Ted Lee’s Presentation: Bitcoin and Blockchain

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Agenda

- What Is Bitcoin?
- How It Works (Blockchain & Mining)
- Why People Use It
- Risks & Challenges
- Getting Started Safely
- Q & A

What Is Bitcoin?

- Digital currency launched in 2009
- No physical form – exits only on the blockchain (online)
- Created by “Satoshi Nakamoto” (pseudonym)
- Permission less
- Decentralize
- Bitcoin is NOT Crypto, fails the Howey Test

Bitcoin vs. Traditional Money

Feature	Traditional Money	Bitcoin
Issuer	Central bank/government	Decentralized network 21K Nodes, 40% TOR nodes
Supply	Can expand at will (7%)	Fixed at 21 million BTC 1 BTC = 100M Satoshis
Ledger	Bank records Digital Database	Public blockchain 800 Mb in size (August 2025)
Transaction Type	Reversible (Chargebacks)	Irreversible (99.9%) Except when there is a fork

🪙 Gold vs Bitcoin: Properties of Money

💡 Property	🟡 Gold	₿ Bitcoin
Durability	**Extremely durable; doesn't corrode**	**Digital and immutable; cannot degrade**
Portability	**Heavy and bulky to transport**	**Highly portable; global transfer in seconds**
Divisibility	**Limited; hard to divide precisely**	**Infinitely divisible (up to 100M satoshis)**
Uniformity	**Requires assay to verify purity**	**Every Bitcoin is identical and verifiable**
Limited Supply	**Scarce, but supply increases slowly**	**Fixed supply: 21 million BTC max**
Acceptability	**Widely accepted for centuries**	**Growing adoption; increasingly accepted**
Verifiability	**Requires physical testing**	**Instantly verifiable via blockchain**
Storage	**Requires secure physical vaults**	**Stored digitally in wallets (hot/cold)**
Counterfeit Risk	**Possible with fake alloys**	**Impossible due to cryptographic security**
Transport Cost	**High (insurance, logistics)**	**Low (internet-based transfer)**
Inflation Resistance	**Strong, but not perfectly capped**	**Perfectly capped; deflationary**

