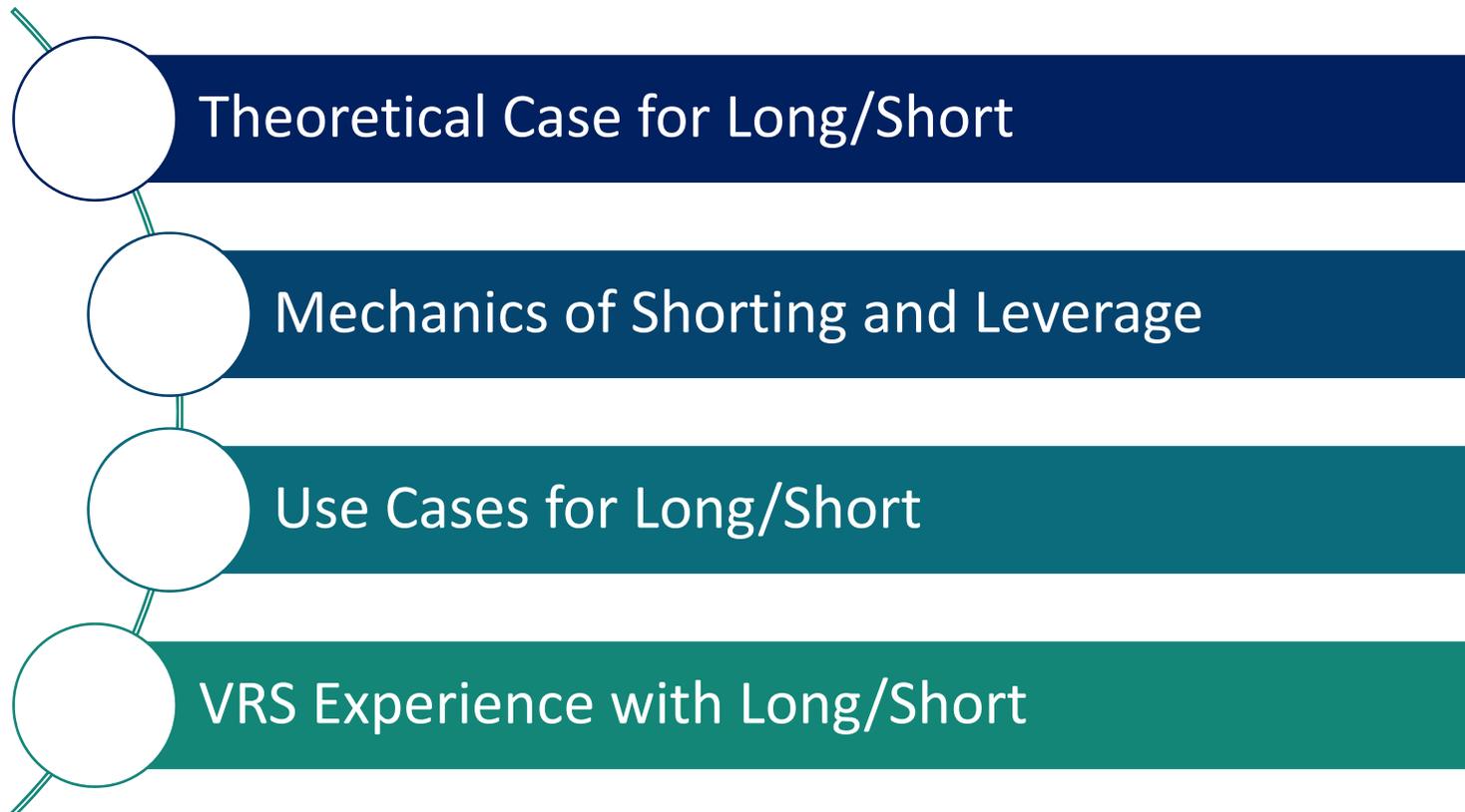
Dan Schlussler, Program Director

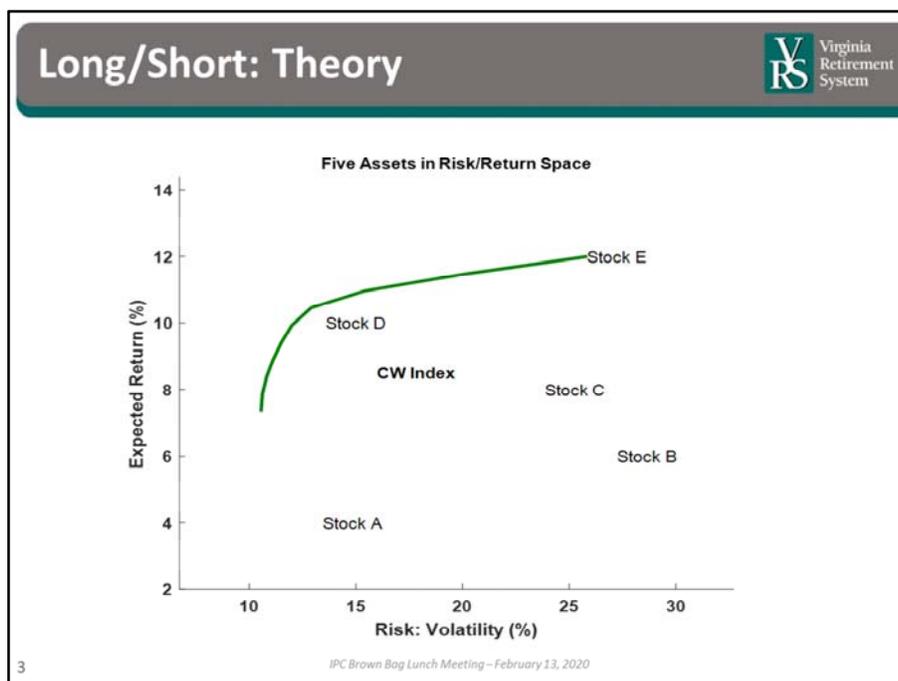
Global Equity:

Dan Whitlock, Program Director

Stephen Adelaar, Portfolio Manager







The most important advantages of shorting and leveraging:

- They allow investors to build more efficient portfolios (return per unit of risk) than Long/Only strategies
- Allow investors to express negative views

We are going to demonstrate this using a 5 asset portfolio.

