OPINION | MONEY STUFF

Broker Leaks and Bitcoin Biases

Also hedge-fund success, 50 Cent and advertising unicorns in space.

By Matt Levine

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Brokers.

It is no fun to have to sell a lot of securities quickly. If, for instance, you are a hedge fund whose clients have demanded their money back, and you need to sell all your stocks and bonds to get it, you will have a hard time selling them for what they are worth. (Or at least, for what they were trading for the day before you started selling.) If you have a lot of stock to sell you will probably do it in chunks, and each time you sell you will drive the price down, so you'll end up getting a much worse price on the last chunks than you did at the beginning. You'll sell your first 1,000 shares at $50 and your second 1,000 shares at $49.50 and your tenth 1,000 shares at like $45. But even worse, other people might figure this out and get ahead of you: If you sell your first 1,000 shares at $50 and everyone figures out that you actually have 10,000 shares to sell, then no one will want to buy from you at $49.50 or $49. They know that you are dumping a lot of stock and that the price is going to fall further. So they'll back away, and only buy from you at $45. Or they will even *short* the stock that you are trying to sell, since they know your selling will bring it down, and then they'll cover their shorts when you are done selling.

But how do they know? How do predatory traders see you trade 1,000 shares and figure out that you have more shares coming so they should get ahead of you? There are various ways -- they can read about it in the press, they can have a magic front-running high-frequency-trading algorithm -- but here is one simple answer: Your broker tells them. Here is "Brokers and Order Flow Leakage: Evidence from Fire Sales <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3079690> ," by Andrea Barbon, Marco Di Maggio, Francesco Franzoni and Augustin Landier:

> *Using trade-level data, we study whether brokers play a role in spreading order flow information. We focus on large portfolio liquidations, which result in temporary drops in stock prices, and identify the brokers that intermediate these trades. We show that these brokers' best clients tend to predate on the liquidating funds: at the beginning of the fire sale, they sell their holdings in the liquidated stocks, to then cover their positions once asset prices start recovering. The predatory trades generate at least 50 basis points over ten days and cause the liquidation costs for the distressed fund to almost double. These results suggest a role of brokers in fostering predatory behavior and raise a red flag for regulators. Moreover, our findings highlight the trade-off between slow execution and potential information leakage in the decision of optimal trading speed.*

That seems like rather unpleasant behavior from the brokers, but actually there is a plausible justification for it. If you need to sell a lot of stock, your broker needs to find someone to buy it. One way to do that is for the broker to call up her favorite clients and say "hey I have a guy who is selling a lot of stock, do you want to buy some?" It would be a bit dishonest of her to say "hey I have a guy who is selling a very little bit of stock, do you want to buy it": Then her favorite client might buy 1,000 shares at $50 only to see the price crater as the liquidating fund keeps selling. Plus, of course, if it turns out that her favorite client wants to buy a *lot* of stock, then the whole trade can be done very efficiently and both sides can be made happy. The broker's whole job is to match buyers and sellers; when she has a big seller, her role is to go call other clients and try to find buyers.

But the tradeoff is that those calls leak information:

> *Brokers may decide to spread the news that a client's large trade is likely to extend over several days to other traders. They may have an incentive to do so in order to establish a reputation as a source of valuable information and attract new business. On the other hand, brokers may care about the*

> *long-term relationship with their clients. Hence, brokers may be reluctant to foster predatory trading against a client. Rather, according to this argument, they should invite other traders to provide liquidity and take the other side of the slow trade. It remains, therefore, an open empirical question whether brokers foster predatory trading or liquidity provision in case of slow trading by a client. The paper aims to address this question.*

The answer is not great for the brokers: "The best clients of the aware brokers are significantly more likely than other clients to sell the stocks that the liquidating manager is offloading during the fire sale with respect to immediately before the fire sale." (We have talked <https://www.bloomberg.com/view/articles/2017-06-20/bank-relationships-and-index-rules> a few times <https://www.bloomberg.com/view/articles/2016-11-08/politics-polls-art-and-bribery> before about <https://www.bloomberg.com/view/articles/2017-07-11/indexing-boredom-and-butter> similar papers, one with authors who overlap with this one's, about brokers who seem to leak valuable information about trades to their favorite clients.) If a broker calls up her best clients and says "I have a guy who is selling," and they all buy, then she is doing her job. If she calls up her best clients and says "I have a guy who is selling," and they all *sell*, she is doing something other than her job.