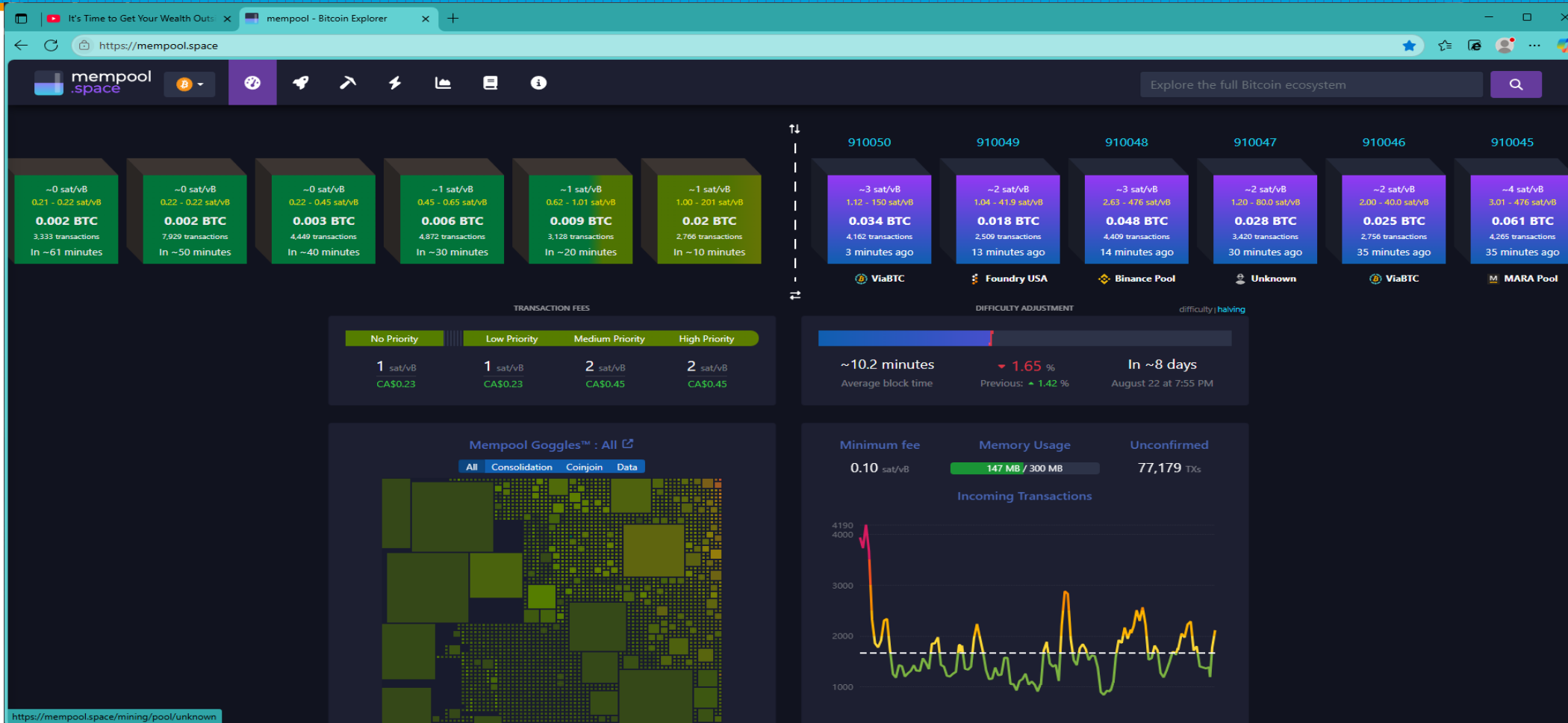
Bitcoin Mining

- Miners compete to solve math puzzle (proof-of-work)
- First to solve adds a block to the blockchain (forks?)
- Reward: newly minted bitcoins + transaction fees
- Energy-intensive and competitive process (ASIC)

How Blockchain Works

- Public ledger of every Bitcoin transaction
- Transactions grouped into “blocks”
- Blocks linked by cryptographic “blocks” SHA256
- Tamper-evident and transparent

