

**Why Does Crypto Currency Matter:
Radical changes in how our economy will
operate and the technology driving it.**



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Housekeeping

- **Interactive Presentation**

- Involvement with BTC survey
- Involvement with DLT survey
- Definitions (Technology and Economic)
- My Journey to Bitcoin
- Deep Analysis of Money
- Characteristics of the Technology
- Major Applications of Crypto Currency
- Major Applications of Distribution Ledger Technology (Blockchain)
- Politics in the Incumbent World
- Politics in the DLT World
- US Law Enforcement Perspective
- US Civil Regulatory Perspective
- Global Law Enforcement Perspective
- Global Civil Regulatory Perspective
- Federal Reserve Perspective
- Global Central Bank Perspective
- Financial NGO Perspectives (World Bank, BIS, IMF)

- **User guide to this presentation**

- I will likely to skip words on the page to elaborate on the same material in a different way. This allows the maximum exposure to the topic at hand.
- I would prefer questions throughout the presentation and will manage the best I can to keep pace across the same period of time.



My Journey To Bitcoin

- **Dallas Federal Reserve Bank (Houston Branch)**
 - End of the Paul Volcker era of re-establishing sound money
 - Centralized Data Processing (IBM A/S 400 and IBM 390) → Microsoft Windows GUI and Local Area Networks
 - Payments Mechanisms Transition
 - Paper Savings Bonds → Electronic Journal Entry
 - Paper Check Processing → ACH
- **First Bank McKinney**
 - Real world impact of money, fractional reserve banking, and payments processing
- **New York Mercantile Exchange**
 - Pit trading → Electronic Trading
- **El Paso Corporation**
 - The “Wild West” of markets, (or total lack of regulation) → Highly regulated markets, controls and enterprise wide risk management
- **New York Mercantile Exchange**
 - 9-11 Disaster Recovery
 - Markets operations
 - Pit trading → Electronic Trading



My Journey To Bitcoin (continued)

- **MotherRock**
 - Leverage
 - Market Manipulation
- **Lehman Brother Crisis (2007-2009)**
 - Reckless use of leverage
 - Free market incentive mechanisms distorted via public policy and lack of supervision
- **Quantitative Easing (2001 – 2018)**
 - Pit trading → Electronic Trading
- **Satoshi White Paper (January 2010, Courtesy of www.stumbleupon.com now <https://mix.com>)**
 - In search of a trade to counter debasement of currency without getting runover (timing is everything)
- **First Investment in Bitcoin**
 - First Major Purchase 13.35 → Long Term Target: \$100,000 at the time based on this equation: $P = (\% \text{ of liquidity recommended by GS one day to be held in crypto currency - at the time only BTC was viable}) \times (\text{Global Supply of USD when the recommendation made}) / (\text{Maximum number of BTC})$ or in math terms $\{ 10\% * \$21,000,000,000 / \text{BTC } 21,000,000 = \$100,000 \text{ per BTC} \}$
 - First Major Sell 1105.00 → I viewed the first very difficult resistant point to be the price of gold at any given time (at the time it was approximately \$1,150) because gold is incorrectly perceived as having some sort of intrinsic value (not including Warren Buffet who also dismisses BTC)



Reflection – Key Lessons Learned

- **I did not REALLY know what money was after managing billions.**
 - It was clearly not what the academics described as money – a list of qualities
 - It is not related to uninformed questions like: “What (or who) is it backed by?”
 - The quest to understand money
 - Webster’s Dictionary: “something generally accepted as a medium of exchange, a measure of value, or a means of payment”
 - Museums in China with exhibitions on money. Common theme: that “money” had no intrinsic value, may or may not have been “backed by the government”, was simply a matter of **CONSENSUS** – whether compelled or voluntary.
 - Mathematical systems of social network adoption - **CONSENSUS**
- **We should not describe money as having many qualities. It has ONE.**
 - **CONSENSUS:** This is reflected in the aggregate analysis of the micro qualities that best meet the users needs.
 - Various qualities correspond to various needs **BUT** in the end **CONSENSUS** accounts for a users aggregate determination of the value of a group of qualities assigned to a given money (currency)
 - Of the following qualities which are most important over a given period of time (different for everyone) : Durability, Portability, Divisibility, Uniformity, Limited Supply(what?), Adaptability.
- **So What Is The ONE Thing About Bitcoin/Blockchain?**
 - It is money (to the degree there is consensus to use it) that cannot be debased by a government, is immutable and absent a 51% attack (more later) will only ever supply 21 million BTC EVER. As such, the monetary system calculus has changed and BTC has become a real world global limit to radical debasement of currencies.