The stocks have covariance and capitalizations that are based on real data, but we have set the expected returns to range between 8% – 12%.

We also have a cap-weighted index.

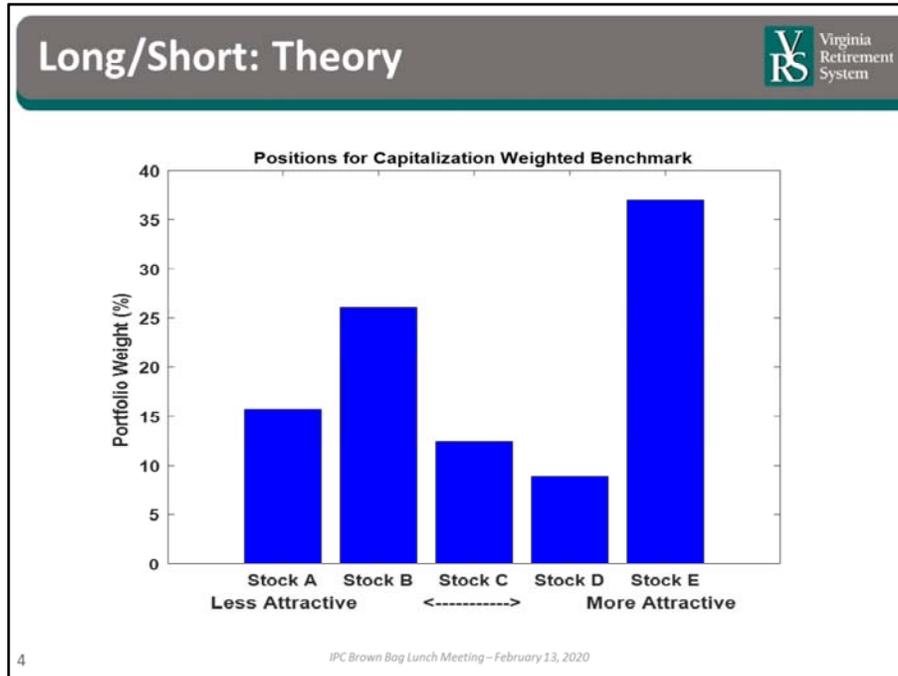
These return forecasts could be based on a quant model or could be the output of a fundamental manager's stock picking process. The point is that shorting and leverage will allow the manager to get the most out of their process.