Mempool.Space



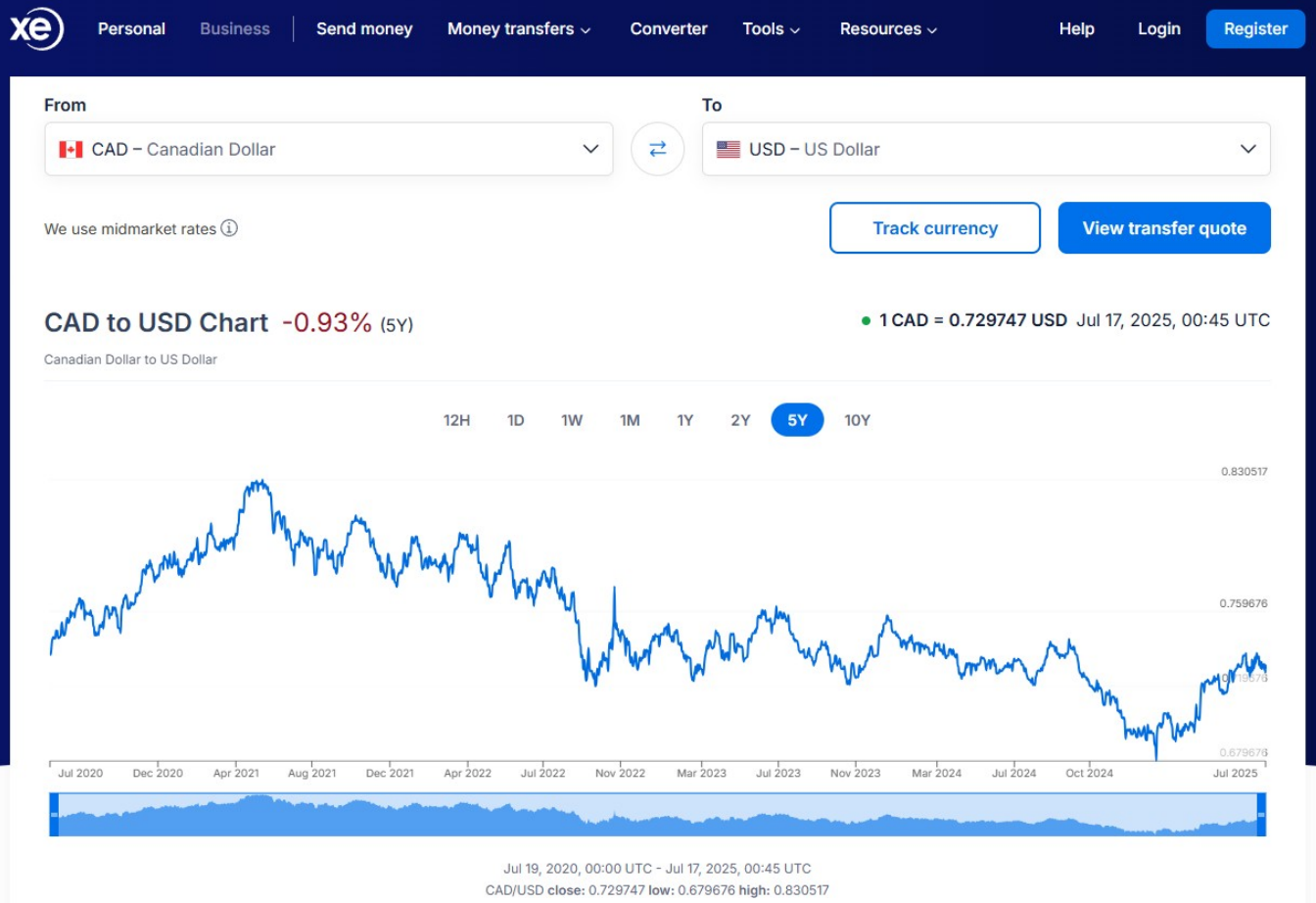
Bitcoin Wallets

- Software wallets (mobile or desktop apps)
- Hardware wallets (physical USB-like devices)
- Public key = address (like an email)
- Private key = secret (like a password)
- Seed words (BIP-39)
- Not your keys, not your Bitcoin