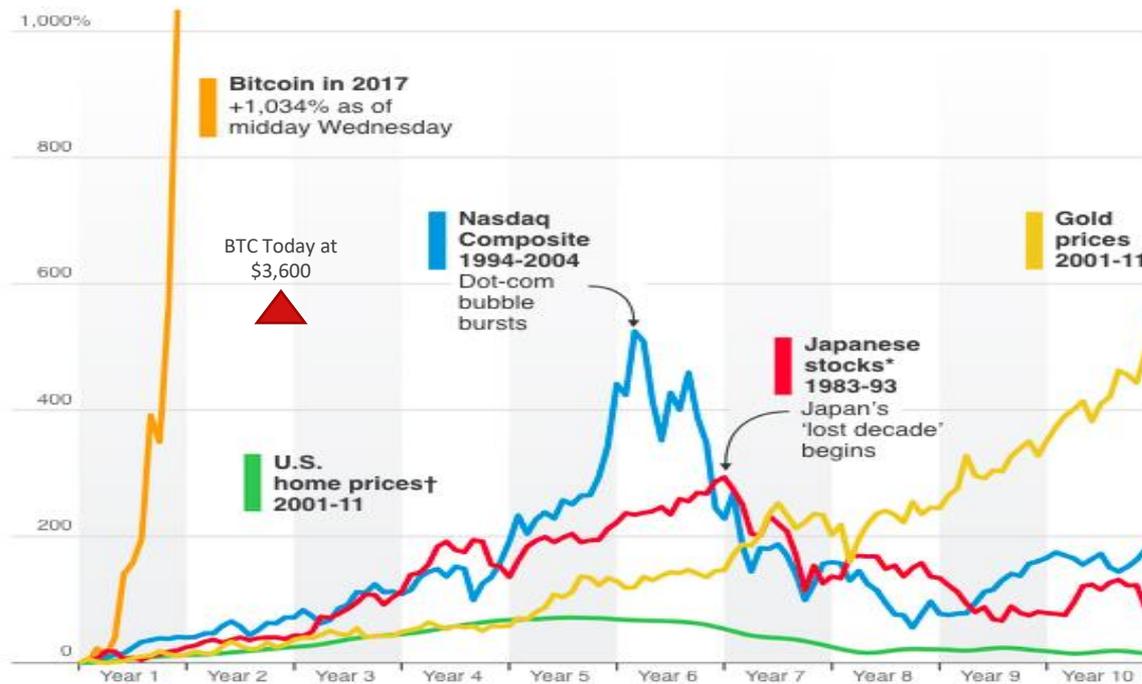


Which Asset Would You Rather Own?

**** Unfortunately the BTC is as of November 2017 at approximately \$7,500**

Vertical Ascent

Bitcoin's 1,034% run-up this year compared to decade-long trends in other historically huge market moves



*Tokyo Stock Price Index †Case-Shiller Home Price Index

Sources: CoinDesk (bitcoin); FactSet (Nasdaq, Japanese stocks, gold); Thomson Reuters (home prices)



Promises of Blockchain

Since the advent of Blockchain, many adaptations of Satoshi's original vision have been deployed. Many promises have been made, which of those have been kept?

