Risk and Regulation

MGT 4074 Fintech & Crypto Tokens, Fall 2025

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Georgia Institute of Technology

October 20, 2025

Welcome! Today is Monday 10/20/25

Today, I will discuss the **Final Project**. Your **Final Project Proposals** are due on Wednesday 10/22!

Roadmap

Roadmap

Good Job (on average)!

The average score was again a solid B. By now, almost all of your grade besides the final project is in the books.

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AMM Math

Short Answer 1 featured a **low-liquidity, low-fee** exchange and a **high-liquidity, high-fee** exchange and asked you to compare them for a **small trade** and a **large trade**.

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"Intuition may fail you. The Math will never fail you"
-One of my PhD instructors

Those of you who did the math correctly saw definitively that the fee matters more for the small trade, but liquidity matters more for the large trade. Small trade goes to Pool A, large trade goes to pool B.
Those of you who used intuition gambled and ended up with a wide variety of scores.

Project Specification

You will have two options for the final project:

- **Build a Smart Contract**
  - Create, deploy, and demonstrate the features of a smart contract
  - Describe what failure of the traditional financial system this contract can address and why it is useful
  - "I have too few U.S. Dollars" does not qualify (on its own) as a failure of the traditional financial system
- **Defend a Mini-Thesis**
  - Propose a **strong thesis statement** and at least one source of data to answer it
  - Strong thesis statements (1) **matter** for society and the economy, and are (2) **controversial** ex-ante
  - A policy proposal can fit into this category
  - Your data may prove your statement right or wrong!

Groups

You may work in groups of up to three students. If you do:

- The expectations for the projects' scale and ambition will grow with the size of the group
    - A group of N choosing "smart contract" must create and demonstrate at least N interoperable and synergistic smart contracts with a total of at least 3N total functions
    - A group of N choosing "mini-thesis" must analyze N distinct sources of data with at least 3N total data visualizations
- There is no inherent advantage to working alone or in a group. Create a team if you trust your teammates to pull their weight.
- The project proposal must commit, in writing, to a **division of labor** ex-ante

Proposals

Proposals in my inbox **by start of class Wednesday 10/22**.

- One proposal per group of up to 3 classmates
- Proposals must either (1) describe the functions your smart contract(s) will have or (2) describe the variables and observations in your dataset
- By Monday 10/27, I will announce the order of presentation.
- There are four presentation days scheduled (10/10 through 10/19). **The most ambitious projects (in my estimation) will go last**
- Demos may be pre-recorded, but no student will escape live questioning

Quizzes

From now until 11/5, **Pop Quizzes may include lecture content**
There is no more exam to study for, but you still need to pay attention in class!

Roadmap

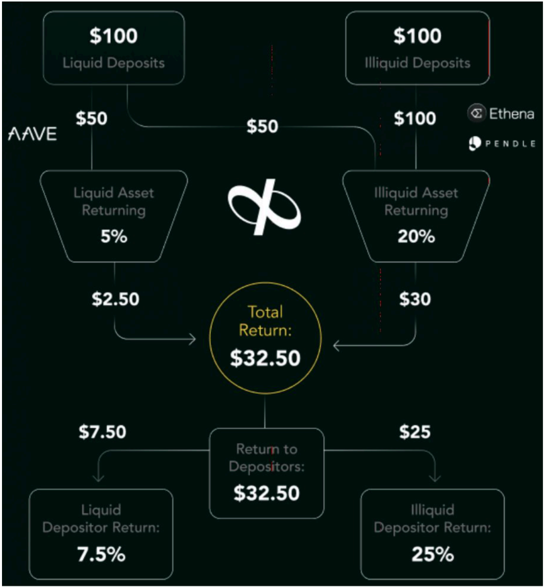
Erebor Bank Approved by Regulators

3 Minutes from Technology Business Programming Network

Crypto-friendly, digital-only bank named for LOTR dragon Smaug's hoard of gold will maintain hyper-conservative leverage ratio and focus on defense tech lending.

Roadmap

Remember our friends at Infinifi?



Treachery!

YOHAN YUN

FEB 24, 2025

Infini loses $50M in exploit; developer deception suspected

A rogue developer who retained admin rights after project delivery is the prime suspect in the theft of $50 million in USDC from the crypto payments firm.

