LEARNWITHKRISU

32 LESSONS

BITCOIN · ETHEREUM · DEFI · SECURITY

Crypto Complete Guide

The Complete Beginner-to-Pro Guide

Beginner to Pro · Worked examples · Common mistakes · Self-tests
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How to use this book

This guide takes you from the very basics of crypto to professional-level risk management. Lessons build on each other, so read them in order the first time.

Each lesson has: a plain-language explanation, a worked example, a deeper section with real mechanics and calculations, common mistakes, key points and a short self-test with answers.

Examples use made-up numbers to explain ideas. They are not real prices, results or recommendations.

A suggested path

- Read one or two lessons a day and redo the calculations by hand.
- Answer the self-test before reading the answer.
- Practise on paper or a demo before using real money.
- Keep a journal of what you learn and what you get wrong.

Important notice

This ebook is for education only. It is not investment, tax or legal advice, and it is not a recommendation to buy or sell anything. Trading and investing involve risk, including loss of capital. Tax and regulation change often, so verify current rules with official sources and a qualified professional. LearnwithKrisu does not guarantee any result.

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LEVEL 1 · BEGINNER

Module 1: Crypto foundations

Start here if crypto is new to you. These lessons explain what it is, how it works and how to take your first safe steps. Crypto is volatile and largely unregulated in India, so learn first and invest small.

LESSON 1 OF 32

What is cryptocurrency?

A **cryptocurrency** is digital money or a digital asset that exists only on a computer network and is secured by cryptography. There is no bank or government in the middle: thousands of computers keep the same shared record of who owns what, and rules written in software decide which transactions are valid.

Traditional money (rupees, dollars) is issued by central banks and recorded by banks. Crypto assets are created by software, recorded on a public ledger and moved directly between wallets. Some are designed as money (Bitcoin), some as platforms for apps (Ethereum), and some as tokens for a specific project or game.

Crypto assets are not legal tender in India and are not backed by the government or the RBI. Their prices come only from what buyers and sellers are willing to pay, which makes them very volatile: moves of 10 percent in a day are not unusual. The official term used in Indian tax law is **virtual digital asset (VDA)**.

> **WORKED EXAMPLE**
>
> You send 0.01 Bitcoin to a friend. Instead of a bank processing it, the transaction is broadcast to the network, checked by thousands of computers and added to a shared ledger. It can take minutes, works on a Sunday night and needs no bank. But if you send it to a wrong address, nobody can reverse it.

Go deeper

Digital scarcity. Cryptocurrency is digital money or assets whose ownership is recorded on a shared ledger instead of a bank's private

database. **Cryptography** (digital signatures) proves you own an asset, and a network of computers agrees on the ledger, so no single company can freeze or edit it at will.

Example. Sending 0.01 BTC: your wallet signs a transaction with your **private key**; the network verifies the signature against your **public address**, checks you have the balance, and adds the transaction to a block. Nobody needs to trust you or a bank, only the rules of the network.

Categories. Coins run their own blockchain (BTC, ETH, SOL). **Tokens** live on another chain (USDT on Ethereum or Tron). **Stablecoins** target a fixed price (1 dollar). **NFTs** are unique tokens. **Memecoins** have no cash flows and depend on attention.

Key differences from stocks. Trades 24×7, no circuit breakers, no company earnings, high volatility, self-custody possible (you can hold your own keys), and regulation is still evolving.

Risk. Prices can fall 70 to 90 percent in bear markets. Never invest money you cannot afford to lose.

> **COMMON MISTAKES**
>
> - Treating all crypto assets as if they were the same.
> - Buying because of social media hype alone.
> - Investing money needed for near-term expenses.

KEY POINTS

- Crypto is digital value recorded on a shared ledger, not issued by a central bank.
- It is not legal tender in India and carries no government guarantee.
- Prices are extremely volatile.
- Transactions are usually irreversible, so accuracy and security are your job.

TEST YOURSELF

Q. What proves you own a crypto asset?
A. Control of the private key that can sign transactions for the address holding it.

Q. How is a token different from a coin?
A. A coin has its own blockchain; a token is built on another blockchain.

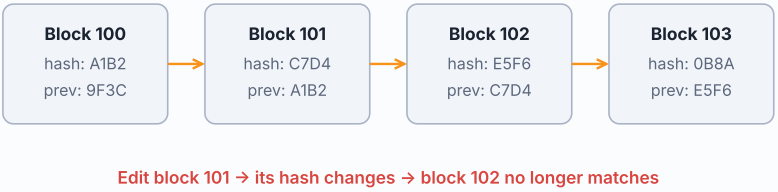
LESSON 2 OF 32

Blockchain explained simply

A **blockchain** is a shared record book. Transactions are grouped into **blocks** and each new block is linked to the previous one with a unique digital fingerprint called a **hash**. If anyone tries to change an old block, its fingerprint changes and breaks every block after it, so tampering is easy to spot. The ledger is copied across thousands of computers called **nodes**, so there is no single place to attack or shut down.

How do strangers agree on the next block? Through a **consensus mechanism**. In **proof of work** (Bitcoin), miners compete to solve a hard puzzle using computing power; the winner adds the block and earns a reward. In **proof of stake** (Ethereum today), **validators** lock up coins as a deposit and are chosen to add blocks; dishonest behaviour can cost them their deposit.

Each user has a pair of keys: a **public key** (like your account number, safe to share) and a **private key** (like your PIN, which proves you own the funds and must never be shared). Whoever has the private key controls the coins.



Each block stores the fingerprint (hash) of the one before it. Changing history breaks every later block.

WORKED EXAMPLE

Imagine a class notebook that every student keeps a copy of. When Asha pays Ravi 5 rupees, everyone writes it down. If Ravi tries to scribble that he got 500, his copy will not match the other 30 copies and will be rejected. A blockchain works on the same idea of many matching copies, only automated with cryptography.

Go deeper

Blocks and chains. Transactions are grouped into blocks. Each block contains a **hash** (a unique fingerprint) of the previous block, so changing an old block changes its hash and breaks every block after it. This makes the history tamper-evident.

Consensus. Nodes must agree on the next block. **Proof of Work** (Bitcoin): miners compete to find a hash below a target, spending energy, so rewriting history requires redoing enormous work. **Proof of Stake** (Ethereum): validators lock up coins as collateral and can be penalised (**slashed**) for cheating.