Earlier Promises of Blockchain

	Mission Acomplished?	Expected Achievement?	Surprise?
Cheaper	No	2020	None
Faster	Sometimes	2030	None
More Secure	Sometimes	2025	None
More Efficient	Sometimes	2030	None
Only Decentralized Activity	No	Never	What?
Disintermediation	Slight	Never	Shocked
Ease of Use	Low	2030	None
Commercial Adoption	Small	2030	None
Anarchist Dream	No	Never	What?
Criminals Use More Than Fiat	No	Never	In Jail
No Taxes	No	Never	What?
Cross-Boarder Payments	Yes	Done	None
Unregulated by Majority of Governments	No	Never	What?
Cost Savings	Depends	2025	What?
Open Public Ledger	Sometimes	2025	None
Decentralized Database	Yes	Done	None
Immutable Database	Yes	Done	None
Protect Private Data (So Far)	Yes	Done	None
Prevents Double Spending (So Far)	Yes	Done	None
Redundancy	Yes	Done	None
Encryption	Yes	Done	None



Bitcoin is NOT Blockchain And Blockchain is not Bitcoin!

- **The Bitcoin Blockchain**

- Is a Distributed Ledger Technology protocol unique to the Bitcoin Blockchain Network (the immutable, transparent, open-source, database)
- Is different, but perhaps largely similar in many ways to the numerous other DLT protocols
- Utilizes a network nodes configured to allocate processing capability to the BTC Blockchain to process proof of work transactions to securely transmit BTC throughout the BTC network. These are privately run nodes called Miners.

- **Bitcoin**

- Is a digital balance that exist on the BTC DLT ONLY.
- Is a unit of measure in which balances are kept and updated in “real-time” such that all nodes have the same information at all times.
- It is required to process transactions at any time (the mining fee)



Unforeseen Revelations (Both Constructive)

- **Intermediaries**

- Suddenly we are reminded **WHY** we pay fees to intermediaries.
 - **Security:** We don't like our stuff stolen. If it is stolen we want someone else to pay us back for their negligence (insurance, company/balance sheet of a company). On the average, individuals are more careless than any custodian/intermediary will ever be.
 - **Efficiency:** Individuals cannot manage the various requirements (technology security, physical security, regulatory reporting, tax reporting, etc.) as cheaply or as seamlessly as intermediaries.
- We are not able to innovate and deploy on a large scale (which is critical to develop consensus) without intermediaries.
- **Silver lining:** BTC has permanently put intermediaries in check for systemic abuse of various fees, payment rails, and scope of business activity. It has also radically inspired enough FOMO or fear of obsolescence that new fintech innovation is booming in an industry that had grown stale.

- **Governments**

- This is a simple analysis. Taking an optimists viewpoint, Governments make rules to protect us from bad actors. Thus far the Crypto Currency epic has dramatically highlighted the positive utility of those rules and policies (fraud, unregistered security sales, theft, intentional misreporting of market information, etc. - all things deemed to harm society and constrained by law). Even one lawless corner of the economy hurts many people who find themselves in that neighborhood.
- Expect a meeting of the minds and technology regarding ways to increase the efficacy of existing regulatory principles using DLT.



About Mercantile Global Holdings

Mercantile Global Holdings, Inc. (MGH) and its affiliates, San Juan Mercantile Exchange, Inc. (SJMX) and San Juan Mercantile Bank & Trust International Corp. (SJMBT), are developing an institutional grade electronic trading platform (ETP) and integrated banking platform for digital assets.

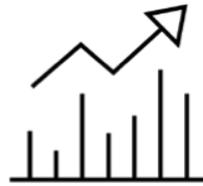


Management Team

Former President of New York Mercantile Exchange (NYMEX)

Recent CEO of NASDAQ Futures Exchange (NFX)

Experienced team of top-tier bankers, technologists, legal, compliance and sales personnel



Exchange Technology

Enterprise-grade matching engine with FIX APIs

Ability to co-locate

Connectivity with major ISVs currently servicing the global financial markets



Integrated Bank

Integrated services between Exchange and Bank affiliate

Custodian Agnostic: Pursuing integration with top-tier Custodians to afford customers self-directed storage of digital assets

Designed to permit customers to split digital assets across multiple custodians



Compliance & Regulatory

Surveil for fraud, manipulation and other deceptive trading practices

Use of sophisticated trade surveillance software currently deployed in financial markets



Management Highlights

We have operated regulated exchanges and run large organizations and we are applying our knowledge and experience to digital assets.