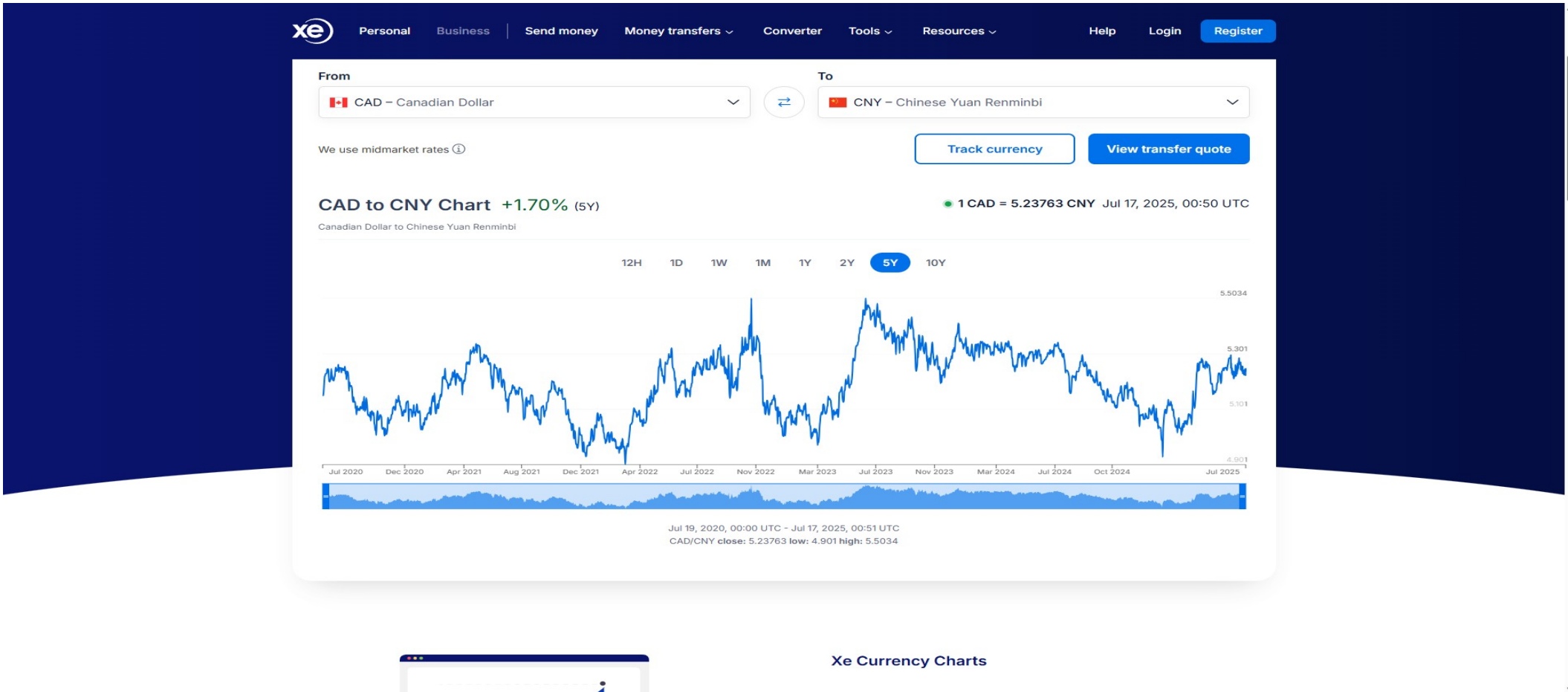
Why People Use Bitcoin

- Peer-to-peer transfer-no banks or middlepersons
- Hedge against inflation (limited supply)
- Pseudonymous-addresses, not names (traceable)
- Global-send money anywhere quickly
- Layer2 Bitcoin=Lighting, transactions in seconds

