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Research

Fractionalized & Fractional Money

Counterparty considerations for deposits in flight-to-safety

Intro

One would be hard-pressed to not open a financial publication in the past few months and not come across the words banking crisis, capital controls, defaults, and bank protection schemes.

The most common word, at least that kept crossing this research team's field of vision, is the word 'backstop'. The world ultimately, in today's financial scenarios, really means that central banks will aim to provide a financial outfit under stress liquidity in order to assist its operations, calm markets and avoid potential default.

Interestingly, rehypothecation, a term that would certainly take investors back to the jitters of the 2008 Great Financial Crisis (GFC), was little to be seen; more on this later.

The philosophy of assets, money and financing took a new dimension this year when the Federal Reserve introduced the Bank Term Funding Program (BTFP). With flailing banking institutions able to mark-to-market their low-yield bonds and take out a loan at par value because they would be held-to-maturity (HTM), finance opened up various new possibilities. There are potentially hurtful fiscal scenarios that may or not play out depending on how many more banks fail. At the time of writing, it was just 3 failed banks whose total deposits surpassed the US banking failures in 2008 (see table).

Great Financial Crisis vs 2023 Banking Crisis

Year	# of failed banks	Assets*
2008	25	$526bn
2023	3	$532bn

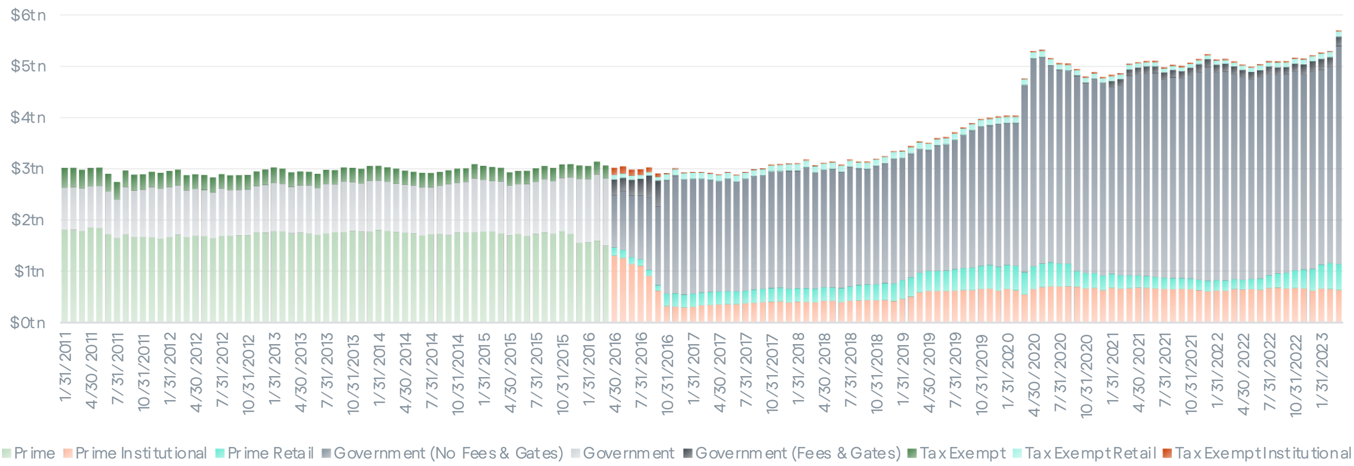
Sources: FDIC, NYTimes *Inflation adjusted

Still, this isn't really a surprise for anyone who saw the unraveling of the GFC and with the Federal Reserve ramping up over half a dozen programs in 2008 aimed to bring some stabilization through liquidity injections, guarantees and funding facilities.

Global markets remain on edge with central banks globally continuing to increase rates at record pace with little sign of stopping. The Federal Reserve itself has increased rates ten times over the last 14 months. Meanwhile, inflation is either increasing or decreasing depending on who you ask, what you look at and by which calculation. Layoffs continue as recession fears ring alarm bells.