Bo Collins

**Chairman & CEO of MGH
and SJMBT**

- Former President of the New York Mercantile Exchange (NYMEX)
- Led NYMEX through transition to electronic trading and increased market cap from \$600M to \$2.7B within 3 years
- In partnership with NASDAQ, launched International Derivatives Clearing Group (IDCG) in 2008, which later sold to LCH.Clearnet Group
- Serial Entrepreneur and well respected FinTech executive

Rick Beaman

CEO of SJMX

- Recent CEO of NASDAQ Futures Exchange (NFX)
- Grew NFX volumes from start-up to the 2nd largest exchange in Natural Gas Options; named the 'Fastest Growing' exchange in 2017
- Successfully launched TradeSpark Exchange with Cantor Fitzgerald, which was an early competitor to ICE
- 10 year veteran of the U.S. Navy

Nick Varelakis

**President & COO of
SJMBT and CFO of MGH**

- Previous COO and interim CFO of Noble Bank International (NBI), an International Financial Entity (IFE) dedicated to facilitating growth of the digital asset market
- Head of large operational teams at JP Morgan across various asset classes
- Director at LCH.Clearnet, Global Head of Operations for SwapClear; a CFTC registered Derivatives Clearing Organization (DCO)

Bob Cavnar

President & COO of MGH

- 40+ year executive in the energy industry
- Deep management experience with start-ups, turn-arounds and large corporations
- Past CEO of Luca Technologies, Milagro Exploration and Mission Resources
- Former CFO and COO of the El Paso Corporation; led a number of acquisitions, restructurings and mergers



Differentiating factors at a glance

SJMX will offer a professional trading front-end that is connected through CQG, to promote faster execution and greater reliability

- SJMX will be a professional trading platform, not an Internet website and is not cloud based. It is integrated into traditional capital markets infrastructure, designed to increase security and throughput for professional traders.
- The technology will feature an API that uses the Financial Interface Exchange (“FIX”) protocol relied upon by banks and large broker dealers globally. Clients can co-locate their servers with CQG for even greater speed and security.
- SJMX owns and will operate a proprietary matching engine designed to manage millions of trades per second. Other exchanges lack this technology.
- SJMX will have a structural advantage over incumbent digital asset exchanges by having an affiliated bank entity, SJMBT, which will settle transactions and manage fiat balances.
- SJMX will be the only exchange that will offer a customer-centric custody solution that allows customers to choose our proprietary custody solution (i.e., their assets are held in digital wallets managed by the Bank) or to choose to hold their assets at other custodians instead.
- SJMX and SJMBT, working in conjunction, will provide customers with the ability to hold both fiat and digital assets on account, allowing a user to trade on the exchange based on these balances.

This structure will provide efficiency and unique benefits, as customers can deposit fiat and/or digital assets, receive interest on fiat balances, benefit from institutional-grade custody for digital assets, be connected to a major liquidity pool that provides best execution, price discovery, and settlement of transactions on a real-time basis.



The Problem: Retail Architecture

Institutional-Grade Exchange

vs.

Retail Architecture

Existing digital asset exchanges are not designed to meet institutional requirements

- Access via web browser
- Too slow
- Outsourced infrastructure (e.g., AWS)
- Vulnerable to cyberattacks
- Unreliable during peak times
- Unable to trade on other exchanges

Most institutions are not able to trade on their existing infrastructure platforms

- Incompatible with web-based connectivity and protocols
- Inconsistent connectivity
- Not able to service existing customers
- Subject to fraud, manipulation and deceptive trading practices
- Unable to connect with middle and back office workflows

Material limitations on security, withdrawals and support

- At risk of cyber hacks; funds sit with the exchange
- Tiered account security creates vulnerabilities and unfair advantages
- Limitations on dollar and/or digital asset withdrawal amounts
- Delayed and unpredictable trade processing
- Low-touch customer service



The Solution: Institutional Grade Exchange

Institutional-Grade Exchange

vs.