I mean, you can understand why! Her best clients are her best clients; she wants to make them happy. The fire-selling client, on the other hand, is ... probably not her best client? How much more business is she going to get from a liquidating hedge fund?

Bitcoin, always bitcoin.

"The days of bitcoin stunt journalism are over," writes Felix Salmon <http://www.niemanlab.org/2017/12/covering-bitcoin-while-owning-bitcoin/> : "Today, if you write about bitcoin, you can't ethically own it, any more than you can own shares directly in companies you write about." This seems to be a consensus among journalists, but I wonder about it <https://twitter.com/matt_levine/status/941008444005502978> a little. If you *don't* have any bitcoins, doesn't that make you biased against it? After all, I *do* own stock in most of the public companies I write about, not "directly," but in the sense that they are in broad market indexes and most of my money is in broad market index funds. My exposure to the companies that I write about is not *zero*, it is instead a *neutral amount*: I own them in approximate proportion to their importance in the equity markets, and to my exposure to the equity markets.

It is hard to know what the "neutral" allocation to an asset is, but it seems reasonably clear that for prominent mainstream financial assets -- Apple Inc. stock, say -- it is not zero. If you had an otherwise normal healthy market-cap-weighted allocation to a diversified portfolio of U.S. equities, but zero exposure to Apple stock, then that would look a lot like a bet against Apple. You would be "underweight Apple" -- almost like being short Apple -- and your portfolio would do better, relatively speaking, if Apple went down than if it went up. If Apple went up a lot, you would be sad, because you made what is in effect a conscious decision to bet against Apple by having less than the neutral amount of it in your portfolio. If you were a journalist writing about Apple, that might, to some fastidious observers, create the impression that you were biased *against* Apple.

On the other hand no one expects you to be long Beanie Babies or Dogecoin or Arkansas commercial real estate or penny stocks or whatever other niche investments some people are into, not even in proportion to their economic importance. It's normal to have a normal amount of normal assets; it's fine to have zero of niche assets.

In the glory days of bitcoin stunt journalism -- when Kashmir Hill "lived on

Bitcoin in 2013 <https://twitter.com/kashhill/status/935556665939656704> " and bought a sushi dinner for 10 bitcoins (now $166,400) -- it was an extremely niche asset. Now ... I mean ... I don't know? It is still a little weird to own bitcoin, but if current trends continue -- a big if! -- then in a couple of years it will be a little weird not to. (At least in ETF form or whatever.) In round numbers the total value of bitcoin <https://coinmarketcap.com/currencies/bitcoin/> represents about 1/10th of one percent of the total wealth <https://www.bloomberg.com/view/articles/2017-12-11/bitcoin-is-a-bit-of-a-miracle-at-any-price> in the world. If 20 percent of your net worth is in bitcoin you are probably overweight, but if zero percent is in bitcoin you might be a little underweight.

Disclosure: I don't own any bitcoin. And I feel a little guilty about it.

Meanwhile in bitcoin futures, Interactive Brokers <https://www.businesswire.com/news/home/20171213005840/en> "will now accept orders for short sales of Cboe Futures Exchange (CFE) Bitcoin futures." You'll have to post margin of $40,000 per (one-bitcoin) contract -- over 200 percent -- to short the futures at Interactive Brokers. (A long futures bet requires $9,000 of margin, and that 200 percent margin is a concession: At one point Interactive Brokers Chairman Thomas Peterffy said that <https://www.ft.com/content/829babb2-df74-11e7-a8a4-0a1e63a52f9c> the margin to go short would be "in the neighbourhood of $100,000.") The arbitrage spread between spot bitcoin and bitcoin futures does seem to be compressing a bit -- as of 8:15 a.m. today it was about $485, or about 3 percent, down from $1,000+ when the futures first started trading <https://www.bloomberg.com/view/articles/2017-12-11/bitcoin-futures-and-banky-thoughts> -- so perhaps easier shorting is leading to more efficient trading.

