

# Liquidity, Bankruptcy and Paperwork

Also overfitting, ICOs, and mayonnaise boardroom drama.

By [Matt Levine](#)

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## People are worried about bond market liquidity.

If you are professionally worried about bond market liquidity, why not do something about it? Bond managers complain that banks are less willing to use their own capital to buy and sell bonds, which means that there is no one to buy when everyone else is selling or sell when everyone else is buying. So why shouldn't the bond managers themselves pick up the slack? After all, the banks have historically made a lot of money in the bond-dealing business. If they're getting out of it, shouldn't someone else get in?

ADVERTISING

The advertisement features two panels. The left panel shows a Dell XPS 13 7390 2-in-1 laptop in its closed position, displaying a vibrant blue river scene on its screen. The right panel shows the same laptop in its open, tent-like position, also displaying the same scene, with a white circular arrow icon pointing to the right. Both panels have the text 'THE POWER OF PREMIUM' at the top and 'XPS 13 7390 2-in-1' at the bottom. The bottom of the ad is a blue banner containing the Dell logo, 'SMALL BUSINESS' text, a 'Shop Now' button, and the Intel Core i5 10th Gen logo. Small text at the bottom right of the banner reads: 'Screens simulated, subject to change. Apps sold separately, availability may vary.'

Obviously being a long-term bond investor is a different business from being a market maker, but you can tinker at the edges. If you run a giant bond portfolio, you will mostly buy bonds that you like and hold them for a long time, but you might occasionally step in to buy bonds because others are selling and they look like a bargain. Or you might even partner up with dealers to provide liquidity: If dealers have stopped buying bonds from customers themselves, and now mostly call up other customers to find a buyer, why not try to be the customer who gets those calls?

Anyway here is a fun paper from Amber Anand of Syracuse and Chotibhak Jotikasthira and Kumar Venkataraman of Southern Methodist University, called "[Do Buy-Side Institutions Supply Liquidity in Bond Markets? Evidence from Mutual Funds](#)":

We classify a bond fund's trading style as liquidity supplying (demanding) if the changes in bond holdings exhibit a propensity to absorb (further strain) the aggregate dealer positions. Between 2003 and 2014,

bond funds on average tend to demand liquidity; however, trading styles vary across bond funds and are persistent over time. Higher flexibility in portfolio holdings is associated with a liquidity supplying trading style. A liquidity supplying trading style earns higher future fund returns after controlling for portfolio attributes and factor risk exposures.

There is a classic model of how dealers function, in which when prices are going down, they buy bonds from flighty liquidity-seeking investors and sell them to more stable value investors. (And vice versa when prices are going up.) The dealer provides immediate liquidity for the flighty investors, and cushions a little against small price moves, but the dealer is not the ultimate source of liquidity: It just moves the bonds from the flighty investors to the value investors. The value investors are the deep sources of liquidity, the people who buy when everyone is selling, the people who cushion against catastrophic and irrational price moves.

It is a noble service that they provide, and they get paid for it: Liquidity-supplying funds tend to perform better than liquidity-taking funds, and they especially perform better in periods where liquidity is stressed.

The liquidity supplying trading style generates higher fund alphas when markets are more illiquid, as evidenced by higher levels TED spread, or the St. Louis Fed's Financial Stress Index (FSI), and in the period after the financial crisis. In terms of economic significance, a one standard deviation increase in *LS\_score* is associated with monthly fund alpha of approximately two basis points under normal conditions, and 4.2 basis points under stressful conditions, in which the TED spread is one standard deviation higher than the sample average. To put these numbers in context, the average fund alpha (gross of fees) is 3.3 basis points per month during our sample.

("LS\_score" is the authors' measurement how liquidity-supplying a fund is; a higher LS\_score means that the fund provides liquidity by absorbing dealer inventory.) This makes sense in a payment-for-liquidity-services model: The liquidity-supplying funds provide a valuable service, and the more valuable the service is, the more they get paid. It also makes sense in a simple value-investing model: The liquidity-supplying funds are greedy when everyone else is fearful, and the more fearful everyone else is, the more bargains they can pick up.