3907 Total views **16** Total shares Listen to article 2:48

The Fate of All Crypto Exchanges is...

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The fate of all crypto exchanges

Is to be hacked:

> Binance, one of the world's largest cryptocurrency exchanges, said hackers withdrew 7,000 Bitcoin worth about $40 million via a single transaction in a "large scale security breach," the latest in a long line of thefts in the digital currency space.

"The company will use its Secure Asset Fund for Users, an emergency insurance fund, to cover the incident in full and no user funds will be affected, it said," which is pretty good! The business is maturing; there is … deposit insurance or whatever. It is maybe a little amazing that, despite all the hacks, the business of running a crypto exchange is so lucrative that it can support a reserve fund to pay for all the hacks.

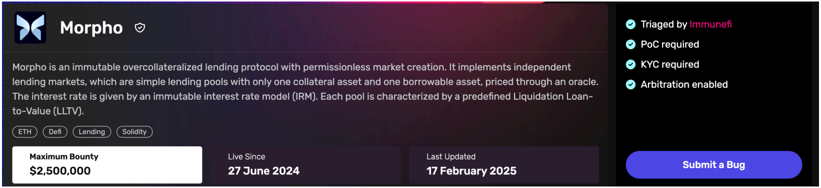
From Matt Levine

Defending against code exploits

Some strategies to defend against code exploits:

- Change your passwords when you fire a disgruntled developer
- Write simple, immutable (non-upgradable) code
- Use bug bounty programs
- Employ 'White Hat' hackers
- Trial and error, alpha/beta testing
- Read the news

Morpho bug bounty via Immunifi



- Up to $2.5M to find a "critical" bug in a Morpho smart contract
- Immunifi has paid out $115M in bug bounties with $187M available today

Roadmap

1. Housekeeping
   - Midterm 2 Post-Mortem
   - Final Project
   - Post-Midterm Quiz Policy
2. In the News
3. Hacks
4. Leverage
5. Regulation

Top Crypto Platform Coinbase Offers Leverage

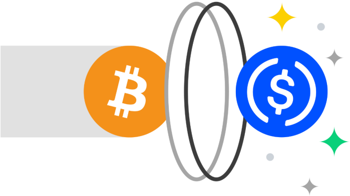
Borrow against your bitcoin without selling it

Get instant loans in USDC while continuing to hold your crypto. Loans powered by Morpho.

Sign up to get started

Have a Coinbase account? Sign in.

The service will be rolling out progressively. Check your Coinbase mobile app to see if its available to you.



- **Leverage**: borrow money to increase your risk + return

Coinbase partners with Morpho for margin lending

How borrowing works

1. **Choose how much to borrow**

   Borrow up to $100,000 USDC. How much you're able to borrow depends on the amount of bitcoin you have available for collateral. Available in the U.S. to start, excluding New York State.

2. **Receive your loan instantly**

   USDC will be deposited into your Coinbase account and the chosen amount of bitcoin will be moved onchain to Morpho as collateral.

3. **Repay on your timeline**

   There are no repayment schedules or deadlines. Your loan to value ratio must remain under 86% to avoid triggering an automatic liquidation to repay the loan and cover a penalty fee.

Morpho Borrowing Rates and LTVs

Collateral	Loan	LLTV	Liquidity ↓	Rate	Vault Listing
WBTC	USDC	86.00%	41.55M USDC $41.54M	4.78%	+9
PT-sUSDE-27MAR2025	DAI	91.50%	41.45M DAI $41.35M	12.43%	+1
cbBTC	USDC	86.00%	38.62M USDC $38.61M	4.99%	+6
wstETH 3.15% stETH, WETH, ETH ✓	USDC	86.00%	38.48M USDC $38.47M	5.05%	+12
srUSD 10.96%	rUSD	98.00%	31.99M rUSD $31.99M	10.13%	
wstETH 3.15% stETH, WETH, ETH ✓	WETH ETH ✓	96.50%	7191.48 WETH $16.53M	3.59%	+7
USD0++	USDC	96.50%	15.78M USDC $15.77M	28.06%	+2

86% LTV is only 14% margin, lower than most mortgages and lower than FINRA minimum for tradfi margin trading

Morpho liquidation policy

How Liquidations Work

Liquidations on Morpho are quite simple: liquidators can liquidate up to 100% of the account's debt and receive the corresponding collateral value, plus the relative incentive.