On the other hand, here's a Twitter thread <https://twitter.com/TedOnPrivacy/status/940588631709896704> from a guy who tried to sell some bitcoin and found the process "so terrible, it's almost hilarious." Enough exchanges have withdrawal limits, delays, complicated verification processes, etc., that converting bitcoins into dollars is not as easy as it sounds. If you are doing the spot/futures arbitrage, which requires converting bitcoins into dollars at maturity to close out the arbitrage, then I hope you have a better way of doing that conversion.

Elsewhere:

- "After Bitcoin Futures, an ETF Could Be Next <https://www.wsj.com/articles/after-bitcoin-futures-an-etf-could-be-next-1513166400?mod=ITP_businessandfinance_8&tesla=y> ."
- "These Guys Want to Lend You Money Against Your Bitcoin <https://www.bloomberg.com/news/articles/2017-12-14/bitcoin-s-new-barons-no-longer-have-to-sell-to-live-in-luxury> ."
- "Traders weary of modest returns in commodity markets are rushing into the booming world of bitcoin, seeking to mint money <https://www.wsj.com/articles/in-bitcoin-commodity-traders-try-to-revive-heady-days-1513166400?mod=ITP_businessandfinance_0&tesla=y> in one of the riskiest assets."
- "Is Bitcoin a Bubble? 96% of Economists Say 'Yes,' <https://blogs.wsj.com/economics/2017/12/13/is-bitcoin-a-bubble-96-of-economists-say-yes/> " but those are, like, *fiat* economists, man.
- "If you also thought bitcoin, or any cryptocurrency, would one day displace regular money, those prospects have never looked worse," writes Greg Ip <https://www.wsj.com/articles/bitcoin-electrifying-investment-lousy-currency-1513182418> , and I have to say it may be time for a moratorium on complaints that bitcoin is a lousy medium of exchange. It sure is! But that is a pretty well known fact by now, and bitcoin keeps going up anyway. Nor is it weird: Gold is also a pretty lousy medium of exchange these days, and people keep buying it. There really does seem to be demand for a store-of-value/speculative-asset/hedging-asset thing, and people think that bitcoin fits the bill even if it's hard to buy a sandwich with it. "Cryptocurrency is not a good currency" is not a good objection to bitcoin, and hasn't been for a while. You can see why people keep saying it, though; the currency thing is right in the name. If we were talking about a crypto-asset called bit-asset instead of a cryptocurrency called bitcoin, these objections wouldn't even come up.
- Axe Exploration Inc., a micro-cap Canadian gold mining company that has never <http://axeexploration.com/wp-content/uploads/2017/01/Rapport-Annuel-2016-FR.pdf> mined any <http://axeexploration.com/wp-content/uploads/2017/08/Etats-Financiers-Axe-30-Juin-2017.pdf> gold, announced yesterday <http://www.marketwired.com/press-release/axe-announces-its-intention-evaluate-new-business-opportunities-eventually-redirect-tsx-venture-axq-2243252.htm> "its intention to evaluate new business

opportunities and eventually redirect its business to the cryptocurrency and blockchain." The stock was up 87.5 percent on heavy volume. (To 7.5 cents a share, but still.) Just announcing that it was *thinking* about bitcoin added more than a million dollars to its market capitalization.

- You can buy a Miami condo <https://www.redfin.com/FL/Miami/480-NE-30th-St-33137/unit-2206/home/43370743> for 33 bitcoins, though not for dollars; the seller is "ONLY ACCEPTING BITCOIN." The homeowners' association dues are $525 a month, though, in dollars.
- "This startup uses body heat to mine crypto <https://thenextweb.com/insider/2017/12/12/startup-uses-body-heat-to-mine-crypto-for-when-robots-take-jobs/> – for when robots take our jobs." If humans ever end up being Matrix-style sources of fuel for our robot overlords, that will obviously be bad, but it will be especially humiliating if we're fuel for their *bitcoin mining*.

How's Bill Ackman doing?