Despite the Federal Reserve cementing its position as the lender of last resort, smaller banks continue to face pressures not only on concerns of failures, but the increase of deposits moving into money market funds that are paying yields traditionally banks used to also pay (see chart). Is it greed by traditional banks to earn a little less net income, or is it apathy? Are they facing liquidity issues? Perhaps bank runs are not concerning them?

U.S. MMFs' investments by fund category



Source: Office of Financial Research

Perhaps tech giant Apple's entrance into high-yield savings accounts through a partnership with Goldman Sachs might force traditional banks to sit up and listen. Headlines such as "Apple Threatens To Take a Bite Out of Regional Banks" are already being penned. And Apple has attracted nearly $1bn within days of its launch according to sources from Forbes.

Yes, this is peanuts. However, another interesting little tidbit from Forbes is that the $1bn inflows came from just 240,000 sign-ups. It is estimated that in the US alone, 136mn people have iPhones. So, the tech giant can turn into financial behemoth if it can tap into a fraction of the remaining 99.8% of its users – in the US alone.

Time will tell how regulators will respond to the Big Tech operation and whether or not they would be fit-for-purpose. After all, we've seen them come after other big companies in the not so metaphorical past. Then again, previous players such as Meta didn't have a Goldman Sachs holding the purse strings which will certainly favor the largest company (by valuation) in the world

Which finally brings us to the key points in question in regards to this report. When investors are stressed about markets and aim to hold less risky assets, a phenomenon known as flight-to-quality, what exactly are they moving funds into? Even today, cash held at commercial banks poses the question of deposit insurance thresholds and concentration risk for those who exceed the protection limits.

Is it possible, in a fairly ironic twist, that tokenized bonds, which have made their way onto the blockchain in grand style this year, be a safer and quality option? And what of tokenized cash and other tokenized securities?

Copper takes a look at the considerations and the counterparty risks involved. No tokenized option of real-world assets is without a counterparty which is contrary to the decentralized notion of removing all middle men. They are however night and day in the face of commercial bank deposits, broker rehypothecation, moral hazard, opaque clearing counterparties with inadequate skin in the game, T+2 settlement time and a convoluted long traditional custody chain.

Cash, deposits and hope...your bank doesn't fail

Physical cash is no longer as attractive as it once was. Cash payments above certain limits need to be reported to the appropriate tax authorities in the US. In Europe, much more stringent rules apply. Cross-border cash controls exist, and payments limits range from as low as €500 in Greece, to no limits at all.

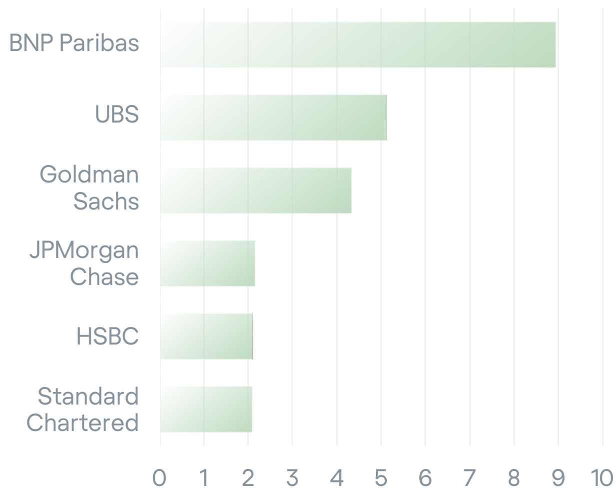
However, cash limits, regardless if it is from a consumer or traders' perspective, might be a bit of a moot point. Larger value payments will require banking transfers as global businesses are not operating on cash settlement.

Plopping a duffle bag of cash in front of a cashier at a bank would trigger so many anti-money laundering bells even the banks would prefer not to accept the deposit. The UK for example is pursuing very stringent limits and unlikely to be the last either.

The global economy's architecture is reliant on commercial banks for trade and transactions. So important to the fabric of society, banks come under a great deal of compliance scrutiny. In 2021, the estimated cost came to just under $214bn spend by institutions for financial crime compliance alone.

There is a reason why at the US federal level there are five different regulators responsible for the financial industry.

Big International banks have paid the most in AML and related penalties (see chart).