The manager's objective is to combine the stocks into a portfolio that can improve upon the CW Index. The client has given them the mandate to build an \$100mm active portfolio that has the same absolute risk as the CW index and will track the index within 5%.

There are many ways to accomplish this:

1. Long/Only -- Buy 100mm of long stocks, net exposure is 100mm.
2. 130/30 or short extension strategy (1XX/XX) buy 100mm of long stocks, Short 30mm and finance 30mm of long stocks. Net exposure is 100mm. Gross exposure is 160mm
3. Market Neutral w/ Overlay. Buy 100mm of stock, Short 100mm of stock, overlay with 100mm notional swap or futures. Gross exposure is 300mm, Net exposure is 100mm.

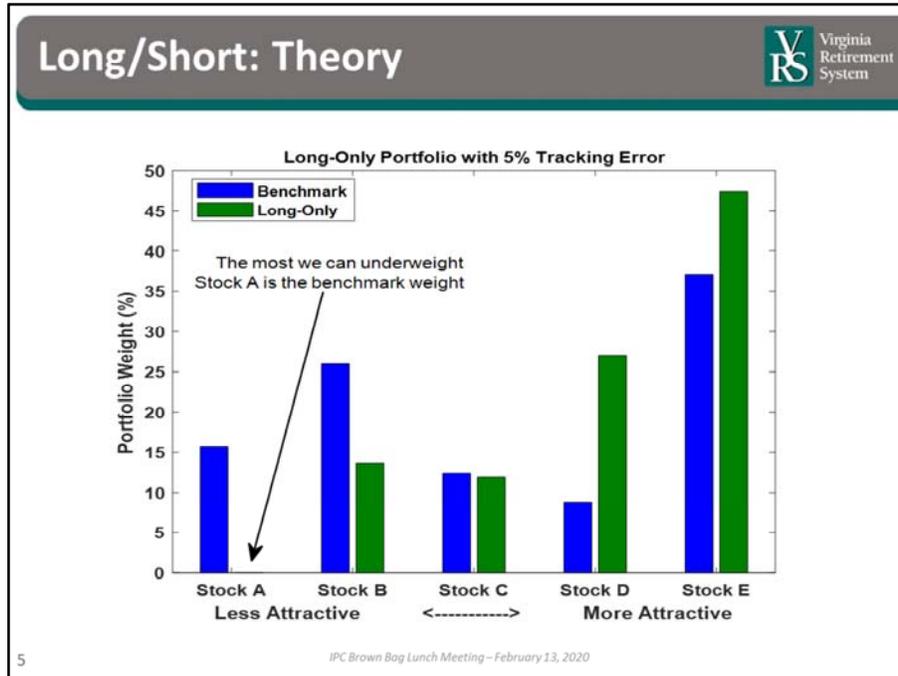
VRS has done all three at various times. We are going to show the Long-only and 130/30 cases for this example since we are researching the 130/30 implementation in IEM. DW and SA will talk about how our external managers have used all three of these strategies at VRS.



This slide shows the positions in the cap-weighted index. They are arranged from less attractive to more attractive.

The index already has a large position in Stock E – an attractive stock according to our forecast.

It also has large positions in stocks A & B which are the least attractive.