We talked the other day <https://www.bloomberg.com/view/articles/2017-12-12/bitcoin-arbitrage-and-tax-math> about a machine-learning-driven hedge fund called Voleon Group, which has had some weak years following some great years, and I joked: "The machine seems to have mastered one very important skill of human hedge fund managers, which is to have enough good years to justify the drawdowns to clients." But of course I meant it too. The measure of success as a hedge fund manager is, roughly speaking: Can you keep managing a lucrative hedge fund? Having high returns is important for this goal, sure, but so is being able to demonstrate statistically that you add alpha, that your returns are not just a matter of luck or excess risk. Beyond that, being able to *qualitatively* demonstrate that you add alpha is important: If you sound smart and talk thoughtfully about your strategy with investors, they will feel more comfortable than if you just shrug and say "I buy stuff that's going to go up." There are also tactical decisions that go into being a successful manager: You want to raise money and lock in investors after a good year so that you can have a cushion for the bad years.

Anyway here is an Institutional Investor profile of Bill Ackman <https://www.institutionalinvestor.com/article/b15ywsstynx8fm/whats-eating-bill-ackman> , who's had some bad years recently, and who "admits he's not having fun anymore," but who is not giving up. ("If I recover the way I expect to from this, Pershing Square becomes much, much stronger," etc.) Are his investors giving up? Well, some of them, sure. ("Over the past two years, investors have pulled about $2 billion out of Pershing Square.") But it is also a study in how being a successful hedge fund manager is not quite the same thing as having good performance. Other things matter too, like reputation:

> *"He didn't get dumb overnight, and at some point he will find something really great and he will make a lot of money for investors," says a major investor in Pershing Square who has been there since the early days, adding, "Everyone is down on Bill Ackman, so he's the contrarian bet."*

And of course there is structuring: Ackman "is better positioned to hang on than most, given his permanent capital vehicle that now accounts for more than half of the firm's assets." If you issue permanent capital in the good times, the bad times are much less worrying.

People are worried that people aren't worried enough.

Poor "50 Cent," the trader who keeps buying options on the CBOE Volatility Index, has had a rough year betting that volatility will go up <http://www.businessinsider.com/vix-volatility-trader-50-cent-lost-197-million-betting-on-market-meltdown-2017-12> :

> *On a year-to-date basis, that persistence has resulted in a whopping $197 million mark-to-market loss for 50 Cent, according to data compiled by Macro Risk Advisors (MRA).*

On the other hand:

> *MRA does note that 50 Cent's volatility trading activity is likely some sort of broader portfolio hedge. By their calculation, the size of the trader's actual market position is likely between $20 billion to $40 billion, assuming that the hedging premium paid represents 0.5% to 1% of total assets.*

If 50 Cent had $20 billion of S&P 500 exposure then he is up about $3.8 billion (18.9 percent) year-to-date on that, or about $3.6 billion (17.9 percent) net of the VIX bets. Also if the world had gone haywire he'd have done well! You can't really complain, if you're 50 Cent.

People are worried about unicorns.

A curious fact of life in late capitalism is that many of humanity's most ambitious dreams are being pursued by advertising companies. Alphabet Inc. has achieved massive advances in artificial intelligence and is planning to "cure death <https://www.theverge.com/2014/9/3/6102377/google-calico-cure-death-1-5-billion-research-abbvie> ," but essentially all of the money to do that comes from internet advertising revenues. Facebook Inc. is at the cutting edge of virtual reality and has also reshaped human interaction and global politics, while its founder is working to "cure all disease <http://www.businessinsider.com/mark-zuckerberg-cure-all-disease-explained-2016-9> "; it, too, gets virtually all of its money from advertising. There are some outliers -- Tesla Inc. and Apple Inc. sell actual products -- but there is something poetic about the fact that the advertising industry has come to dominate not only the economy but also the discussion about humanity's future. In the utopia of virtual reality and artificial intelligence, computers will do all of our work for us and will satisfy our every need. Coming up with new needs -- and creating the ads to get people to feel those needs -- will be the last human economic activity left.