Retail Architecture

SJMX will have technical infrastructure modeled after top commodity exchanges

- Access via proprietary trading application
- High speed private network
- Owned and controlled infrastructure
- Enterprise grade security infrastructure
- High performance and fault tolerant
- Integrated into global exchange ecosystem

Institutions will be able to trade on their existing infrastructure platforms

- Industry accepted connectivity and protocol standards (FIX)
- Reliable connectivity and customary exchange controls
- Fair and efficient markets
- Maintain and enhance your existing customer relationships
- Intuitive workflow integrations

More secure infrastructure, no limits on withdrawals and dedicated support

- Separation between Exchange and Bank along with third-party custody options creates significant security benefits
- No planned limits on dollar or digital asset withdrawal amounts
- Dedicated account management and customer service

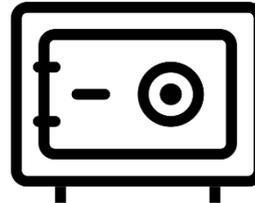


The Exchange: Expected Features & Benefits



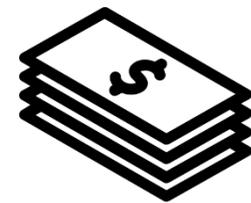
Electronic Trading Platform

- Match engine designed for:
 - Processing more than **1.5 million** transactions per second
 - Latency of **3 milliseconds**
- State of the art trading application and analytics (including mobile trading apps) and risk management tools
- Increased stability and security compared to web-based exchanges
- Access to professional trading tools, market data and trading on 40+ exchanges worldwide, including futures exchanges such as CME and CBOE



Custody

- Funds will be deposited into trust accounts at a regulated financial institution
 - Third-party custodial arrangement for secure digital asset storage
 - Fiat will be on deposit at correspondent banks, broker dealers or Federal Reserve
- Customers will be subject to AML and KYC requirements
- No planned withdrawal limits on amounts of fiat or digital assets
- Options for digital asset deposit insurance to the extent available from insurers