51 percent attack. Controlling a majority of mining power or stake could allow reversing recent transactions; on large networks this is prohibitively expensive, on small chains it has happened.

Example. Block 100 hash = A1B2. Block 101 stores A1B2. Edit a transaction in block 100 and its hash becomes C9D8, which no longer matches what block 101 stored, so the change is detected.

Trade-offs. The **blockchain trilemma**: decentralisation, security and scalability are hard to maximise together, which is why layer-2 networks exist.

COMMON MISTAKES

- Assuming blockchains are anonymous; most are pseudonymous and traceable.
- Believing "blockchain" automatically means secure; applications and wallets can still be hacked.
- Confusing a distributed database with a decentralised one.

KEY POINTS

- A blockchain is a tamper-resistant ledger copied across many computers.
- Consensus (proof of work, proof of stake) decides who adds the next block.
- Public key is shareable. Private key must stay secret.
- Whoever holds the private key controls the coins.

TEST YOURSELF

Q. Why does altering an old block break the chain?

A. Its hash changes, which no longer matches the previous-hash stored in the next block.

Q. What discourages cheating in Proof of Stake?
A. Validators risk losing their locked stake (slashing).

LESSON 3 OF 32

Bitcoin: the first and largest cryptocurrency

Bitcoin (BTC) was created in 2009 by an anonymous person or group using the name Satoshi Nakamoto. It was designed as digital money that works without banks. Its supply is capped at **21 million coins**, which is why many people compare it to digital gold: nobody can print more.

New bitcoins are created as a reward for miners who secure the network. This reward is cut in half roughly every four years in an event called the **halving**, which slows down new supply. Bitcoin can be divided into 100 million units called **satoshis**, so you can buy a small fraction.

Bitcoin's strengths are its security, its long track record and its wide acceptance as the main crypto asset. Its weaknesses are price volatility, slow base-layer transactions, energy use in mining, and regulatory uncertainty. People hold it for different reasons: as a long-term store of value, as a hedge against currency debasement, or as a trading instrument. None of those reasons guarantees a profit.

WORKED EXAMPLE

If Bitcoin trades at 50 lakh rupees per coin, you do not need to buy a whole coin. 5,000 rupees buys 0.001 BTC, which is 100,000 satoshis. If the price later doubles, your 5,000 rupees becomes about 10,000 rupees. If it halves, it becomes about 2,500.

Go deeper

Design. Bitcoin has a hard cap of **21 million** coins. New coins are issued as miner rewards, which halve about every four years (210,000 blocks). The reward fell from 50 BTC to 25, 12.5, 6.25, 3.125 after the 2024 halving, and so on, so issuance keeps falling.

UTXO model. Bitcoin tracks unspent transaction outputs rather than balances. Spending 0.7 BTC from a 1 BTC output creates a 0.7 payment and 0.3 change back to you (minus fees).

Fees. Fees depend on transaction size in bytes and network demand, not on the amount sent; a 100-dollar and a 1,00,000-dollar transfer can cost the same.

Why people hold it. Some see it as digital gold: scarce, portable and censorship-resistant. Others see it as a speculative asset. Its price history shows several drawdowns above 70 percent.

Lightning Network. A layer-2 for fast, cheap Bitcoin payments through payment channels.

Example. Bought 0.01 BTC at 60,00,000 rupees per coin: cost 60,000. A 30 percent fall makes it 42,000. Plan position size so such a fall does not hurt your life.

COMMON MISTAKES

- Believing a price must rise because of the halving.
- Thinking fees are a percentage of the amount.
- Sending to an address on the wrong network.

KEY POINTS

- Bitcoin has a fixed maximum supply of 21 million coins.
- Halvings cut new supply about every four years.
- You can buy a small fraction of a coin.
- It is volatile. Its past price does not predict the future.

TEST YOURSELF

Q. What is Bitcoin's maximum supply?
A. 21 million coins.

Q. How are Bitcoin fees determined?
A. By transaction size in bytes and current network demand, not by the value sent.

Ethereum and smart contracts

Ethereum (ETH) is a blockchain that can run programs, not only record payments. These programs are called **smart contracts**: code that executes automatically when conditions are met, without a middleman. For example, a contract can hold funds and release them only when both sides complete their part.

Smart contracts power many apps: decentralised exchanges, lending platforms, games, NFTs and stablecoins. Anyone can build on Ethereum, which is why it has the biggest ecosystem. To use the network you pay a **gas fee** in ETH, which pays the validators; fees rise when the network is busy.

Smart contracts are only as good as their code. A bug can be exploited and funds can be lost permanently, which has happened many times. Many projects are therefore audited, but an audit is not a guarantee. Other platforms such as Solana, BNB Chain and Avalanche compete with Ethereum by offering different speeds and fees.

WORKED EXAMPLE

A simple lending contract: you deposit 1 ETH as collateral and the contract lets you borrow stablecoins worth less than your collateral. If the price of ETH falls too far, the contract automatically sells part of your collateral to repay the loan. No bank officer decides, the code does it, which is both the benefit and the risk.

Go deeper

Smart contracts. Programs stored on the blockchain that run exactly as coded when conditions are met, such as "release funds if X". They power DeFi, NFTs, DAOs and tokens.

Gas. Every operation costs **gas**, paid in ETH. Fee = gas used x gas price. A simple transfer uses 21,000 gas; if gas price is 20 gwei, fee = 21,000 × 20 = 4,20,000 gwei = 0.00042 ETH. Complex contract interactions cost much more. Since EIP-1559 part of the fee is burned, which can reduce ETH supply.

Proof of Stake. Since 2022, validators stake 32 ETH (or join pools) to secure the network.

Risks. Code is law: bugs and exploits can drain funds permanently. **Approvals** let a contract spend your tokens, so unlimited approvals to unknown contracts are dangerous. Always check contract addresses and review approvals periodically.

ERC standards. ERC-20 for fungible tokens, ERC-721 for NFTs, ERC-4626 for vaults.

Layer-2s (Arbitrum, Optimism, Base) cut fees by processing transactions off the main chain and posting proofs back.

COMMON MISTAKES

- Approving unlimited token spending to unverified sites.
- Using a smart contract only because of its high advertised yield.
- Forgetting that failed transactions still cost gas.