Anyway: "Space Startup Raises $90 Million to Bring Ads to Moon <https://www.bloomberg.com/news/articles/2017-12-13/space-startup-raises-90-million-to-bring-ads-to-moon-by-2020> by 2020." Well why *shouldn't* space exploration be a subsidiary of the advertising industry? We choose to go to the moon, not because it is easy, but because we can put ads there.

Elsewhere: "Federal investigators are pursuing at least one criminal investigation <https://www.nytimes.com/2017/12/13/technology/uber-waymo-driverless-cars.html> into Uber, according to a court document released on Wednesday." And: "How Language in Job Listings <https://www.wsj.com/articles/how-language-in-job-listings-could-widen-silicon-valleys-gender-divide-1513189821?mod=ITP_businessandfinance_4&tesla=y> Could Widen Silicon Valley's Gender Divide."

Things happen.

Disney Buys Fox Assets <https://www.bloomberg.com/news/articles/2017-12-14/disney-buys-fox-assets-in-52-billion-breakup-of-murdoch-empire> in $52 Billion Split of Murdoch Realm. Battle for banking union <https://www.ft.com/content/d38945d6-e030-11e7-a8a4-0a1e63a52f9c> hangs over the eurozone. Wells Fargo Trims Staff <https://www.wsj.com/articles/wells-fargo-trims-staff-in-its-giant-mortgage-unit-1513247400> in Its Giant Mortgage Unit. Navajo Say Wells Fargo Defrauded the Elderly <https://www.courthousenews.com/navajo-say-wells-fargo-defrauded-the-elderly/> . What's up at FBME Bank <https://www.buzzfeed.com/tomwarren/secrets-of-one-of-the-worlds-dirtiest-banks-revealed?utm_term=.iimDp5ADLB#.dfn67k46zp> ? Venezuela's Debt Crisis: Why Litigation is More Advantageous than Arbitration <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3087409> for Bondholders. QuantConnect platform jostles in crowded field of DIY quants <https://www.ft.com/content/c6ead8d2-dfb6-11e7-a8a4-0a1e63a52f9c> . You can trade options on Robinhood <https://www.bloomberg.com/news/articles/2017-12-13/robinhood-offers-free-options-trading-as-it-builds-customer-base> . China's HNA Group <https://www.wsj.com/articles/chinas-hna-group-seeks-to-reassure-lenders-investors-1513187628?mod=ITP_businessandfinance_1&tesla=y> Seeks to Reassure Lenders, Investors. Wanda Denies It's Facing Cash Crunch After Chinese Blog Post <https://www.bloomberg.com/news/articles/2017-12-14/wanda-denies-it-s-facing-cash-crunch-after-chinese-blog-posting> . Appraisal Arbitrage and Shareholder Value <http://clsbluesky.law.columbia.edu/2017/12/14/appraisal-arbitrage-and-shareholder-value/> . How to Rebuild Puerto Rico <https://www.bloomberg.com/news/features/2017-12-14/how-to-rebuild-puerto-rico> . Republican Tax Bill Overhauls Rules Many Were Counting On <https://www.nytimes.com/2017/12/13/business/republican-tax-bill-overhauls.html?rref=collection%2Fsectioncollection%2Fbusiness-dealbook> . Animal shelter faces backlash after using robot <https://www.theverge.com/2017/12/13/16771148/robot-security-guard-scares-homeless-san-francisco> to scare off homeless people. Fetid attraction: London fatberg <https://apnews.com/c7629204ba3540c6bf856aeb161b753a> to go on museum display. Don't snort chocolate <https://thetakeout.com/fda-to-idiot-teens-snorting-chocolate-is-bad-1821262662> . The consequences of looking at pornography at work <https://www.ft.com/content/ead0956e-de96-11e7-a0d4-0944c5f49e46> . "We probed children's understanding of the inevitability of aging <https://twitter.com/degenrolf/status/940957370586468354?refsrc=email&s=11> and the potential role of birthday parties in the aging process."

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To contact the author of this story:
Matt Levine at mlevine51@bloomberg.net

To contact the editor responsible for this story:
James Greiff at jgreiff@bloomberg.net

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