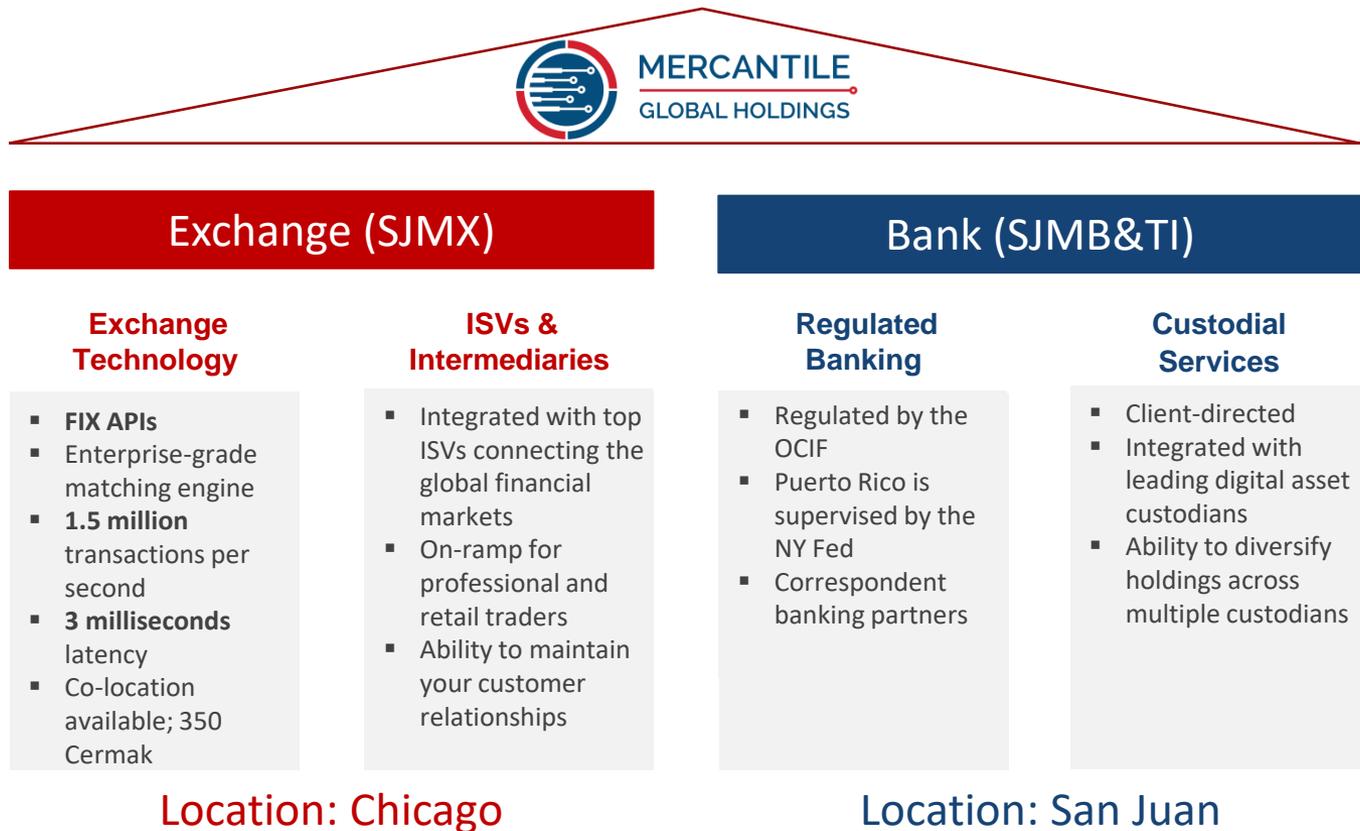
Liquidity

- Substantial number of established traders able to connect to the ETP through their existing trading infrastructure
- Incentives for institutional investors, traders and market makers to use the ETP and increase liquidity
- Integration between Exchange and Bank will facilitate seamless settlement of OTC transactions



Structural Advantages

MGH and its affiliates SJMX and SJMBT will provide unique advantages and security of customer assets





Designing the Banking Infrastructure: SJMBT

Regulatory & Compliance

- SJMBT is organizing as an International Financial Entity (IFE) in Puerto Rico and will be subject to the regulation and oversight of the Office of the Commissioner of Financial Institutions
- Subject to BSA & OFAC requirements
- OCFI is accredited by the Conference of State Bank Supervisors as an organization dedicated to promoting the quality and effectiveness of supervision among the banking regulators from all 50 U.S. states and territories, including the Commonwealth of Puerto Rico.
- OCFI also follows examination guidance issued by the FDIC and by the Financial Institution Examination Council (“FFIEC”), and supervised by the Board of Governors of the Federal Reserve and the Office of the Comptroller of the Currency.

Clearing & Settlement

- Real-time limit management based upon holdings at Bank
- Ability to view and manage fiat & digital asset custody in one entity

Digital Custody

- Ability to diversify across institutional grade digital custody solutions
- Ability to actively manage concentration risk across digital custody platforms