Source: Financial Times

The Federal Deposit Insurance Corporation (FDIC) is one of these regulators. As an important agency in the financial apparatus, the FDIC guides the banking industry with various reserve requirements of its members and offers creditors with deposit protection insurance.

Depositors will be able to recoup the limit of $250,000 per account should a bank fail.

This insurance is for cash deposits not for stocks, bonds and treasuries (more on this later). Europe is much worse off with its Deposit Guarantee Scheme (DGS) of just €100,000. In Japan, just ¥10mn which is under $75k (see table).

Is this adequate protection?
Perhaps it is, perhaps it is not.

Without serious amendments nonetheless, a bank failure for retail depositors would especially be hurtful, especially if one begins accounting for inflation too.

One way around this is to reduce the concentration risk by having multiple bank accounts. But from a trader's perspective, these limits are still very low in the face of a potential banking collapse.

There is also the issue of the time from when a commercial bank fails and the time regulators will allow redemptions under the guarantee schemes. In some cases, it took over two years before being able to touch any deposit.

The question is - what alternative options are there and what are the risk profiles attached with the purpose of reducing potential losses, including the consideration of recovery time risks?

Bank Deposit Insurance by country

Country	Bank Deposit Insurance	Protection Limit Bank Deposits
United States	FDIC (Federal Deposit Insurance Corporation) link →	$250,000
United Kingdom	FSCS (Financial Services Compensation Scheme) link →	£85,000
European Union	EU Directive, some countries may vary link →	€100,000
Canada	CDIC (Canada Deposit Insurance Corporation) link →	CAD $100,000
Australia	APRA (Australian Prudential Regulation Authority) link →	AUD $250,000
Japan	DICJ (Deposit Insurance Corporation of Japan) link →	JPY 10 million
Saudi Arabia	Saudi Arabian Monetary Authority (SAMA) link →	SAR 200,000
Turkey	Savings Deposit Insurance Fund (SDIF) link →	TRY 100,000
India	Deposit Insurance and Credit Guarantee Corporation (DICGC) link →	INR 500,000
China	China Deposit Insurance Corporation (CDIC) link →	CNY 500,000
South Korea	Korea Deposit Insurance Corporation (KDIC) link →	KRW 50 million
Singapore	Singapore Deposit Insurance Corporation (SDIC) link →	SGD 75,000
Hong Kong	Hong Kong Deposit Protection Scheme (DPS) link →	HKD 500,000

Tokenization of deposits, assets

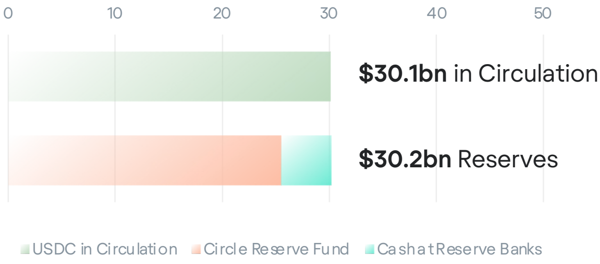
Stablecoins are the first alternative asset class that change the dynamics of protected funds as the reliance on commercial banking is much lower depending on the composition and assets supporting the tokenized form of cash.

Should future regulations and banking licenses allow, perhaps even the commercial bank deposits held by stablecoin issues will turn into accounts held directly with Central Banks further solidifying the safety net under a narrow banking structure.

Mathematically, this lessens the blow on creditors from potential banking failures and changes the equation by increasing what could be adequately protected.

Take for example Circle which issues USDC. Any person or business whose protection from FDIC or the likes is not adequate, may find the consideration of holding onto a stablecoin to be a better option as the tokenized cash composition is just under 16% commercial bank deposits while the rest is in short-term treasuries and repurchase agreements (see chart, table). The means that in case of banking partner failures, the exposure of USDC holders is not on par to a commercial bank deposit.

