From: Bruce O Knuteson knuteson@mit.edu @ Subject: Re: Date: January 6, 2021 at 2:08 PM @washpost.com, @washpost.com, @washpost.com To:XXX Dear I attach updated plots from Strikingly Suspicious Overnight and Intraday Returns, including those referenced in footnote 18. Do you think your readers deserve to know about suspicious return patterns in their investments? If so, you should tell them. Thanks and regards, Bruce Bruce Knuteson http://bruceknuteson.com Overnight and Intraday Returns to Major Stock Market Indices 1193 14869 39405 United States United States Canada iShares TSX 60 ETF S&P 500 SPDR ETF NASDAQ Composite overnight intraday 0 9% -68% -30% 3850% +70,9 +10905/ Australia Brazil Mexico SPDR S&P/ASX 200 Fund iShares MSCI Brazil Capped ETF iShares MSCI Mexico Capped ETF -99.0 0 94% +1209% 590% +1518 United Kingdom France Germany iShares Core FTSE 100 ETF CAC 40 DAX 0 56% 0 61% 89% +1252% +2487 Netherlands Norway DNB OBX ETF 2053% Italy iShares FTSE MIB ETF AEX 0 63% 0 0 85% -97% +760. 885% 22995 Israel India India NIFTY 50 TA-125 S&P BSE SENSEX 83% 0 87% -99.8 C 24629 +57629 +137. Singapore Korea Taiwan SPDR Straits Times Index ETF KOSPI Composite Index TSEC Weighted Index



On Oct 20, 2020, at 4:02 PM, Bruce O Knuteson <<u>knuteson@mit.edu</u>> wrote:

Dear XX

I attach updated plots from Strikingly Suspicious Overnight and Intraday Returns.

If you have not yet figured out whose trading is responsible, perhaps you could bring these extraordinary plots to the attention of your readers.

They deserve to know about suspicious return patterns in their investments.

Thanks and regards,

Bruce

Bruce Knuteson http://bruceknuteson.com

<suspicious_index_returns.pdf>

On Aug 14, 2020, at 1:27 PM, Bruce O Knuteson <<u>knuteson@mit.edu</u>> wrote:

Dear XX

Have you figured out whose trading caused more than all of the positive returns to the world's major stock market indices (except China's) over the past 30 years to occur overnight?

I reattach a few plots from "Celebrating Three Decades of Worldwide Stock Market Manipulation" (arXiv, SSRN).

If not, perhaps you could bring these extraordinary return patterns to the attention of your readers.

I think they would find this interesting.

Thanks and regards, Bruce

Bruce Knuteson http://bruceknuteson.com

<suspicious_index_returns.png>

On May 26, 2020, at 1:01 PM, Bruce O Knuteson <<u>knuteson@mit.edu</u>> wrote:

Dear

Have you been able to figure out whose trading caused more than all of the positive returns to the world's major stock market indices over the past 30 years to occur overnight?

If not, perhaps you might consider bringing these extraordinary return patterns to the attention of your readers. I re-attach a few plots from "Celebrating Three Decades of Worldwide Stock Market Manipulation" (available on <u>arXiv</u> and <u>SSRN</u>).

Suspicious return patterns in financial markets usually indicate a problem.

Thanks and regards, Bruce

Bruce Knuteson http://bruceknuteson.com

<suspicious_index_returns.png>

On Jan 6, 2020, at 4:00 PM, With the work of the work

D.E. Shaw is a big deal. My owner's former employer.



Dear

Thanks for your interest.

I am an expert on this, but what I can say is unfortunately constrained by an agreement with a previous employer (D.E. Shaw & Co.).

I would be happy to consider by email any specific questions you might have. (Email provides me with sufficient time to ensure my response manifestly complies with the previously mentioned constraint. Real-time communication does not, unfortunately.) You would be more than welcome to quote (or not) anything in my responses.

I suspect Marie-Eve Lachance and the academics quoted in Sommer's piece would be willing to answer questions by phone. Conversations with the following two people should bring you quickly up to speed on these strange return patterns:



Thanks and regards, Bruce

On Jan 6, 2020, at 3:06 PM, washpost.com > wrote:

This intrigues me, Bruce. I am in the middle of something, but this would be a really good column. I will read Sommer's piece (I respect him). Are you an expert on this? Can I call you in the next couple of weeks to pick your brain please? Would love to quote you if you are willing. Or not. Its okay.



Dear

As an extension to my Sep 29, 2018 suggestion (earlier in this thread), I wonder whether you might be interested in writing about the difference between overnight and intraday returns on the world's major stock market indices.

Your story could be similar in form to Jeff Sommer's <u>February 2018 New York Times article</u> [<u>nytimes.com</u>], which notes the puzzling overnight versus intraday return pattern in the S&P 500 index.

I attach a few plots from "Celebrating Three Decades of Worldwide Stock Market Manipulation" (available on <u>arXiv [arxiv.org]</u> and <u>SSRN [ssrn.com]</u>).

Lachance (the author of Reference 11 of the aforementioned article).

I think your readers would be interested in hearing about these extraordinary return patterns.