KEY POINTS

- Ethereum runs smart contracts, which are self-executing programs.
- Gas fees pay for network use and rise when it is busy.
- Smart contract bugs can cause permanent losses.
- Other blockchains compete with different speed, cost and design.

TEST YOURSELF

Q. A transfer uses 21,000 gas at 30 gwei. Fee in gwei?
A. 21,000 × 30 = **6,30,000 gwei** (0.00063 ETH).

Q. Why are token approvals a security risk?
A. A malicious or buggy contract with approval can move your tokens without a further signature.

LESSON 5 OF 32

Coins, tokens, altcoins and stablecoins

A **coin** runs on its own blockchain (Bitcoin, Ether, Solana). A **token** is created on another blockchain, usually by a smart contract, such as tokens on Ethereum. **Altcoins** means every crypto asset other than Bitcoin. The thousands of altcoins range from serious infrastructure projects to jokes and outright scams, and most small ones eventually fade.

Stablecoins try to hold a stable price, usually one US dollar. Some are backed by reserves of cash and short-term bonds (such as USDT and USDC), some by other crypto and some by algorithms. Algorithmic ones have collapsed in the past, so the backing and transparency matter. Stablecoins are used to move money between exchanges and to park value between trades, but they carry risks: the issuer may not hold what it claims, regulators may act and the coin can temporarily lose its peg.

Meme coins have no real use and rise or fall on hype and social media. Treat them as gambling with money you can fully lose. **Governance tokens** let holders vote on a project's decisions, and **utility tokens** give access to a service.

WORKED EXAMPLE

You hold 100 USDT, a dollar stablecoin. When Bitcoin is falling, you move your coins into USDT to avoid the volatility without leaving the crypto world. If the issuer lost trust and USDT traded at 0.90, your 100 coins would be worth only 90 dollars. Stable is a target, not a promise.

Go deeper

Stablecoin types. Fiat-backed (USDT, USDC): reserves of cash and short-term bonds; risk is the issuer and reserve quality. **Crypto-backed** (DAI/USDS): over-collateralised by crypto, managed by smart contracts. **Algorithmic**: rely on code and incentives, with the failure of TerraUSD in 2022 showing how they can collapse to zero.

Why they exist. A stable unit for trading, saving and transfers without leaving crypto rails. A "peg" can break if redemptions overwhelm reserves.

Checks. Look at reserve attestations, redemption rights, regulation and liquidity on the exchanges you use.

Examples of risk. If a stablecoin trades at 0.97 dollar, a 3 percent discount shows market stress; in 2023, USDC briefly dropped near 0.88 when a bank holding some reserves failed, before recovering.

Tokens by use. Utility tokens (access), governance tokens (votes), exchange tokens (fee discounts), wrapped tokens (representing another asset). Value depends on real demand and token design.

Taxes. Swapping tokens, including into stablecoins, can be a taxable event; see the India tax lesson.

COMMON MISTAKES

- Believing stablecoins are risk-free.
- Chasing high "yield" on stablecoins without understanding where it comes from.
- Ignoring de-peg risk when holding large balances.

KEY POINTS

- Coins have their own blockchain. Tokens live on another one.
- Stablecoins aim to track a currency, but they carry issuer and peg risk.
- Most small altcoins and meme coins fail.
- Never judge a coin by hype or social media.

TEST YOURSELF

Q. What failed in the TerraUSD collapse?
A. An algorithmic design depending on incentives and a sister token; confidence broke and the peg collapsed.

Q. How can you assess a fiat-backed stablecoin?
A. Check reserve reports, redemption terms, issuer reputation and liquidity.

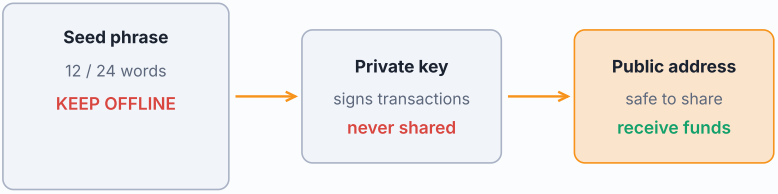
LESSON 6 OF 32

Wallets, keys and seed phrases

A **wallet** does not store coins; it stores your keys, which prove your ownership of coins on the blockchain. There are two main kinds. **Custodial wallets** (like an exchange account) hold the keys for you, which is easier but means you trust the company; if it fails or is hacked, you may lose your funds. **Non-custodial wallets** give you the keys. Nobody can freeze your coins, but nobody can help you if you lose access.

Wallets can also be **hot** (connected to the internet, such as mobile and browser wallets, convenient but exposed) or **cold** (offline, such as a hardware wallet, much safer for large amounts).

When you create a non-custodial wallet you receive a **seed phrase** (recovery phrase) of 12 or 24 words. It is the master key to everything. Write it on paper (or metal), store copies in separate safe places and **never** type it into any website, send it in chat or photograph it. Anyone who has it can take everything. Genuine support staff never ask for it.



Your private key signs transactions. The seed phrase can rebuild every key, so it must never be shared.

WORKED EXAMPLE

Sana buys a hardware wallet from the maker's official site, writes her 24 words on paper and keeps it in a locked drawer with another copy at a trusted relative's home. Her phone breaks, but she buys a new device, enters the words and her funds reappear. A friend who kept his phrase as a phone screenshot had it stolen when his cloud account was hacked.

Go deeper

Custodial vs non-custodial. On an exchange you hold an IOU; the exchange holds the keys. In a **non-custodial wallet** you hold the keys. "Not your keys, not your coins" means exchange failures (like FTX in 2022) can freeze your funds.

Hot vs cold. Hot wallets (mobile, browser) are connected to the internet: convenient but exposed. **Cold wallets** (hardware devices) keep keys offline; transactions are signed on the device.

Seed phrase. 12 or 24 words generate all your keys. Anyone with them controls your funds; if lost, funds are unrecoverable. Write on paper or steel, store in two secure places, **never** photograph, type into websites, store in cloud notes or share with "support".

Safe routine. Buy a hardware wallet only from the maker; verify the address on the device screen; send a small test transaction first; keep a small hot wallet for daily use and the bulk in cold storage.

Scams. Fake wallet apps, airdrop sites asking for the seed, and "support" DMs. No legitimate service ever asks for your seed phrase.

COMMON MISTAKES

- Storing the seed phrase as a screenshot or in email.
- Entering the seed phrase on any website.
- Skipping the test transaction on a large transfer.