USDC Reserve Composition (As of 4 May 2023)



Source: Circle

Circle Reserve Fund (USDC Composition)

Position Description	%Par	Par	Yield/ Coupon	Final Maturity
Treasury bill	32.72	8,804,655,000.00	4.14	30-May-23
Treasury bill	12.45	3,350,000,000.00	4.5	16-May-23
Treasury bill	11.97	3,220,000,000.00	3.43	23-May-23
Treasury bill	9.69	2,608,000,000.00	4.42	25-May-23
Treasury bill	5.88	1,582,000,000.00	4.39	09-May-23
Tri-party BofA Ssecurities Inc.	5.57	1,500,000,000.00	4.95	09-May-23
Tri-party Royal Bank of Canada	4.83	1,300,000,000.00	5.03	09-May-23
Treasury bill	4.27	1,150,000,000.00	4.3	18-May-23
Tri-party BNP Paribas	3.72	1,000,000,000.00	5.03	09-May-23
Treasury bill	3.53	950,000,000.00	4.5	11-May-23
Tri-party Goldman Sachs & co. LLC	1.86	500,000,000.00	5	09-May-23
Treasury note	1.11	300,000,000.00	4.25	15-May-23
Treasury note	1.11	300,000,000.00	4.43	15-May-23
Treasury note	0.9	243,000,000.00	4.54	31-May-23
Treasury note	0.37	100,000,000.00	4.31	31-May-23
Tri-party Morgan Stanley & Co LLC	0	100,000.00	5.03	09-May-23

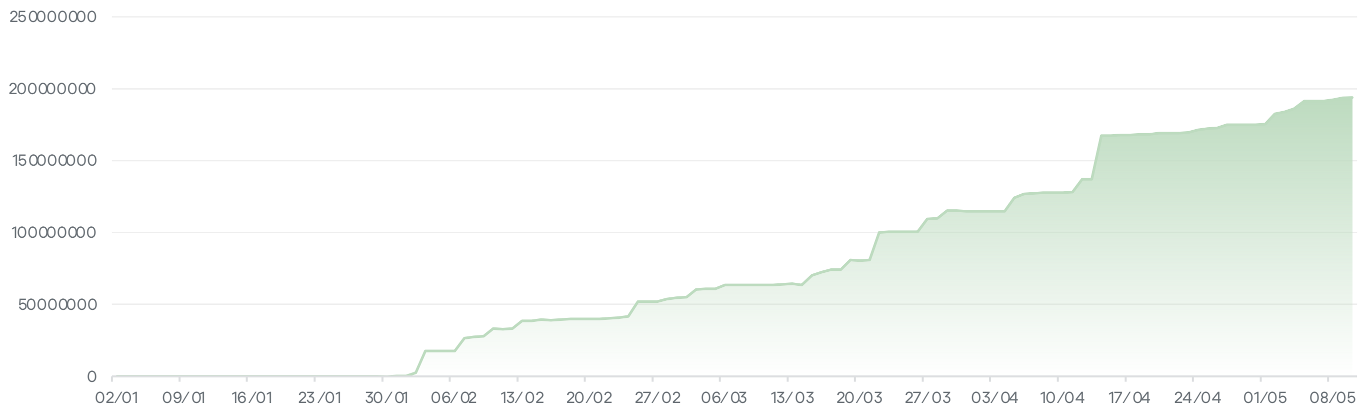
Source: Blackrock

Tokenized forms of money

The cryptocurrency industry has seen the rise and what seemingly as of late is the fall of Decentralized Finance (DeFi). In reality, nothing could be further from the truth as the ecosystem has instilled and planted seeds of new philosophies of what form money can take. Bear with us for a second.

Last month saw Franklin Templeton, which manages over $1.5trillion in assets, launch its 'OnChain U.S. Government Money Fund' on Polygon after a successful launch on the Stellar network in 2021 that has seen the fund's AuM pass $250mn. Ethereum also has nearly $200mn in tokenized bonds from various issuers who have gone live this year alone which is certainly nothing to scoff at all things considered in today's environment (see chart).