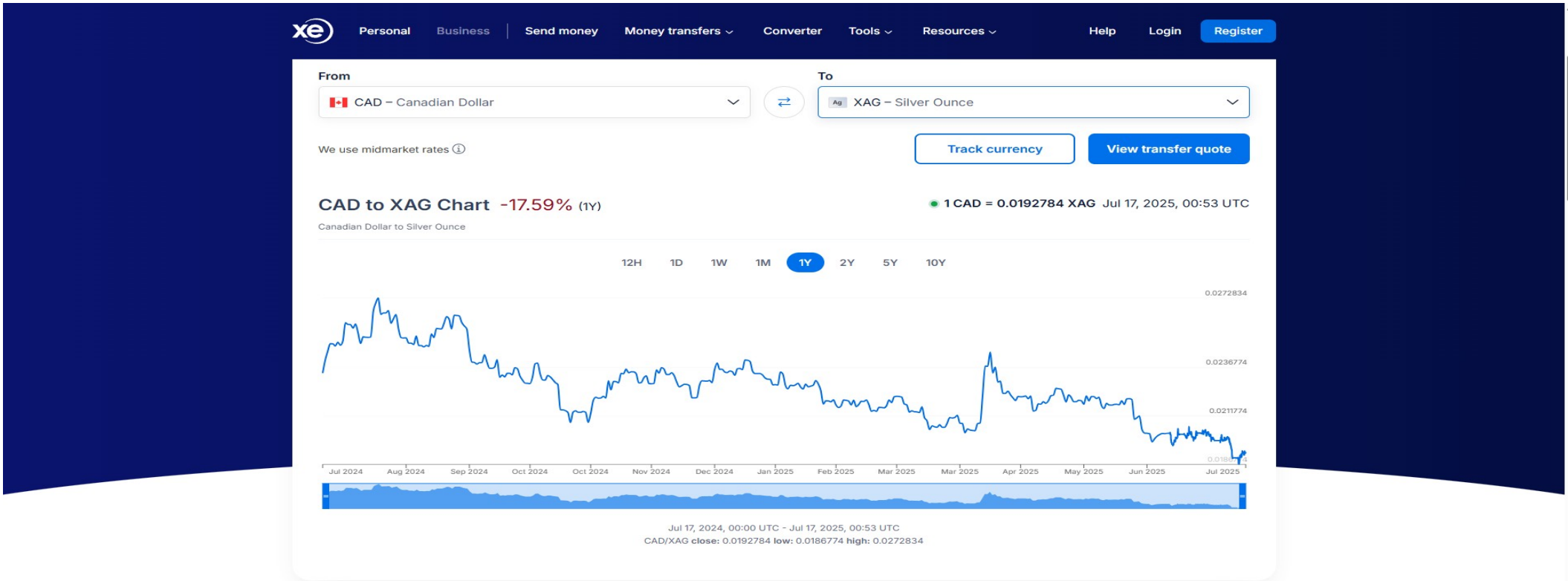
CAD vs USD 5 years



CAD to CNY 5 years

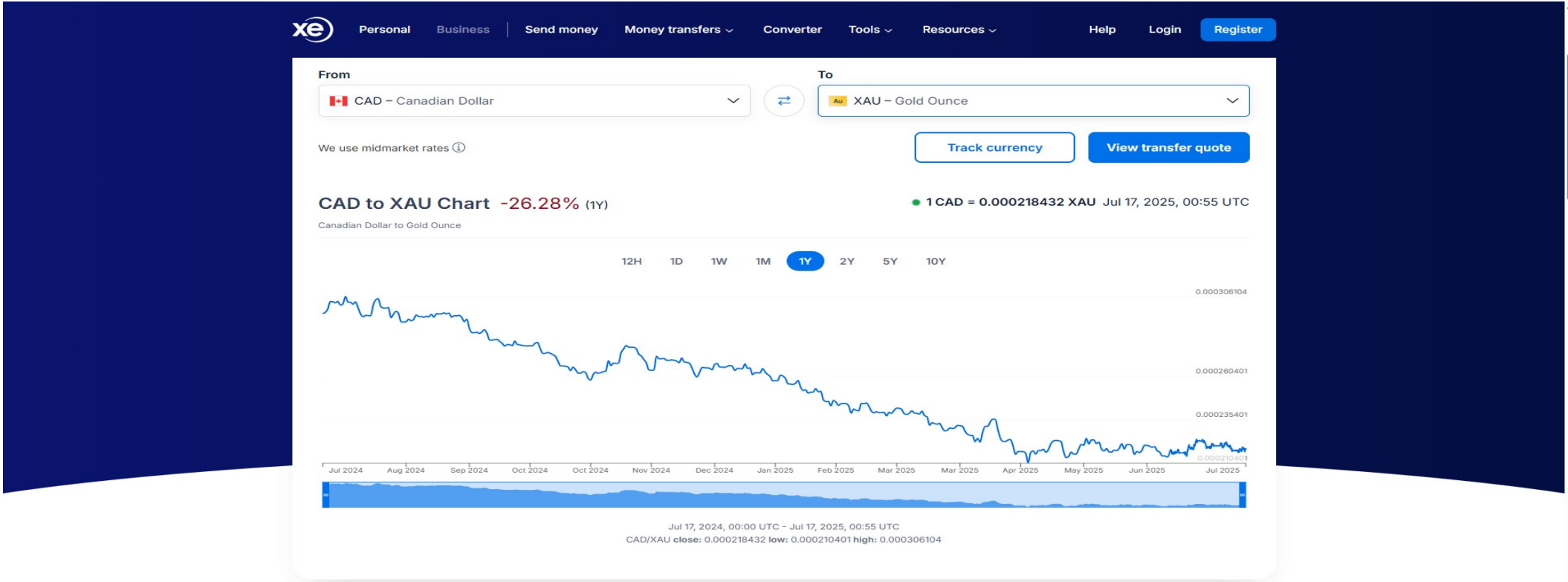


CAD vs Silver 5 years



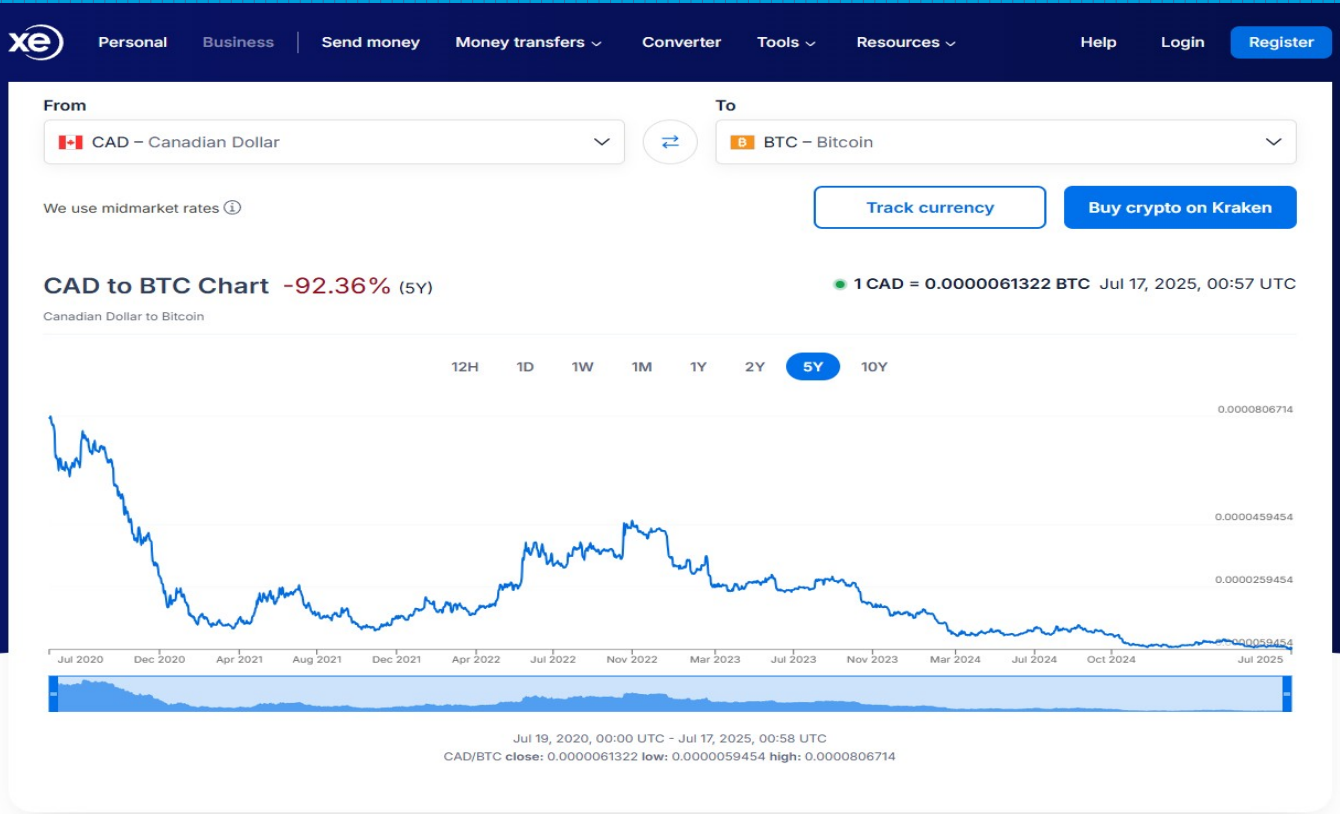
Xe Currency Charts

CAD vs Gold 5 years



Xe Currency Charts

CAD vs Bitcoin (BTC) 5 years



Xe Currency Charts

⚠️ Risks of Storing Wealth: Gold vs Bitcoin vs Stock Market

Risk Type	🟡 Gold	₿ Bitcoin	📈 S&P 500
Market Volatility	**Moderate**	**Very High**	**High**
Security Risk	**Theft or damage**	**Cyberattacks, wallet loss**	**Fraud, data breaches**
Storage Risk	**Vaults and insurance**	**Cold/hot wallet risks**	**Minimal**
Liquidity Risk	**Low**	**High**	**High**
Regulatory Risk	**Low**	**High**	**Moderate**
Income Generation	**None**	**None (unless lent)**	**Yes (dividends)**
Counterfeit/Fraud Risk	**Fake alloys**	**Scams, phishing**	**Pump-and-dump schemes**
Environmental Risk	**Minimal**	**High (energy use)**	**Varies by industry**
Technology Risk	**None**	**Quantum computing threat**	**Low**
Inflation Protection	**Strong**	**Deflationary**	**Historically strong**

🟡 Gold Summary

- **Pros:** Tangible, long history, inflation hedge
- **Cons:** No income, storage costs, theft risk, illiquidity

₿ Bitcoin Summary

- **Pros:** Portable, scarce, decentralized, high upside