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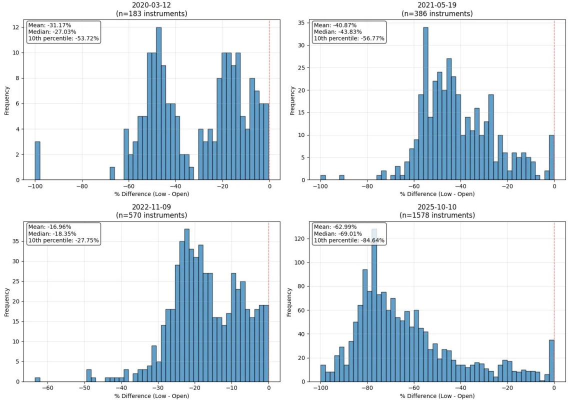
$110k of liquidations on the Morpho platform in the past 24h alone (as of when I wrote these slides)!

Crypto's "Black Friday" on 10/10/25

On 10/10/25, over 200 altcoins (tokens that are not stablecoins, ETH, nor BTC) dropped by more than 80%



Over $19 **billion** of leveraged positions were liquidated in a matter of seconds (ltrd)

Perpetuals

A **Perpetual Futures Contract** (or "perp") is a zero-sum derivative contract between two market participants

One side bets the price of the underlying will go up, the other side bets it will go down

No one actually needs to touch the underlying asset! Just read the price of it off of an exchange. This has two implications:

- Any amount of leverage is equally easy to implement: just multiply the price changes by 2x, 20x, 50x...
- The price of the underlying can go arbitrarily high: the short leg is always at risk of going below zero at *any* leverage ratio above zero

Perp sellers are historically called "bucket shops" because they put traders' cash in a bucket, and traders just swap around the money in the bucket without touching the underlying.

Leveraged Perps

Brian Armstrong @brian_armstrong

Follow

We just bumped up the max leverage from 20x to 50x on international perpetual futures.

A bunch of traders asked for this update. Let us know what else we can add!

Coinbase Internation... @Coinb... · Sep 3

We just leveled up. Perpetual futures are no longer capped at 20x — say hello to 50x leverage.

3:55 PM · Sep 3, 2025 · **4.1M** Views

Auto-Deleveraging

What happens when I win \$100 from you, but you only deposited \$50 into your brokerage account?

Auto-Deleveraging is when winning bets are closed early because their counterparty has gone bust.

On 10/10/25, \$19B of positions were hit by ADL.

Many traders use perps to **hedge** their exposure: If I'm long bitcoin, I short some leveraged bitcoin perps so that if my long position loses my short position will make up for it.

Auto-Deleveraging presents a threat to hedging strategies: if I'm long the underlying but short the perp, and the price falls a lot, my long position has lost but my winning position gets closed early!

Even worse: these traders need to find a new way to get short to stay hedged, pushing prices down further.

Crypto Black Friday

Two other points bear mentioning:

- Reported liquidations on centralized exchanges like Binance may not be accurate. Liquidations reported by on-chain exchanges like Hyperliquid are more trustworthy (chameleon_jeff).
- Some traders have private deals with exchanges to avoid deleveraging! These private deals represent a hidden cost/subsidy from traders with out these deals (darkmarketio).

Roadmap

The GENIUS Act

A BILL

To provide for the regulation of payment stablecoins, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Guiding and Establishing National Innovation for U.S. Stablecoins of 2025" or the "GENIUS Act of 2025".

Introduced by Bill Hagerty (R-TN) (Full Text)

GENIUS Act

The GENIUS Act:

- Grants regulated issuers **exclusive** rights to distribute stablecoins
- Regulates sc issuers like banks at the federal **or state level**
  - Issuers with \$10b+ assets must register federally
- Clarifies that stablecoins are *not* "securities" (in the 1936 securities exchange act meaning)
- Requires ledgers to be public to qualify as "stablecoins"
- Applies consumer protection laws to stablecoin wallet providers
- Prohibits paying interest on stablecoins (so they cannot compete with bank deposits)

Among other details (see discussion by law firm Davis Polk)

Prosecutorial Discretion

Trump order gives banks a regulatory break, but at what cost?

A White House order peeling back agency independence would curtail bank regulation in the near term, but could set the stage for long-term uncertainty and volatility.