KEY POINTS

- A wallet stores keys, not coins.
- Custodial = easy but you trust the company. Non-custodial = you are fully responsible.
- Seed phrase = master key. Never share or photograph it.
- Use a hardware wallet for larger amounts.

TEST YOURSELF

Q. Who should ever see your seed phrase?
A. Nobody; it is entered only into your own wallet device or app during recovery.

Q. Why send a small test transaction first?
A. To confirm the address and network are correct before risking the full amount.

LESSON 7 OF 32

Crypto exchanges, KYC and the Indian context

A **centralised exchange (CEX)** is a company that lets you buy and sell crypto with rupees through a bank or UPI transfer. You complete **KYC** with PAN, Aadhaar and bank details. In India, crypto exchanges are required to register with the **Financial Intelligence Unit (FIU-IND)** and follow anti-money-laundering rules. Registration with FIU is a compliance requirement, not a guarantee of safety or a government endorsement.

Compare exchanges on security (2-factor authentication, proof of reserves, history of incidents), fees, liquidity (tight spreads and deep order books), INR deposit and withdrawal options, supported coins and customer support. A **decentralised exchange (DEX)** lets you swap directly from your own wallet through smart contracts, with no KYC and no company holding your funds, but you carry all smart contract and scam risk and need to understand gas fees and token approvals.

Do not keep large amounts on an exchange for a long time. Exchanges have been hacked or have collapsed, and withdrawing to your own wallet is the safer habit for long-term holdings. Remember the Indian rules: crypto is not legal tender, there is no investor protection scheme specific to it, and tax applies to profits.



On an exchange they hold your keys. In self-custody you do. Split holdings so one failure cannot take everything.

WORKED EXAMPLE

You compare two exchanges. Exchange A shows a buy price of 100 and a sell price of 99.9. Exchange B shows 100 and 98.5. The gap on B is 1.5 percent, so you lose 1.5 percent just by buying and selling. Add trading fees and A is clearly cheaper to use for the same coin.

Go deeper

Choosing an exchange. Check that it is registered with India's **FIU-IND** as a reporting entity, follows KYC/AML, supports INR deposits via UPI or bank transfer, offers proof of reserves or transparent security practices, has deep liquidity and clear fees.

Costs. Trading fee (maker/taker, for example 0.1 percent), spread, deposit and withdrawal fees, and **1 percent TDS** on crypto transfers above set thresholds under current tax law (check current rules). On a trade of 50,000 rupees, a 0.2 percent fee is 100 rupees and 1 percent TDS is 500 withheld and credited against your tax.

Order types. Market, limit, and stop-limit. Use limit orders to control price, especially in thinner markets.

Security. Enable two-factor authentication using an authenticator app, an anti-phishing code, withdrawal address whitelisting, and strong unique passwords. Do not keep large balances on an exchange.

KYC. Needs PAN, Aadhaar and a selfie. Keep records of all trades and download tax reports.

Diversify risk. Avoid keeping everything on a single platform.

COMMON MISTAKES

- Choosing based on bonus offers rather than safety and compliance.
- Using SMS-only two-factor authentication.
- Leaving a large long-term holding on the exchange.

KEY POINTS

- Centralised exchanges need KYC. DEXes use your own wallet.
- FIU registration is a compliance requirement, not a safety guarantee.
- Compare security, fees, liquidity, INR options and support.
- Keep long-term holdings in your own wallet, not on an exchange.

TEST YOURSELF

Q. Trade value 20,000 and 1 percent TDS applies. How much is withheld?
A. **200 rupees**, which is adjusted against your final tax.

Q. Why use limit orders?

A. They guarantee your price or better, avoiding slippage in fast or thin markets.

LESSON 8 OF 32

Your first purchase step by step

Take the first purchase slowly. A safe sequence:

First, decide the amount, and make it money you can afford to lose entirely. Second, create an account on a reputable exchange, complete KYC and turn on **2-factor authentication** with an authenticator app (not just SMS). Third, add rupees using the exchange's supported method such as UPI or bank transfer. Fourth, buy using a **limit order** if you want price control, or a market order for speed; check the fee shown before confirming. Fifth, decide where to hold it: leave a small trading amount on the exchange and move long-term holdings to a wallet you control. Always send a tiny test amount first when moving coins to a new address, then send the rest.

Beware **peer-to-peer (P2P)** trades with strangers. Scammers may send money that is later reversed or flagged as linked to fraud, which can freeze your bank account. Prefer regulated exchange deposits and keep records of every transaction for tax.

WORKED EXAMPLE

Rahul decides he can afford to lose 5,000 rupees. He buys 3,000 of Bitcoin and 2,000 of Ethereum with limit orders. He keeps the receipts, withdraws his Bitcoin to his own wallet after sending a test of 100 rupees worth first, and records the transactions in a spreadsheet for his tax return.

Go deeper

Step by step. (1) Complete KYC. (2) Deposit a small amount you can afford to lose. (3) Choose a major asset like BTC or ETH for your first

trade rather than a memecoin. (4) Place a **limit** order slightly under the market or a small market order. (5) Check the fee. (6) Decide whether to keep it on the exchange or withdraw to your own wallet.

Example. Deposit 5,000 rupees. Spend 3,000 on BTC and keep 2,000 for later. If BTC trades at 60,00,000, you get 0.0005 BTC. Fees of 0.2 percent = 6 rupees. TDS of 1 percent = 30 rupees.

Dollar-cost averaging. Splitting the purchase into equal amounts weekly or monthly reduces the risk of buying all at a peak.

Records. Save the trade confirmation and keep a spreadsheet: date, asset, amount, price, fee, TDS.

Mindset. Your first purchases are tuition: small size, learn the interface, learn the fees, learn how you feel when the price moves 10 percent in a day.

COMMON MISTAKES

- Starting with a large sum right away.
- Buying a coin you cannot explain.
- Sending funds to your wallet without a test.

KEY POINTS

- Start with an amount you can afford to lose completely.
- Enable 2FA with an authenticator app.
- Send a small test transaction before moving a large amount.
- Avoid risky P2P deals and keep records for tax.