- **Cons:** Extreme volatility, cybersecurity risk, regulatory uncertainty

📈 S&P 500 Summary

- **Pros:** Income-generating, liquid, historically strong returns
- **Cons:** Market crashes, company-specific risks, emotional investing

💰 Gold vs Bitcoin vs S&P 500: Properties of Money & Performance

💡 Property	🟡 Gold	₿ Bitcoin	📈 S&P 500
Durability	**Extremely durable**	**Digital and immutable**	**Not applicable (financial asset)**
Portability	**Heavy and bulky**	**Instant global transfer**	**Tradable electronically**
Divisibility	**Limited**	**Up to 100M satoshis**	**Fractional shares possible**
Uniformity	**Requires purity testing**	**Identical units**	**Standardized index units**
Limited Supply	**Scarce, mined**	**Capped at 21M BTC**	**Unlimited; reflects market cap**
Acceptability	**Widely accepted**	**Growing adoption**	**Highly accepted investment**
Verifiability	**Physical testing needed**	**Blockchain verification**	**Public market data**
Storage	**Vaults required**	**Digital wallets**	**Brokerage accounts**
Counterfeit Risk	**Possible with fake alloys**	**Cryptographically secure**	**Low; regulated markets**
Transport Cost	**High**	**Low**	**None (digital)**
Inflation Resistance	**Strong**	**Deflationary design**	**Growth outpaces inflation**