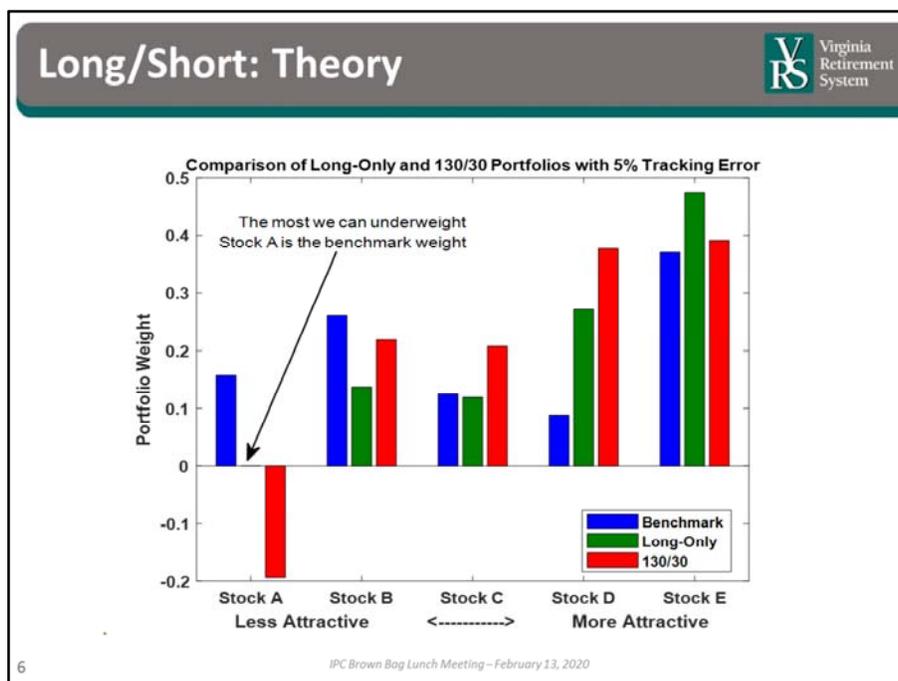


Let's say the client assigns us a long only mandate.

Our objective is to build the best risk/return portfolio that we can given our forecasts and the limitation that we cannot short or finance long securities and that we will track the benchmark within 5%.

In Long/Only we buy significantly more of stocks D & E.
Notice that we don't own any of stock A, our least attractive.

This portfolio has expected tracking of 5% and is expected to outperform the benchmark by 150 bps.



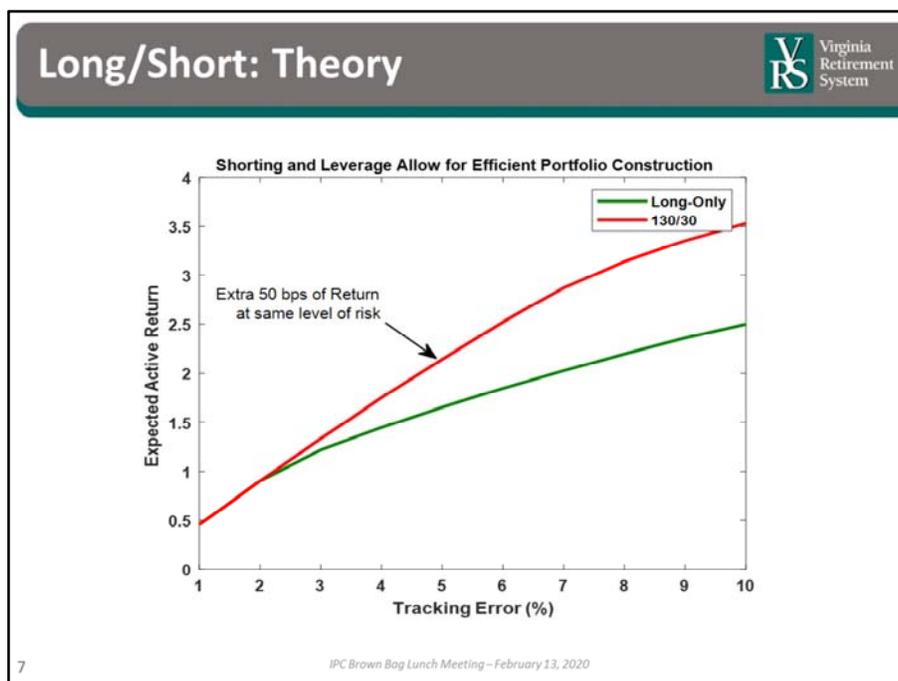
What if we allow the manager to short up to 30% and finance an equivalent amount of long securities.

Here at the 5% tracking level, the optimizer builds a 120/20 portfolio. So we have spent 100mm, shorted 20mm and financed 20mm of long positions with a net exposure of 100mm.

Note that rather than not owning any of stock A, we now take a ~20% short position. In Long/Only world the most we could underweight stock A was A's position in the benchmark, 15%. In Long/Short we have a 35% underweight position vs the benchmark.

We also own larger positions in stock B, C, & D. Our ability to short stock A created an opportunity to add to these positions while still keeping the same net exposure as we had in Long/Only.

The 130/30 portfolio has an expected tracking of 5% and an expected return of ~2%. This is 50 bps better than the long only portfolio at the same level of active risk.