TEST YOURSELF

Q. Why start with a small purchase?

A. To learn the process and your own reactions to volatility with limited risk.

Q. What is dollar-cost averaging?
A. Buying equal amounts at regular intervals, reducing the impact of entry timing.

LESSON 9 OF 32

Reading the crypto market: market cap, volume, supply, order book

Before buying, learn to read the numbers. **Market capitalisation** is price times circulating supply and shows the size of a project; do not judge a coin as cheap just because its price per coin is low. A coin priced at 0.001 with 100 trillion coins in circulation can have a larger market cap than a coin priced at 100 with only a million coins.

Circulating supply is what is currently available; **total** and **maximum supply** show what may come. **24-hour volume** shows how active trading is; very low volume means you may not be able to sell easily. A **trading pair** such as BTC/INR or ETH/USDT shows the coin and the currency you price it in. The **order book** lists buy orders (bids) and sell orders (asks) with quantity, and **market depth** shows how large an order the book can take without moving the price. **Dominance** is Bitcoin's share of the total crypto market cap.

Beware of coins with small market caps and thin volume: a few buyers can push the price up and a few sellers can crash it, which is how manipulation works.



Price per coin means little. Market cap = price × circulating supply.

WORKED EXAMPLE

Coin X costs 2 rupees and has 10 billion coins in circulation: market cap 20 billion rupees. Coin Y costs 20,000 rupees and has 1 million coins: market cap also 20 billion rupees. Coin X is not "cheaper" than Y. They are the same size. Price per coin alone tells you nothing.

Go deeper

Key numbers. Market cap = price x circulating supply. **FDV** (fully diluted valuation) = price x maximum supply. Example: a token at 2 dollars with 100 million circulating and 1 billion maximum has market cap 200 million but FDV 2 billion; large future unlocks can pressure price. **24h volume** shows activity; volume/market cap far above normal can mean hype or wash trading.

Order book and depth. Check how much it costs to buy or sell a given size. Thin books mean big slippage.

Dominance. BTC dominance is Bitcoin's share of total market cap. Rising dominance often means money is moving to safety within crypto;

falling dominance with a rising total market often marks "altcoin season".

Fear and Greed index summarises sentiment; extremes (very high greed) have often preceded pullbacks, but they are not timing tools.

Sources. Use CoinMarketCap/CoinGecko for data, exchange charts for price, and DefiLlama for TVL. Verify the token contract address; fake tokens copy names.

Habit. Compare two sources and check liquidity before any trade.

COMMON MISTAKES

- Judging a coin by price per unit instead of market cap and supply.
- Ignoring FDV and future unlocks.
- Trusting a token name without checking the contract address.

KEY POINTS

- Market cap = price times circulating supply. It shows size, not value.
- Check volume and depth so you can actually exit.
- Know the trading pair you are looking at.
- Small caps with thin volume are easy to manipulate.

TEST YOURSELF

Q. Price 5, circulating supply 10 million. Market cap?
A. **50 million**.

Q. Why does FDV matter?

A. It shows the value if all tokens were in circulation; large future unlocks can add selling pressure.

LESSON 10 OF 32

Safety basics: 2FA, phishing and common scams

Most crypto losses come from scams, not from the market. Basic security habits prevent most of them.

Use a **unique strong password** with a password manager and an **authenticator app** for 2-factor authentication. Be careful with links: **phishing** sites copy real exchanges and wallets to steal logins. Type the address yourself or use a saved bookmark. Beware of fake support agents on social media and Telegram who contact you first; real support never asks for your seed phrase, password or OTP.

Common scams: **giveaways** ("send 1 coin and get 2 back"), **fake investment platforms** that show fake profits and block withdrawals, **romance and "pig butchering" scams** where a stranger builds trust and then pushes you to invest on a fake app, **rug pulls** where developers of a new token take the money and vanish, **fake wallet apps** and **malicious token approvals** that give a scammer permission to drain your wallet. Use a separate "burner" wallet with small funds for experiments.

If you are scammed, act fast: contact your bank, report to the cyber crime helpline 1930 and cybercrime.gov.in, and report to the exchange involved. Recovery is rare, so prevention matters most.



No one can guarantee returns. Verify, slow down, never share keys.

Most scams follow the same script. Spot the pattern and walk away.

WORKED EXAMPLE

You get a message: "Congratulations, you won 2 ETH, connect your wallet to claim." The link goes to a lookalike site that asks you to sign a transaction. That signature gives the scammer permission to move your tokens. A legitimate project never asks you to connect to claim a surprise prize.

Go deeper

Layers of defence. (1) Account: unique strong password in a password manager, authenticator app 2FA, anti-phishing code. (2) Device: updated OS, no pirated software, no remote-access tools for strangers. (3) Wallet: hardware wallet for savings, seed phrase offline. (4) Behaviour: slow down on every transaction.

Phishing patterns. Fake exchange sites with similar URLs, ads on search engines, emails about "suspicious login", DMs offering support, QR codes that open malicious sites. Always type the URL or use a bookmark.

Transaction hygiene. Check the first and last characters of the address, verify the network (ERC-20 vs TRC-20 vs BEP-20: sending on the wrong network can lose funds), use a small test transfer, and use address whitelisting on exchanges.

Common traps. Fake airdrops, "double your crypto", romance and investment scams, rug pulls (developers abandon the project and drain liquidity), honeypot tokens that can be bought but not sold.

Recovery reality. Crypto transactions are irreversible. Prevention is the only dependable protection.

COMMON MISTAKES

- Clicking links from DMs or ads for the exchange login.
- Choosing the wrong network when withdrawing.
- Using the same password across services.

KEY POINTS

- Use unique passwords and an authenticator app.
- Never share seed phrases, passwords or OTPs. Real support will not ask.
- Be suspicious of giveaways, guaranteed returns and strangers offering help.
- Use a separate small wallet for experiments.

TEST YOURSELF

Q. What is a rug pull?

A. Developers drain liquidity or abandon a project after raising money, leaving holders with worthless tokens.

Q. Why use a small test transaction?

A. Transfers are irreversible; a test confirms address and network before the full amount moves.

LEVEL 2 · INTERMEDIATE

Module 2: Understanding value and the ecosystem

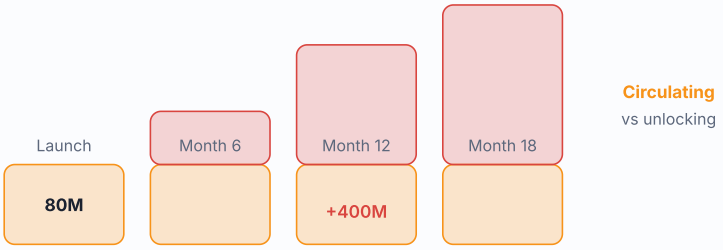
Prices are noise in the short term. These lessons help you judge what a project is, how it makes sense economically and how the wider crypto world fits together.