Also, here is how the authors characterize the liquidity-supplying funds:

Funds in the highest *LS\_score* quintile tend to be younger; have higher percentage of assets in cash; hold more liquid bonds, i.e., bonds with shorter duration, higher credit quality, and larger issues; have lower portfolio risk; and exhibit smaller volatility in investor flows. The finding on flow volatility suggests that some funds are handicapped by volatile investor flows that force costly bond trading.

Buy better bonds, keep plenty of dry powder, and make sure that you don't rely on flighty investors yourself, and you can benefit from the lack of liquidity by providing it yourself.

**Sovereign bankruptcy.**

A well-known problem in sovereign debt is that there is no bankruptcy regime. If a country has unsustainable debt, it can go to its creditors and ask them to restructure their debt, and many of them might agree. But if others don't, you can't force them; the only way to bind every holder to a restructuring is to get every holder to agree. And so you get situations like Argentina's long-running dispute with Elliott Management and other holdout creditors, who refused to participate in Argentina's restructuring and ended up holding out for tons more money, keeping Argentina out of the international debt markets for years along the way.

People have proposed various solutions to this problem, with a popular one being to add collective action clauses into sovereign bonds: The bond documents might say "if two-thirds of bondholders vote for a restructuring, then that restructuring will bind everyone." (It's more complicated than that, with rules governing voting by multiple classes of bonds, and two-thirds isn't necessarily the right magic number, but that's the basic idea.) But this only really works for *future* bonds: You have to put the collective action clause in the bond document *before* you sell the bond, so this doesn't help already-outstanding bonds without the CACs.

That wouldn't matter in bankruptcy law: If a company issues a bond that *doesn't* contain any collective-action restructuring procedures, and then it can't pay, then it can file for bankruptcy, and bankruptcy law is basically just a series of provisions letting votes of creditors (and decisions of a judge) decide how to restructure the company's bonds. The collective action clauses are in the law, not the contract.

But again there is no sovereign bankruptcy regime. But there could be. It doesn't even really need to be an international sovereign bankruptcy court: New York and England could just adopt collective-action provisions for sovereign bonds, and that would more or less do it. Most sovereign bonds are issued either under the law of their own countries -- which those countries could change to allow restructuring whenever they feel like it -- or under the law of New York or England; if those jurisdictions allowed restructuring by creditor vote, then that would cover a lot of bonds.

That's the gist of this blog post and related paper by Steven Schwarcz of Duke University School of Law, "Sovereign Debt Restructuring and English Governing Law," who lays out a model law for sovereign debt restructuring and suggests that England (and, elsewhere, New York) adopt that model law and apply it to existing bonds. Amusingly, a key risk is human rights law:

The only potential post-Brexit complication might be the First Protocol to the European Convention on Human Rights, which has been incorporated into English law. Article 1 of that Protocol provides that every person is "entitled to the peaceful enjoyment of his possessions," raising a question about the Model Law's optional retroactivity. At least one decision interpreting the First Protocol confirms that a right to payment, such as a claim against a debtor-state, is a "possession" thereunder.

It would be strange if a "vulture" hedge fund could demand additional money from an impoverished country as a matter of human rights.

**Student loan robo-signing.**

Here is a story about how "one of the nation's largest owners of private student loans, the National Collegiate Student Loan Trusts ... is struggling to prove in court that it has the legal paperwork showing ownership of its loans." Loans are originated by banks and sold to investors, the paperwork is complicated, it's a volume business, corners are cut, one thing leads to another, and you end up going to court to collect delinquent loans and then realizing that you can't prove that you actually own the loan.

There are two sets of losers here: The investors who own the loans but can't get paid because they've messed up the documents, and the borrowers who are sometimes sued *incorrectly* because the trust really *doesn't* own the loan. And in theory there is a third, more remote, set of losers: If the investors can't get their money back when borrowers default, they will charge higher interest rates to future borrowers.