The arrow shows us the difference between the L/O and 130/30 portfolios in active risk and return space.

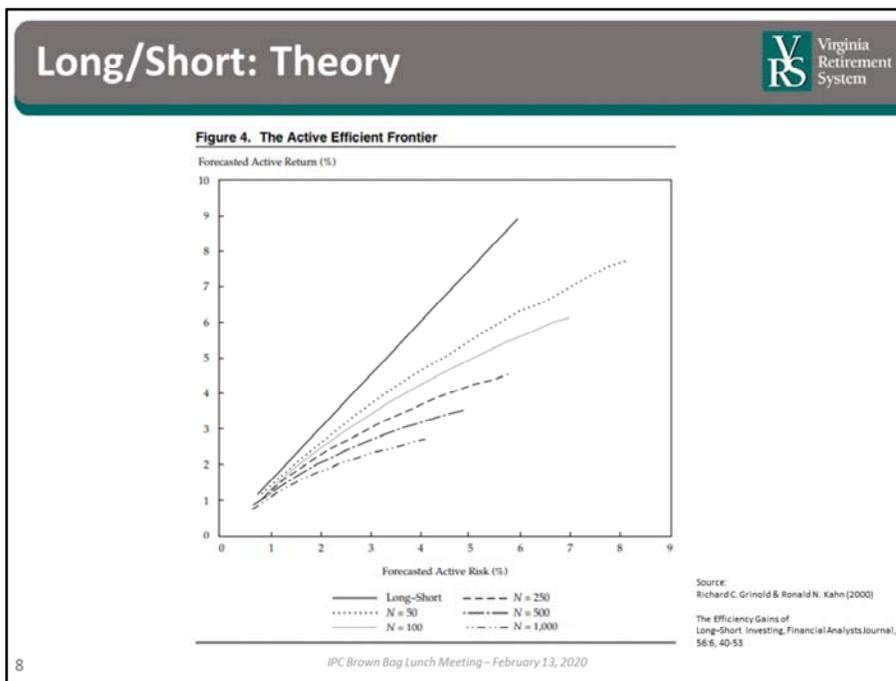
What happens if we ask the optimizer to construct portfolios that take increasing amounts of tracking error, ranging from 1% to 10%.

As we increase the amount of risk we do get additional alpha but we get it at a decreasing rate. The slope of these two lines is called the information ratio.

Notice that as we increase active risk from 1 to 2% we get similar amounts of additional alpha in Long/Short and Long/Only.

At 5% tracking we get an additional 50 bps and at 10% tracking we get an additional 100 bps. The 130/30 retains a higher information ratio as we take on more active risk.

The ability to short and leverage becomes more important as we increase the active risk of the portfolio.



So far we have shown how L/S allows investors to build more efficient portfolios and that this becomes more important as they take more active risk. Our example just included 5 assets – what happens when we generalize this to larger asset universes?

Grinold and Kahn ran simulations using different numbers of assets (50 to 1000) and varying levels of active risk (tracking error). They found that efficiency (Information Ratio) declines for Long/Only portfolios as both the number of stock and active risk increase.

Long/Short FAQ:

Does shorting expose you to unlimited losses?