Tokenomics: supply, distribution and unlocks

Tokenomics is the economics of a token: how many exist, who holds them, how new ones are created and what gives the token value. It is often more important than the technology.

Check **total, maximum and circulating supply**. Check the **distribution**: what percentage went to the team, early investors, community and treasury, and over what schedule it **unlocks** (vesting). If a large portion unlocks soon, new supply may flow to the market and push down the price, as insiders sell. Compare **fully diluted valuation** (price times total supply) with the current market cap; a big gap means more coins are yet to come.

Ask what the token is **for**. Is it needed to use the product, to pay fees, to vote or to earn a share of revenue? Tokens with no real demand other than speculation depend on new buyers arriving. Check **inflation** (how fast new tokens are issued) and any **burn** mechanism that removes tokens from supply.



Tokens locked at launch unlock later. A large unlock adds supply that buyers must absorb.

WORKED EXAMPLE

A token has a market cap of 100 crore rupees but a fully diluted valuation of 1,000 crore, because only 10 percent of the supply is circulating. Next month a large unlock lets early investors sell 5 percent of the total supply. That is as much as half of what is currently circulating, so selling pressure could be heavy even if the project is fine.

Go deeper

What to analyse. Total and circulating supply, **emission schedule**, allocation (team, investors, community, treasury), **vesting and cliffs**, token utility, and mechanisms like burns or staking rewards.

Example. A token has 1 billion supply: 20 percent team (4-year vest, 1-year cliff), 20 percent investors, 10 percent public sale, 50 percent ecosystem. At launch 8 percent circulates. When the investor cliff ends, 200 million tokens (20 percent of supply) may start unlocking, which can far exceed the original float and create sell pressure.

Inflation. If staking rewards give 10 percent yearly, holders who do not stake are diluted by about 10 percent. Real yield means yield paid from actual revenue rather than new token emission.

Value accrual. Ask: why would someone need to hold this token? Fee share, governance power, collateral, or access. Tokens with none of these depend on speculation.

Check calendars. Token unlock trackers show upcoming releases; compare unlock size to daily volume.

COMMON MISTAKES

- Ignoring unlock schedules.
- Treating high staking APY as free money when it comes from inflation.
- Buying a token with no clear reason for demand.

KEY POINTS

- Check supply, distribution and unlock schedule.
- Compare market cap with fully diluted valuation.
- Ask what real demand exists for the token.
- Large upcoming unlocks can pressure the price.

TEST YOURSELF

Q. Why can a big unlock lower the price?
A. Newly liquid tokens can be sold by recipients, increasing supply relative to demand.

Q. What is real yield?

A. Yield paid from protocol revenue instead of newly issued tokens.

LESSON 12 OF 32

How to research a crypto project

Before investing in any project, answer a short checklist. **What problem does it solve** and for whom, and could it work without a token? **Who is the team**: are they public with a verifiable track record, or anonymous? **Is the code open source** and **audited**, and by whom? **Is anyone actually using it**: look at active users, transaction counts, **TVL** (total value locked) for DeFi, revenue and developer activity on GitHub. **Who are the competitors** and what is different? **Who are the investors** and what are their unlock terms? **What does the community say** and, more importantly, what do independent critics say?

Read the **whitepaper**, but do not trust it blindly: anyone can write a convincing one. Be sceptical of promises of fixed returns, celebrity endorsements, pressure to hurry and projects that cannot explain what they do in one simple sentence.

Write down your thesis and what would prove you wrong, for example "I will exit if daily users fall by half." That plan protects you from falling in love with a coin.

> **WORKED EXAMPLE**
>
> Project A claims to be "the next Ethereum" but has an anonymous team, no audit, 90 percent of tokens held by 5 wallets and no working product. Project B has a public team, a live product with growing monthly users, two audits and a steady token unlock schedule. Neither is guaranteed to succeed, but B passes basic checks and A fails nearly all of them.

Go deeper

A due-diligence routine. (1) What problem does it solve and who pays? (2) Team: are they public with track records? (3) Product: is it live, used, audited? (4) Tokenomics: supply, unlocks, utility. (5) Traction: users, revenue, TVL, on-chain activity (check DefiLlama, Dune, Token Terminal). (6) Competition and moat. (7) Investors and community quality. (8) Risks: regulatory, security, centralisation.

Security checks. Smart contract **audits** by recognised firms (reduce but do not remove risk), bug bounty programs, time-locked upgrades, multi-sig admin keys. A single anonymous admin key with power to mint tokens is a red flag.

Narrative vs fundamentals. Hype can push any token up temporarily; durable value needs usage and revenue.

Write a thesis. Three lines: why it could win, what must go right, what would make you exit. If you cannot write it, you do not understand the investment.

Position size. Treat small projects as high-risk, sizing so a total loss is tolerable.

COMMON MISTAKES

- Relying on influencers instead of primary data.
- Ignoring admin-key and upgrade risks.
- Sizing a speculative token like a core holding.

KEY POINTS

- Ask what problem it solves and whether anyone uses it.
- Check team, audits, token holders and unlock terms.
- Be suspicious of guaranteed returns and pressure to hurry.
- Write your thesis and your exit condition before buying.

TEST YOURSELF

Q. Why is an audit not a guarantee?
A. Audits find known classes of bugs in a snapshot of code; they cannot prove the absence of all flaws or future changes.