Thanks and regards, Bruce

Bruce Knuteson http://bruceknuteson.com [bruceknuteson.com]

<image001.png>

On Nov 18, 2018, at 6:49 PM, Bruce O Knuteson <<u>knuteson@mit.edu</u>> wrote:



You may also wish to check out Figure 1 of <u>How to Increase Global Wealth Inequality for Fun</u> and <u>Profit [ssrn.com]</u>.

Thanks and regards, Bruce

On Sep 29, 2018, at 6:13 PM, washpost.com > wrote:

Great idea, Bruce



On Sep 29, 2018, at 4:40 PM, Bruce O Knuteson <<u>knuteson@mit.edu</u>> wrote:

Dear

I wonder whether you might be interested in writing about the difference between overnight and intraday returns on the NASDAQ Composite index. Over the past quarter century (1993-01-29 to 2018-09-30), the cumulative overnight (intraday) return to the NASDAQ Composite index is +2,939% (-62%).

Your story could be similar in form to Jeff Sommer's <u>February 2018 New York</u> <u>Times article [nytimes.com]</u>, which notes the similarly puzzling overnight versus intraday return pattern in the S&P 500 index. No need to mention me, of course. For someone to quote, you could begin with Michael Kelly (quoted in the aforementioned New York Times article), who studied this effect in a NASDAQ index ETF.

I attach for reference an updated version of the NASDAQ Composite index plot*, but a similar plot obtained from your own analysis would be more suitable for such a story.

I think your readers would be interested in hearing about this extraordinary return pattern.

Thanks and regards, Bruce

Bruce Knuteson http://bruceknuteson.com [bruceknuteson.com]

<nasdaq_day_and_night.png>

*This plot (covering dates from 1993-01-29 to 2018-09-30) was made using the code linked at <u>https://bruceknuteson.github.io/spy-day-and-night/</u>[bruceknuteson.github.io], with symbol "^IXIC".

On Jun 4, 2018, at 3:14 PM, washpost.com wrote:

Thanks, Bruce.



 $\times \times$



From: Bruce O Knuteson [mailto:knuteson@mit.edu] Sent: Sunday, June 03, 2018 7:15 PM





Have you been able to figure out whose 9:30am trading caused all of the positive returns to the S&P 500 index over the past 25 years?

If not, does the striking consistency of the return pattern in the attached plot lead you to think it is caused by the trading of a bunch of random retail investors, or by the trading of a computer algorithm?

If the latter, can you think of any firm(s) that may have been (i) running a computer algorithm (ii) trading volumes large enough to cause these plots (iii) with a portfolio big enough to benefit from the impact arb described in <u>https://arxiv.org/pdf/1612.06855.pdf [arxiv.org]</u> (iv) since 1993?

Thanks and regards, Bruce

<image001.png>



Thanks, Bruce.



[EXTERNAL EMAIL] Dear

You may have seen the article discussing this return pattern in the New York Times earlier this month:

https://www.nytimes.com/2018/02/02/your-money/stock-market-afterhours-trading.html [nytimes.com]

Over the past quarter century (1993-01-29 to 2018-01-31), the cumulative overnight (intraday) return on the SPY is +1,052% (-11%).

As you presumably know by now, the pattern in the NASDAQ Composite index is even more curious. Over the past quarter century, the cumulative overnight (intraday) return on the NASDAQ Composite index is +2,733% (-62%).

Plots are attached. Details are available [bruceknuteson.github.io].

Thanks and regards, Bruce

Bruce Knuteson http://bruceknuteson.com [bruceknuteson.com]

<image001.png>

<image002.png>

On Dec 2, 2017, at 7:35 PM, Bruce O Knuteson <<u>knuteson@mit.edu</u>> wrote:



Have you figured out whose trading caused this extraordinary return pattern?

Thanks and regards, Bruce

Bruce Knuteson http://bruceknuteson.com [bruceknuteson.com]

<spy_day_and_night.png>

On Aug 3, 2017, at 9:29 AM, washpost.com wrote:

Bruce,

Thanks for your note. That's really interesting what you point out. I recall 2015 when everyone was writing articles about how the last 30 minutes of the trading day were so crucial because that's when the bulk of the activity was happening: https://www.cnbc.com/2015/05/28/why-the-last-minutes-of-trading-are-crucial-traders.html [cnbc.com] You take a longer term view though.

Thanks for passing along. I had not thought about this issue in awhile. You have given us some food for thought.





From: Bruce O Knuteson [mailto:knuteson@mit.edu] Sent: Wednesday, August 02, 2017 10:40 PM To: washpost.com>; washpost.com>; Subject: Dear

All of the positive returns to the S&P 500 index over the past 25 years occurred at 9:30am (plot attached; references at<u>https://bruceknuteson.github.io/spy-day-and-night/[bruceknuteson.github.io]</u>).

To understand what is really behind view of the start by figuring out whose trading is responsible for this extraordinary return pattern.

Best regards, Bruce

Bruce Knuteson http://bruceknuteson.com[bruceknuteson.com]

<image001.png>