Read More →

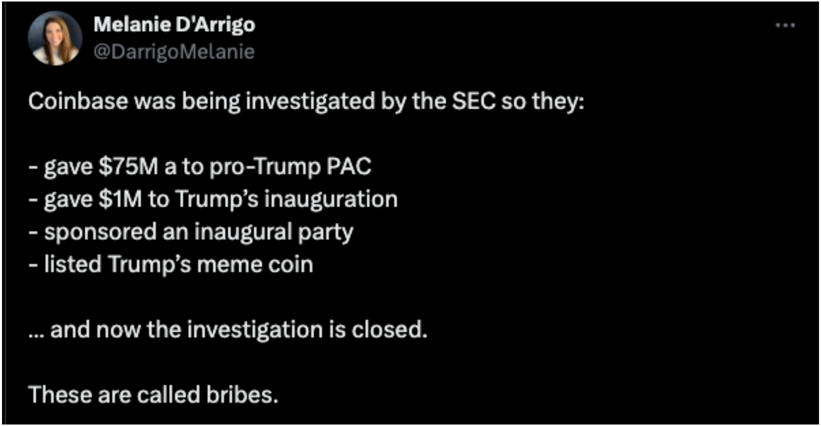
Banks face promise and peril with weakened regulators

President Trump's deregulatory promises have drawn praise from bank leaders, but leave experts worried of the potential for slipshod enforcement going forward.

Read More →

Source: American Banker Newsletter

Prosecutorial Discretion


Melanie D'Arrigo
@DarrigoMelanie

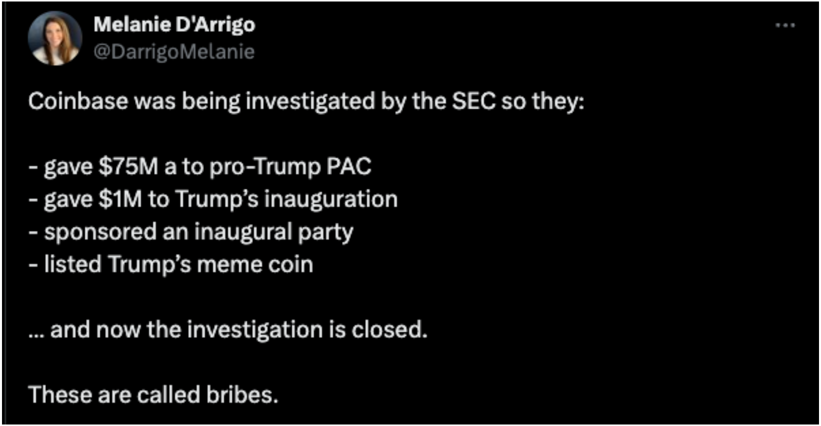
Coinbase was being investigated by the SEC so they:

- gave $75M a to pro-Trump PAC
- gave $1M to Trump's inauguration
- sponsored an inaugural party
- listed Trump's meme coin

... and now the investigation is closed.

These are called bribes.

Prosecutorial Discretion



"Code is law"? How about "Trump is law"?

Meme-coin company bids on InfoWars

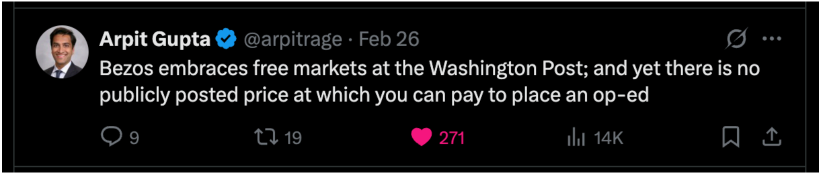
Right-wing conspiracy theory and misinformation website InfoWars, founded by Alex Jones, must be sold to pay his legal liabilities stemming from Sandy Hook defamation case.

Meme-coin company Wow.ai has entered a bid to buy InfoWars using equity tokens.

Meme-coin company bids on InfoWars

"We will receive proposals from people and entities who want to operate the website and Wars token-holders will get to vote on what decision to make," Infowars CEO Rick Latona said. "So the creditors will be in an interesting situation because if this thing plays out over a year they have been invested in a lot of tokens."

Completing incomplete markets



- Will wow.ai bring Arpit's idea to fruition?