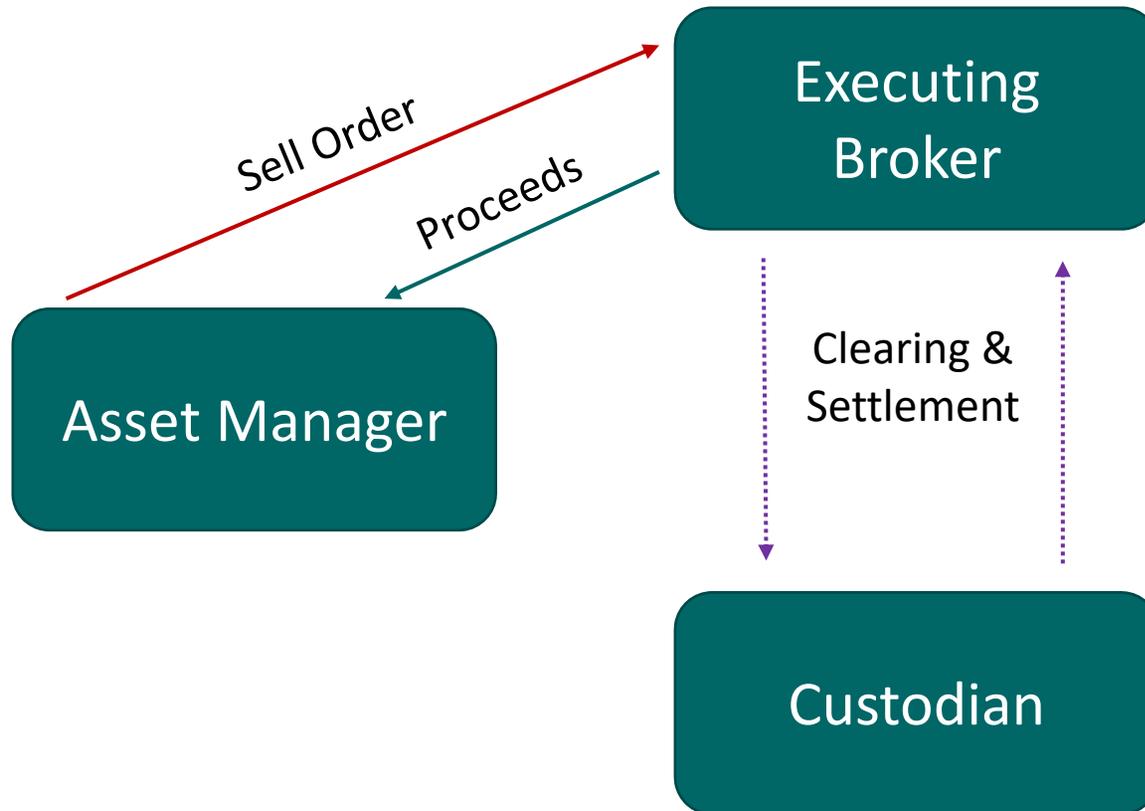
What are the risks of using leverage?

What do we mean by “economic” leverage?