Q. What belongs in a three-line thesis?
A. Why it could win, what must go right, and what would make you exit.

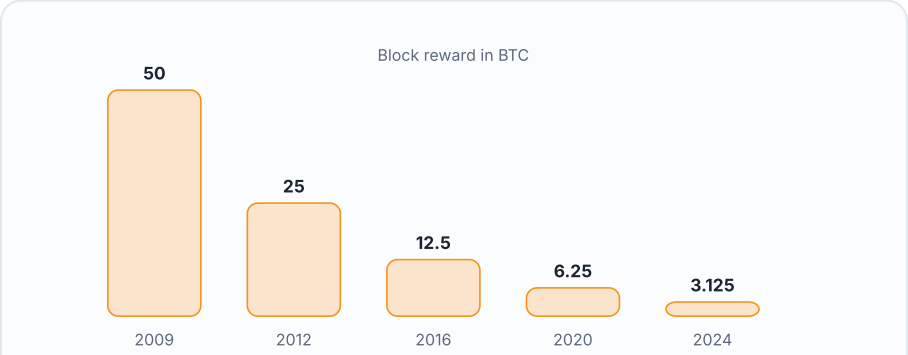
LESSON 13 OF 32

Market cycles, the Bitcoin halving and dominance

Crypto has moved in large cycles: long periods of rising prices (bull markets), followed by sharp falls (bear markets) of 50 to 80 percent for major coins and often more for small ones. Many observers link past cycles with the **Bitcoin halving**, which reduces new supply roughly every four years, along with global liquidity and sentiment. But there are only a few cycles in history, so any pattern is a weak guide, not a rule.

Bitcoin dominance is Bitcoin's share of the total crypto market cap. Historically, capital often flows first into Bitcoin, then into large altcoins and then into small ones in the late stage of a bull market, a pattern called "altcoin season". It does not always occur.

Useful habits: do not buy because something is up 300 percent this week, recognise that euphoria (everyone talks about crypto) is a warning and fear is often an opportunity, size positions so a 70 percent drop does not break you, and use dollar-cost averaging rather than going all-in at one price.



Bitcoin issuance halves roughly every four years, so new supply keeps shrinking.

WORKED EXAMPLE

Someone invests all their savings at a market peak, when headlines say prices can only rise. Over the next year the price falls 75 percent. If they had split the same amount into 12 monthly purchases and kept some cash, their average cost would have been much lower and their loss smaller.

Go deeper

Historical pattern. Bitcoin has seen boom-and-bust cycles often loosely linked to halvings: strong rallies in the 12 to 18 months after, followed by drawdowns of 70 to 85 percent in earlier cycles. Whether this repeats is uncertain: sample size is only a few cycles, and ETFs and institutions changed market structure.

Liquidity drives cycles. Global liquidity, interest rates and the dollar influence crypto. Easy money supports risk assets; tightening hurts them.

Typical phases. Accumulation (quiet, low volume), markup (rising prices, growing interest), distribution (euphoria, highest volume), markdown (bear market). Retail participation tends to peak near the top.

Altcoin behaviour. Altcoins often fall more than Bitcoin in drawdowns (for example 90 percent against Bitcoin's 75) and rise more in rallies, but most never recover prior highs.

Use carefully. Cycle theory helps with expectations, not exact timing. Do not plan your finances around a predicted peak.

COMMON MISTAKES

- Treating cycle history as a guarantee.
- Going all-in on altcoins at the peak of euphoria.
- Ignoring macro liquidity.

KEY POINTS

- Crypto moves in large boom and bust cycles.
- Halvings and liquidity matter, but past patterns are not guarantees.
- Dominance shows where money is flowing.
- Do not invest more than you can hold through a 70 percent fall.

TEST YOURSELF

Q. Why can altcoins fall more than Bitcoin in bear markets?
A. They have lower liquidity and weaker fundamentals, so investors rotate out to safer assets.

Q. Why should you be careful with halving-cycle predictions?
A. Few cycles exist, and market structure and macro conditions have changed.

LESSON 14 OF 32

Layer 1, Layer 2, DeFi, staking and NFTs

Layer 1 (L1) chains are base blockchains: Bitcoin, Ethereum, Solana. Busy L1s can be slow and costly, so **Layer 2 (L2)** networks (such as rollups) process transactions off the main chain and post proofs back, giving lower fees and faster speeds while inheriting the security of the L1.

DeFi (decentralised finance) rebuilds financial services with smart contracts. **DEXes** use **automated market makers (AMMs)**: pools of two tokens where traders swap against the pool and price is set by a formula. Liquidity providers who deposit into the pool earn fees but face **impermanent loss**, a loss compared with simply holding when the prices of the two tokens diverge. **Lending protocols** let you earn interest on deposits or borrow against collateral. **Yield farming** chases rewards across protocols and often carries high smart contract and token-price risk. High yield almost always means high risk.

Staking means locking coins to help secure a proof-of-stake network and earn rewards. Risks include lock-up periods, price falls and slashing penalties. **NFTs** are unique digital tokens that represent ownership of an item such as art or a game asset. Most NFT collections lost much of their value after the hype, so treat them as speculative.



A liquidity pool prices trades by formula (x × y = k). Bigger trades move the price more.

WORKED EXAMPLE

You deposit equal values of ETH and a stablecoin into a liquidity pool, earning fees. If ETH rises sharply, the pool automatically sells some of your ETH to keep the balance, so you end up with less ETH than if you had just held it. That difference is impermanent loss. The fees you earn may or may not make up for it.

Go deeper

Layers. Layer 1 (Bitcoin, Ethereum, Solana) are base chains. **Layer 2** (rollups) execute transactions off-chain and post data on L1 for security. Optimistic rollups use a challenge period; zk-rollups use cryptographic validity proofs.

DeFi. Decentralised finance offers lending, trading and yield without intermediaries. **AMM** (automated market makers): liquidity pools priced by formula x*y=k. Example: a pool holds 100 ETH and 3,00,000 USDC (k = 3 crore). Buying 1 ETH changes the pool to 99 ETH, so USDC

needed = k/99 = 3,03,030, cost about 3,030 USDC for the next unit. Larger trades move price more (slippage).

Impermanent loss. Liquidity providers can end up with less value than simply holding if the price ratio changes; trading fees may or may not compensate.

Lending. Over-collateralised loans: deposit 150 of crypto to borrow 100. If collateral value falls below the threshold you are liquidated with a penalty.

NFTs. Unique tokens for art, game items and tickets. Most NFT collections have lost most of their value; the market is illiquid and scam-prone.

Risk. Smart-contract hacks, oracle failures, and depegs are real.

COMMON MISTAKES

- Providing liquidity without understanding impermanent loss.
- Borrowing near the liquidation threshold.
- Assuming a high APY is safe.

KEY POINTS

- L2 networks make transactions cheaper and faster using L1 security.
- DeFi uses smart contracts for trading, lending and earning.
- High yield means high risk. Understand where it comes from.
- Staking has lock-ups and penalty risks. NFTs are speculative.