Tokenized Securities Market Cap (As of 10 May 2023)



Source: Dune

Tokenized Securities

Issuer	Bond / Money Market Fund	Market Cap $
Ondo	Ondo Short-Term U.S. Government Bond Fund	118,231,656.33
Matrixdock	Matrixdock Short-term Treasury Bill	71,862,703.15
Backed	Backed IB01 $ Treasury Bond 0-1yr	2,729,489.09
Franklin Templeton	Franklin OnChain U.S. Government Money Fund	2,001,333.49
OpenEden	OpenEden TBILL Vault	1,519,947.52
Swarm	Swarm iShares Treasury Bond 0-1yr	8,083.14
Swarm	Swarm iShares Treasury Bond 1-3yr	7,811.87

Issuer	Bond / Money Market Fund	Market Cap $
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Most importantly though is the fact that investors of short-term treasury bills are no longer bound to the face value of a bond; a $100,000 bond can actually be 100,000 units/tokens of $1.

While this would be a security product earning interest (approximately 5% as of today), by nature it is a fractionalized representation of a US government liability, much like cash. In contrast, commercial bank money cannot guarantee full deposits as it runs a fractional reserves system.

We are not here to discuss flaws or merits of the current financial system, but to highlight the considerations of what is really the safer asset.

What can be considered a stable store-of-value begins to morph into new potential forms of money, of which each form has different counterparty risks and considerations. And this is why DeFi is alive and well and necessary as it is the open gateway to a global liquidity pool. Without liquidity, and easy access to such products, there would be little need for tokenization in the first place.

The ability to transfer a fraction of a bond quickly onto a decentralized exchange opens up a great deal of possibilities so long as liquidity is available.

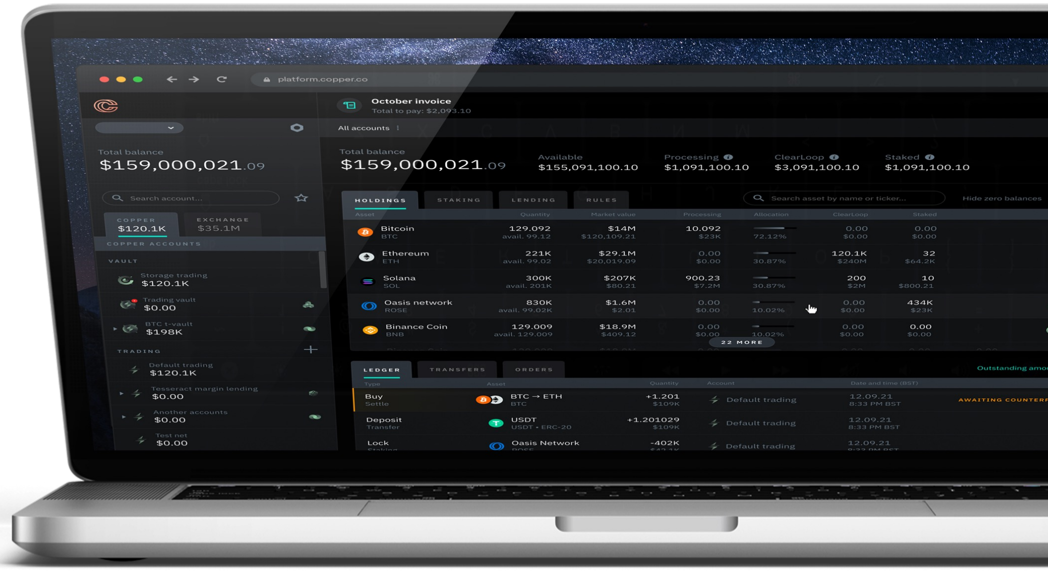
Conclusion

Although US regulators seem to be taking a less friendly approach to the ecosystem, it is in fact the rest of the world that have more to benefit from adopting digital assets as a diversification tool from an opaque financial sector with very low guarantees under national protection schemes.

Here is the reality: digital assets are a technology to use, not a financial instrument that can scale an economy. Fractional banking's place in the world will stand so long as there is a need for credit.

But credit comes with risk, and depositors take no reward from bank earnings in good times and will likely have to pay for it by way of bail-in if a financial outfit fails.

The other option is a government bail-out only to devalue the currency and to socialize losses for everyone who holds a certain bill. And if you recall, this was the 2008 kindling for the creation of Bitcoin.



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