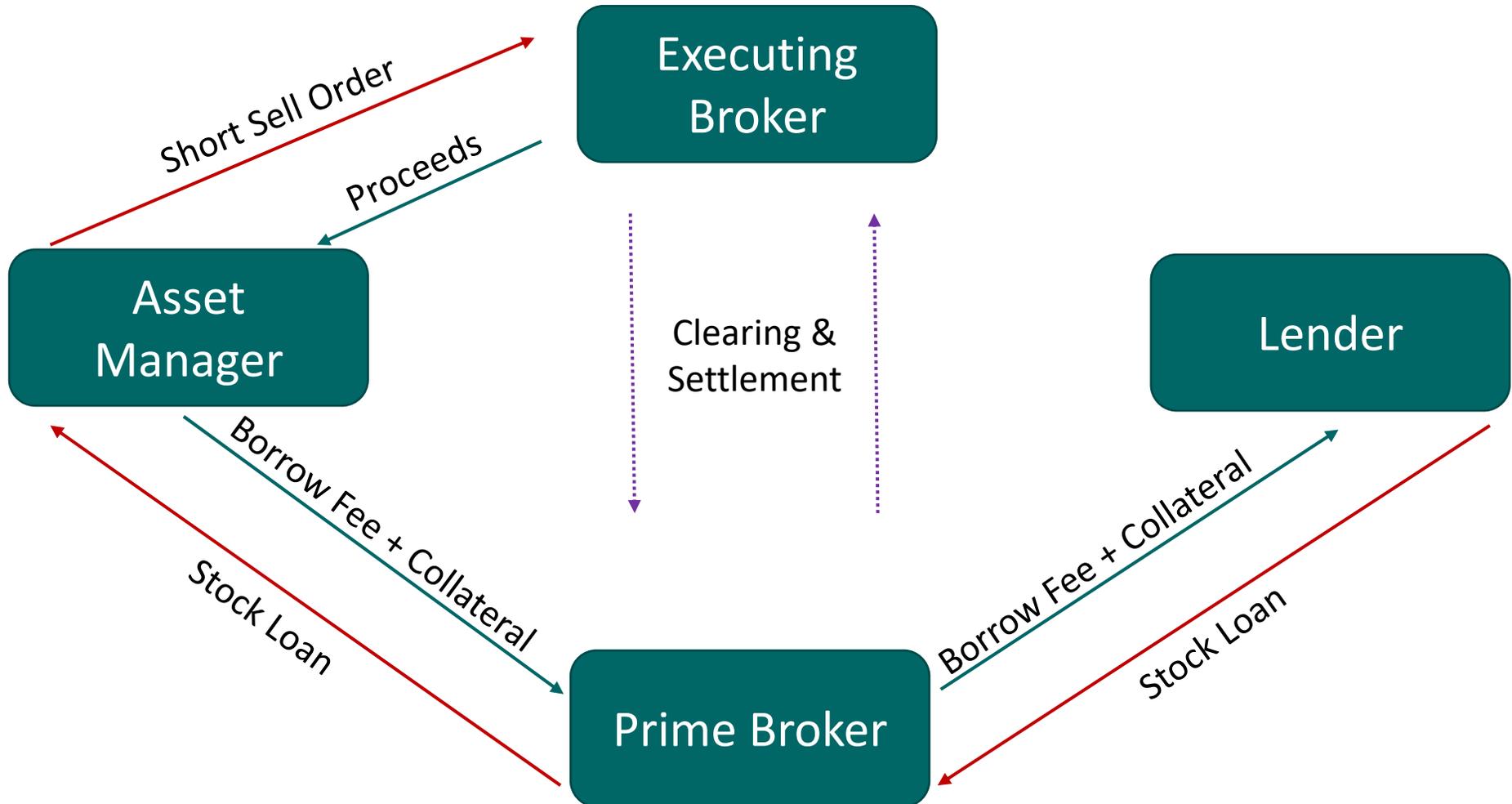
Do shorting and leveraging require more trading and portfolio turnover?