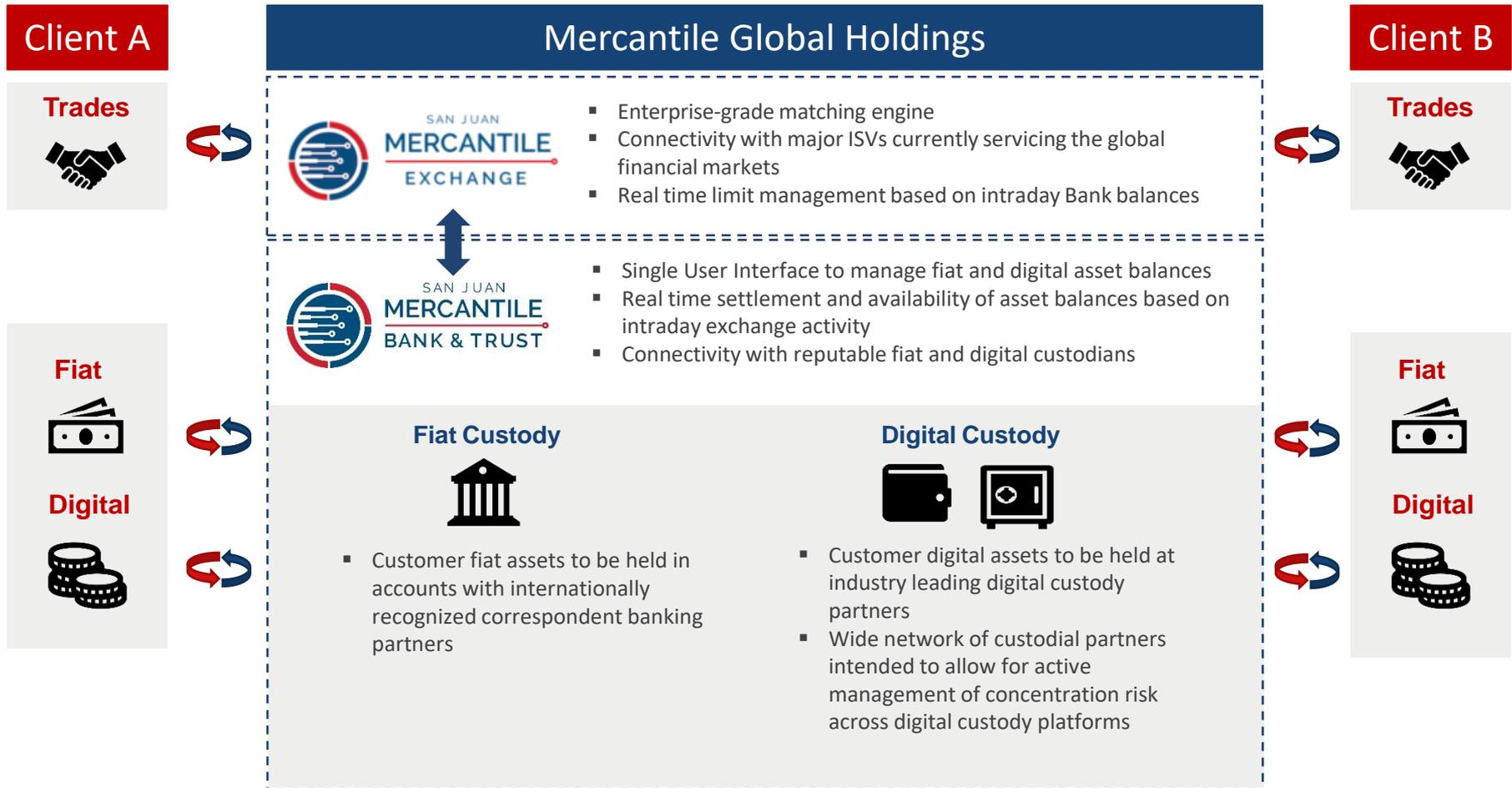
Fiat Custody

- Internationally reputable correspondent banking network
- Institutional grade customer service and operational support





MGH Ecosystem: Overview





Regulatory & Compliance

Being built on the foundation of a rigorous and trusted regulatory framework designed to meet applicable regulatory requirements



Rigorous on-boarding process using customary KYC/AML procedures



Market surveillance technology provided by top third-party specialists



Utilize industry practices modeled after CFTC guidelines



Thank You