This all seems bad, and it would be nice if someone would fix it. Maybe it's a good use case for the blockchain, ha ha ha. Or just, like, you could have a national database of these loans, set up by a consortium of banks and investors, with some trusted administrator to make sure that the paperwork was processed in an efficient, accessible, electronic way. Instead of keeping lots of photocopies of lots of documents, and maybe losing them, have everything in a secure but usable electronic form.

But that is not how traditional American consumer-loan documents, or courts, work: You sign a promissory note, it goes in a file, someone pulls it out of the file and points to your signature, it's a whole 19th-century dance. You saw this back in the mortgage robo-signing cases: Banks set up a system called MERS to electronically transfer loan entitlements, instead of relying on the antique system of going down to the county courthouse and recording a mortgage transfer. And people -- and courts -- worried that that was an end run around the traditional system. Efficient electronic transfers of entitlements overseen by a consortium of banks work great for the stock market, but they are viewed with some suspicion in consumer lending. There is this sense that the arcane old practices -- with lots of complicated paperwork to fill out, and lots of ways to accidentally mess up -- ought to be, at least, *held against* lenders: Lenders ought to have to suffer through the complicated paperwork just like the rest of us, and if they mess up the paperwork they shouldn't be able to collect the loans.

A better solution would be to replace the bad complicated paperwork with simple clear electronic entitlements, and then let the lenders collect on the loans that they actually own (but not others). But there is this sense in America in 2017 that everything should be awful and difficult and inscrutable, but with occasional random lotteries to escape the awfulness. Student debt levels are crushing, and proving student loan ownership is impossible, but hey: Every so often a borrower will get a free education because her lender messed up the paperwork! That feel-good -- or feel-bad-but-with-a-windfall-at-the-end -- story seems to justify a lot of badness.

### **People are worried about overfitting.**

Well, it comes up a lot, and might make a good recurring section:

In the industry, spotting patterns that don't repeat is known as "overfitting"—picking up on the irrelevant snow in the picture of a wolf, or chance patterns in past stock prices that bear no relation to the future.

David Harding, founder of hedge fund Winton Group, says finding ways to avoid such fake patterns is at the core of computer-driven investment.

“Avoiding overfitting is a state of mind,” he says. “It’s the same thing as avoiding wishful thinking.”

One of my favorite debates in quantitative investing involves a basic obvious way to avoid overfitting:

Many quantitative investors try to avoid overfitting by insisting that any rule they adopt should have an economic or behavioral rationale. If the computer finds that every third Wednesday when it rains in Kansas the stocks of oil companies listed in Paris go up, betting on it happening in future would be no more than a leap of faith.

Nothing could be more sensible! And yet many famous successful quantitative investors seem to flout this rule, notably Renaissance Technologies, which is fine with weird rules:

“Some signals that make no intuitive sense do indeed work.” Indeed, it is the nonintuitive signals that often prove the most lucrative for Renaissance. “The signals that we have been trading without interruption for fifteen years make no sense,” Mercer explains. “Otherwise someone else would have found them.”

And as neural networks and deep learning and other buzzwords creep into computer-driven investing, this problem will get more acute: If your neural network can't explain its trading rules to you, will you still trade on them? If so, what is your economic-behavioral justification? If not, why did you program the neural network in the first place? Overfitting is partly a statistical problem, about how we can extrapolate rules from data, but it is also a deep worry about whether the world is understandable, whether it is subject to rules, and whether those rules are comprehensible to humans.

## **Blockchain blockchain blockchain.**

Ah:

CoinDash, a blockchain technology startup that bills itself as a social-trading platform, said that its website was hacked Monday and \$7 million was stolen from investors trying to participate in the company’s initial coin offering.

Investors had been instructed to pay with ethereum and send funds to the token sale’s smart contract address. In an email, CoinDash said it appeared that the sending address was hacked and changed to a fraudulent address.

I would say "this seems like the logical conclusion of the ICO craze," but really we are very early in the ICO craze, and also it's only \$7 million. The logical conclusion of the ICO craze will be so much bigger and

dumber. But we should take this as a learning experience. What about an ICO where the inevitable theft by hackers is *right there in the white paper*?