Are there counterparty risks associated with shorting and leveraging?

Mechanics of a Long Sale



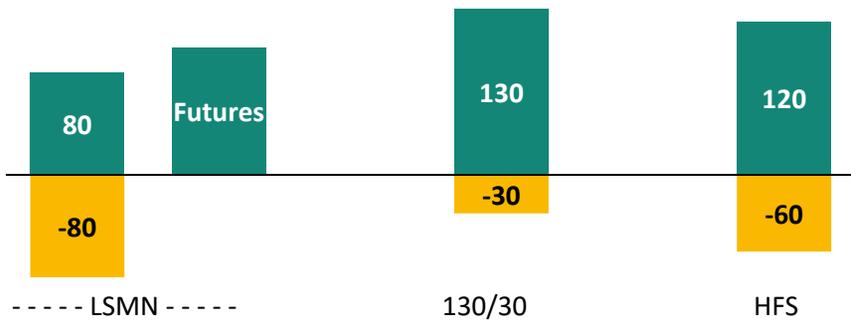
Mechanics of a Short Sale



Loosened Constraints: VRS Shorting History In Public Equity



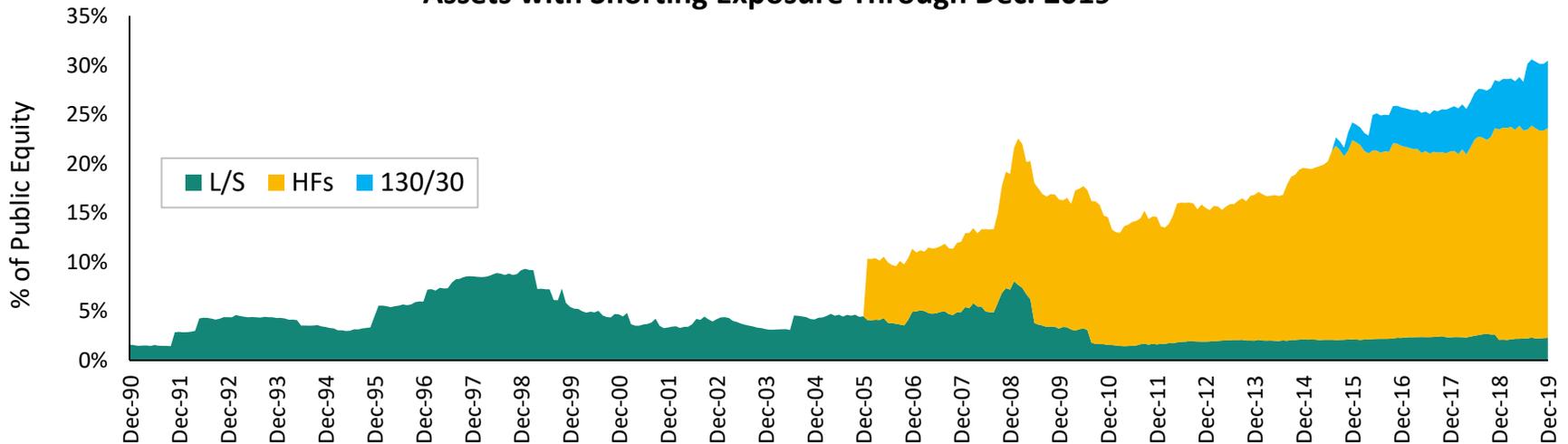
Examples of Long/Short Exposures



VRS Experienced Excess (net of fees) - as of Dec. 2019

	1 Yr	3 Yr	5 Yr	10 Yr	Incept.
LSMN	(0.20)	1.69	(0.38)	0.45	0.19
HF	6.78	(0.04)	0.20	1.77	3.00
130/30	(2.52)	3.33	n/a	n/a	2.33

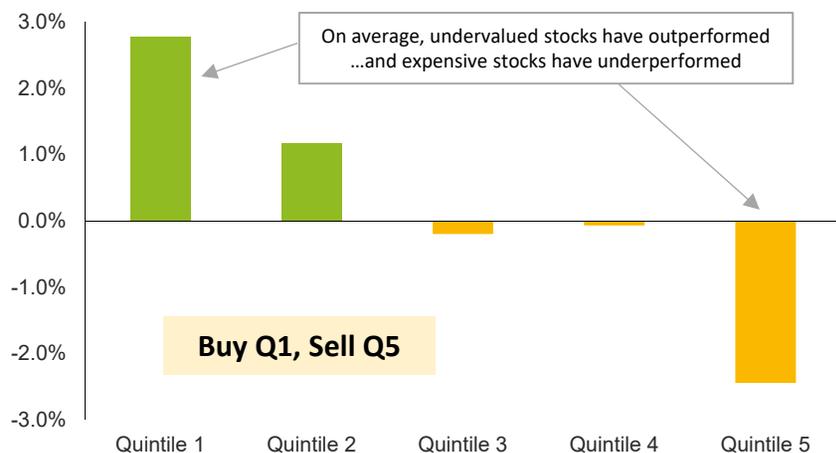
Assets with Shorting Exposure Through Dec. 2019



J.P. Morgan: 30 Years of Partnership

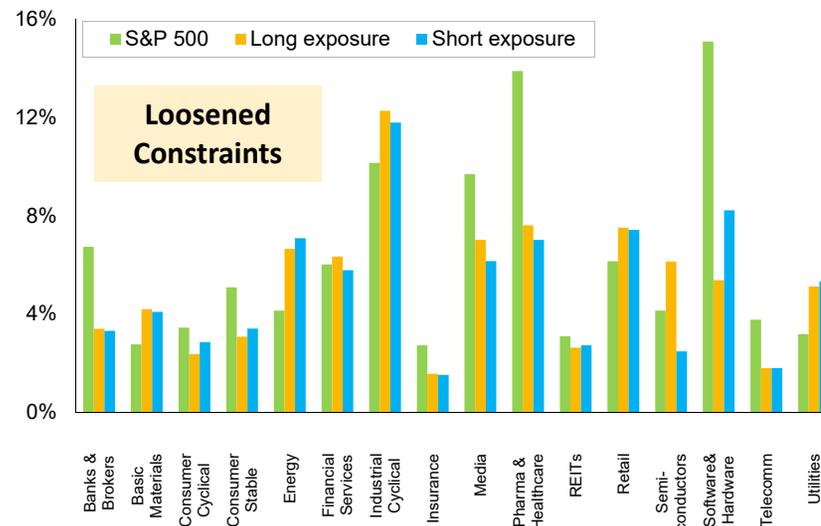


**Quintile Performance vs. S&P 500 Index
1/1/1987 – 12/31/2019**



Source: J.P. Morgan Asset Management

**J.P. Morgan Asset Management
Research Market Neutral Portfolio Positioning as of 12/31/19**



Source: Wilshire

VRS Experienced Cumulative Excess (net of fees) Through Dec. 2019

