

NEWS

# Hurricane Sandy Destroys Trillions Of Dollars Of Securities But That's No Big Deal

By MATT LEVINE

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I'm a little obsessed with the [Depository Trust & Clearing Corp](#). One way to think of the financial industry is that it is basically a machine for abstracting real human activity: *you* buy a house made of bricks and wood and stuff, but the financial industry enters numbers in a computer to represent your mortgage, bundles it with other mortgages, slices up the risks of those mortgages – house price appreciation, credit risk, interest rate risk, prepayment risk – and sells them to different people who never need to care about what your house looks like. There you sit in your house, while the numbers spin unseen around you.

The machine, though, is built out of pretty old-timey materials. Those mortgages are *mortgages*, recorded on pieces of paper in [county records offices](#) somewhere; the securities are *securities*, scraps of paper that convey rights to whoever happens to hold them. Bonds used to be, and in some metaphorical and legalistic sense still often are, pieces of paper with coupons attached that you tear off and mail to the corporation to get them to send you a check for your interest payment. I think things like that actually happened, in the dark ages. But not for a long time.

At the core of the financial abstraction machine is the engine that turns old-timey scraps of paper and whatnot into abstractions.<sup>1</sup> And that engine is an actual thing! It is called DTCC! It's, like, a building downtown, and all the paper certificates come in, and out come numbers on screens that you can sum and multiply and manipulate and sell derivatives of to your friends. It's what allows finance to be fast and computerized and high-frequency, so you can buy derivatives and indexes and deltas and exposures rather than, like, ten pieces of paper that give you ownership in Ye Olde Buggy Whips Concern.

Anyway [this happened](#):

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Trillions of dollars of stock certificates are feared ruined after Hurricane Sandy flooded a vault at the Depository Trust & Clearing Corp, the Wall Street-owned organisation that manages important parts of the US trading infrastructure.

DTCC [tells us](#) that as of year-end 2011 it had 3.69 million certificates total, with a value of \$39.5 trillion; if about a third of the certificates were in lower Manhattan then at a guess \$10 – \$15 trillion worth of securities have *vanished*.<sup>2</sup>

Does that matter? I mean, one, obviously, no, though, two, it sort of puts in perspective [Germany's fretting](#) about whether its gold at the Fed is actually at the Fed. You, right now, are walking around as the proud owner of 100 shares of Microsoft or whatever, but actually you are only the proud owner of an electronic chit in your broker's books, and your broker only owns an electronic chit in DTCC's books, and it really owns the hell out of that chit, but DTCC meanwhile is the owner of a basement filled with a solution of water, sewage, and dissolved molecules of Microsoft share certificates. DTCC owns, to a first approximation, *everything*, and it just misplaced *all of it*.

Still, it's okay. DTCC [assures its participants](#) that "all of DTCC's computer records are fully intact, including detailed inventory files of all certificates held in the vault," which is an amazing statement: imagine if the Fed lost Germany's gold but assured Germany "don't worry, our *computer records* of your gold are fine." Imagine if banks lost their mortgage documents but assured homeowners "don't worry, our *computer records* of your mortgage are fine, we're pretty sure we can foreclose." Actually [that part totally happened](#) and people got really angry about it for quite understandable reasons.

But DTCC is right: their records should suffice. In the securities business, trust plus electronic records have grown to wholly replace the actual things – which, to be fair, were never all that actual or thing-like. Whole bodies of [law](#) and custom have grown up around making sure that having chits on the books at DTCC is just as good as having a piece of paper saying "100 shares"; no one is ever actually going to look. Plus, shares are mostly book-entry these days so DTCC can always get a replacement copy of most of their papers from the issuers. Plus, DTCC has for ages been trying to move to the next stage of abstraction and get rid of the paper; this [should be a nudge](#) in that direction.

Mostly I just mention this because it is neat; *one* area of human activity has been rendered relatively safe from weather and accident and put on stable footing through computers and the internet and a really large dose of trust and cooperation.<sup>3</sup> Like most things that decrease variance, though, this perhaps fattens the tails: you're all backed up in the cloud, but if the cloud fails, you're really quite screwed. In the olden tymes your clerk could lose your stock certificate and you'd be out of luck, but the damage would be limited to you; in the new times that's impossible but if something *did* take down DTCC's computer records that would be *absolutely amazingly terrible*. So let's hope that doesn't happen.

[DTCC Resumes Processing of Physical Securities](#) [DTCC]

[Stock certificates feared ruined by Sandy](#) [FT]

[Swans dematerialise Wall St](#) [The OTC Space]

1. Paul Wilmott [has complained](#) about quantitative finance that it is not much of a science because it lacks conservation laws; one might spin from DTCC a law of conservation of abstraction, though I wouldn't want to build math around it. Exercise for somebody.

2. Incidentally some dividing will tell you that each "certificate" owned by DTCC is worth about \$10mm; these are not, like, single shares of stock but rather things like global notes where a \$500mm bond issue is written on one piece of paper handed to DTCC.