**Problem:** When you invest in an ICO, you can't be sure if your money will go to buying tokens, or if it will be stolen by hackers.

**Solution:** The Mattcoin ICO is the only ICO where we can definitively promise that your money will be stolen by hackers, giving you certainty and peace of mind.

Of course the even simpler solution is to do an ICO without offering tokens at all: Investors give you money, and you give them nothing, cutting out the middleman (the hackers) and just taking the money directly. Elsewhere here is [Kadhim Shubber on the block.one ICO](#):

In an earlier post, we likened an initial coin offering to a Kickstarter campaign. Investors hand over their money, and in return get some sort of access to the product when it's finished. The access is granted by a token that can be used with the software being developed. Block.one's initial coin offering is different. There's a token, but it can't actually be used for anything.

### **People are worried about unicorns.**

Hampton Creek Inc., the Mayo Unicorn, has had to say goodbye to a few members of its board of directors recently, [specifically all of them](#), except its chief executive officer, Josh Tetrick, who "is now the only remaining board member." So that's weird! To lose one board member may be regarded as normal turnover, but to lose ... five? ... [looks like carelessness](#). But there's an explanation:

Tetrick described the board changes as a way to give more power to staff. "Ensuring our employees maintain their ability to direct our mission is as critical as the technologies we deploy and the products we launch," Tetrick wrote in an emailed statement. "We will always protect this principle."

I must say I like this as a general-purpose approach to bad news: Every time you lose something, you can concentrate more on what you have left. "Sure our CEO left, but now his deputies feel empowered." "We lost a lot of money last quarter, but now we can focus even more on the money we still have."

But, yes, getting rid of your board of directors *is* one way to give more power to your staff. It eliminates a layer of management: Instead of ultimately answering to a board of directors that represents the investors in the company, the staff just answers to ... itself? (I mean, it answers to the CEO, who is also the board, but who is in a crucial sense "staff," a member of the team.) "We will advise Josh and the team on strategies across all areas of its business moving forward," said the departing board members, collectively, for some reason. They just won't be in charge any more.

It is a baffling story, one that may or may not have something to do with Hampton Creek's recent decision to fire three managers "for attempting to change our company's corporate governance, which in the process would have stripped our employees of the autonomy to direct our long-term mission." But we have talked a lot about the shifting balance of power between entrepreneurs and investors, in which companies like Snap Inc. can now go public without giving shareholders any voting rights. I wonder if this weird story is a harbinger of the future: Why *do* private companies need boards of directors, anyway? As powerless advisers? Or as representatives of the owners, who ultimately have the power to fire the entrepreneur-CEO and shape the direction of the company in order to protect those owners' investments? That is the normal way of looking at the board, but I wonder if it is becoming out of date.

## Things happen.

Goldman's Traders Turn In Worst First Half of Blankfein's Reign. (Earnings release.) Bank of America Results Get Boost from Higher Rates. (Earnings release, presentation, supplement.) KKR positions successors to Henry Kravis and George Roberts. Activist Attack Puts Focus on Procter & Gamble Cost Cutting. Proxy Fights Are a Rarity for Peltz's Trian. Why Nelson Peltz Wants P.&G. to See Him as a 'Constructivist.' Why You Don't Feel Fed Rate Hikes in Your Bank Account. Banking Regulator Urges CFPB to Delay Rule Barring Mandatory Arbitration. Bitcoin Jumps After First Solution to Major Ideological Divide. The Strange Defense of Martin Shkreli. BNP Paribas Fined \$246 Million by Fed Over Currency Manipulation. Tesla Shares Fall After Driver Claims Car Crashed While Using Autopilot. Property Developers Push for Open Drinking on City Streets. Tombstone QR codes. Amazing Reddit Post Is Thousands of People Defending Why They Once Ate at the Times Square Olive Garden. Robot Security Guard Commits Suicide in Public Fountain.

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