Risks & Challenges

- High price volatility-values can swing 10-20% in days
- Scams and phishing-fake wallets or exchanges
- Irreversible transactions-no chargebacks
- Regulatory uncertainty in many countries

Getting Started Safely

- Choose a reputable wallet (Blue, Aqua, CoinOS)
- Register on a trusted exchange (Bitcoin Well, Bull Bitcoin)
- Enable two-factor authentication (2FA) or password
- Securely back up your seed phrase offline (paper, metal)
- Test with a small transaction first

Bitcoin is a decentralized digital currency that allows secure peer-to-peer transactions without the need for intermediaries. Here's a simple roadmap to begin your journey into Bitcoin ownership.

🪙 Good: Buy and Hold on an Exchange

> Create an account with a trusted cryptocurrency exchange (like Bitcoin Well, Bull Bitcoin, Kraken or Coinbase).
>
> Purchase Bitcoin using fiat currency (e.g., USD, CAD).
>
> **Risk:** Your Bitcoin is stored by the exchange, meaning you don't control the private keys. Exchanges can be hacked, go offline, or freeze your funds.

🔒 Better: Use a Hot Wallet with Seed Words

> Withdraw your Bitcoin from the exchange into a **hot wallet that uses Seed Words** (e.g., mobile or desktop wallets like Aqua, Muun or BlueWallet).
>
> Hot wallets are connected to the internet, offering convenience but less security.
>
> **Pros:** You control your private keys. Easy access and user-friendly.
>
> **Cons:** Vulnerable to malware, device theft, or phishing attacks.

🧊 Best: Use a Cold Wallet + Sparrow Wallet

> Set up a **cold wallet** using Sparrow Wallet with an air-gapped device or hardware wallet.
>
> Sparrow Wallet allows advanced privacy features like generating a new Bitcoin address for each transaction to improve anonymity.
>
> **Cold wallets** are offline, offering excellent security and peace of mind.
>
> **Pros:** Full control of your Bitcoin. Resistant to online attacks.
>
> **Cons:** Requires more setup and responsibility. If you lose your seed phrase or backup, recovery can be impossible.

🔥 Hot vs 🧊 Cold Wallets: What's the Difference?

- **Hot Wallets:** Connected to the internet. Convenient but less secure.
- **Cold Wallets:** Fully offline. Much safer but less convenient.

🚫 Risks of Storing Bitcoin Online

Storing Bitcoin on exchanges exposes you to several risks:

- Exchange hacks and cyberattacks
- Regulatory shutdowns
- Withdrawal freezes
- Lack of true ownership

Tip: Always withdraw your Bitcoin to a wallet where you control the private keys. Remember: *Not your keys, not*

Bitcoin & Retirement

- Consider a small allocation-diversification principle
- Tax implication (capital gains) and record-keeping
- Estate planning: securely passing private keys to heirs
- Consult a license financial advisor before large investments
- Not me!, no longer license and no E&O insurance

Gandalf’s Warnings and Guidance

- **Keep it secret, Keep it safe:** This iconic line is Gandalf’s urgent instruction to Frodo. He emphasizes that no one must know Frodo has Bitcoin, and that it must be protected at all costs.
- **Do not sell it:** Gandalf warns Frodo never to sell his Bitcoin, even in desperation. Selling it would expose him to the Government gaze and tax him over time.
- **Trust no one too easily:** Gandalf cautions Frodo to be wary, even of friends, because Bitcoin can corrupt anyone.
- Gandalf’s advice sets the tone for Frodo’s Bitcoin journey: secrecy, caution, and the heavy burden of responsibility. For the Government is coming for your Bitcoin.

Q&A

- What stuck out to you?
- Hands up if you've ever heard of or used Bitcoin before
- Answers at https://btc.tedlee.ca
- https://hope.com
- Free Bitcoin Wallets to give out!