TEST YOURSELF

Q. What is impermanent loss?

A. The reduction in value of providing liquidity compared with simply holding the tokens, caused by price changes.

Q. Why do large trades in a small pool cost more?
A. The pool formula moves price progressively, creating higher slippage.

LESSON 15 OF 32

Technical analysis for crypto

The tools from other markets work in crypto too: candlesticks, **support and resistance**, trendlines, moving averages, RSI, MACD and volume. Crypto trades 24 hours a day, seven days a week, with no closing bell, so there are no overnight gaps but also no break from risk. Weekend liquidity is often thinner and moves can be sudden.

Practical points: use **daily and weekly charts** to find the main trend and levels, as lower timeframes in crypto are noisy. Higher volatility means you must use wider stops and smaller position sizes than in stocks; an ATR-based stop adapts automatically. Bitcoin influences nearly all other coins, so check Bitcoin's trend before trading altcoins; altcoins often fall harder when Bitcoin drops. Be careful with **thin order books** on small coins, where wicks to both sides are common and stops get hit.

Also learn the main order types: market, limit and stop orders. Remember that a stop order may fill at a worse price in a fast move, which is called slippage.

WORKED EXAMPLE

Bitcoin is in a clear daily uptrend and you want to buy an altcoin. You first check that Bitcoin is above its 50-day average and holding support. The altcoin pulls back to its own support and prints a bullish candle. You enter with a stop below support and size the position so that the stop loss is 1 percent of your capital. If Bitcoin breaks its support, you tighten the stop or exit because altcoins would likely fall faster.

Go deeper

What differs from stocks. Markets run 24×7, there are no opening gaps, volatility is higher, and weekend liquidity is thin. Support and resistance, trendlines and moving averages work similarly, but stops should be wider and sizes smaller.

Useful tools. 50 and 200 day moving averages, weekly levels, RSI, volume profile, and **funding rate and open interest** from derivatives. Bitcoin often leads; check BTC's chart before trading alts, and the **ALT/BTC pair** to see if an alt is truly outperforming.

Volatility sizing. If a coin's daily range is 8 percent, a 3 percent stop is just noise. Use ATR to set stops and reduce size accordingly. Example: risk 1,000 rupees with a stop 8 percent away means a position of 12,500 rupees, versus 33,333 for a 3 percent stop.

Weekends and news. Liquidity thins, wicks get longer, and news can move prices instantly. Avoid large leveraged positions over weekends.

Cautions. Technical analysis in low-liquidity coins is easily manipulated by whales.

COMMON MISTAKES

- Using stocks-sized stops on very volatile coins.
- Trading small alts using chart patterns while liquidity is tiny.
- Ignoring Bitcoin's trend when trading altcoins.

KEY POINTS

- Standard chart tools work, but crypto trades 24/7 and is more volatile.
- Use wider stops and smaller size than in stocks.
- Check Bitcoin's trend before trading altcoins.
- Small coins with thin books produce stop-hunting wicks.

TEST YOURSELF

Q. Risk 2,000, stop 10 percent away. Position size?
A. 2,000/0.10 = **20,000 rupees**.

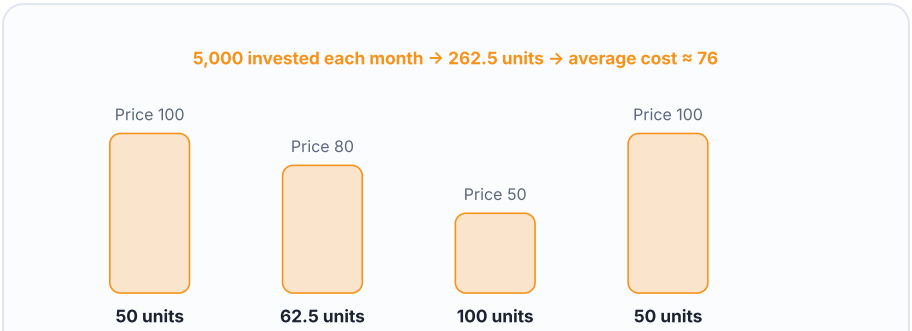
Q. Why check ALT/BTC?
A. It shows whether an altcoin is outperforming Bitcoin or merely rising with the whole market.

Dollar-cost averaging and long-term investing in crypto

Dollar-cost averaging (DCA) means buying a fixed amount at regular intervals, for example 2,000 rupees every week, regardless of price. It removes the stress of timing and averages your entry price across highs and lows. DCA does not guarantee profit. If an asset falls to zero, DCA only spreads out a loss. So DCA only into assets you have researched.

A simple, cautious long-term approach: keep crypto to a small part of your total investments (many people choose a single-digit percentage), concentrate mainly on the largest and most established assets, avoid leverage entirely and plan in advance what you will do in a 70 percent drawdown. Decide in advance when you will take some profit, for example rebalancing back to your target percentage once a year, so you do not rely on emotion at the top.

Store long-term holdings in your own wallet, keep clear records of every buy for tax purposes and review your plan a few times a year, not every day.



Investing a fixed amount each month buys more units when prices are low, lowering your average cost.

WORKED EXAMPLE

You decide crypto will be 5 percent of your portfolio. Your total investable amount is 10 lakh rupees, so crypto is 50,000 rupees. You buy 5,000 rupees each month for ten months. If the market falls by half in month five, you buy more units for the same amount, and your average cost falls. At the yearly review, if crypto has grown to 12 percent of your portfolio, you sell the excess to return to 5 percent.

Go deeper

How DCA works. Invest a fixed amount at fixed intervals. Example: 5,000 rupees monthly. Prices: 100, 80, 50, 100. Units bought: 50, 62.5, 100, 50 = 262.5 units for 20,000, average cost 76.2 even though the average price was 82.5. DCA lowers the cost basis in volatile markets and removes the timing decision.

Limits. In a long downtrend DCA keeps buying a falling asset; it does not protect against a failing project. Apply it to assets with long-term

survival potential (mostly large caps).

Lump sum vs DCA. Historically lump sum wins more often in rising markets; DCA reduces regret and variance.

Exit plan. Decide beforehand: take partial profits at set targets, rebalance to target allocation, hold some for long term. Write rules for how much of the portfolio crypto may be (for example 5 percent).

Taxes and costs. Each purchase carries fees and TDS; use fewer, larger intervals if costs are high.

Reality. DCA is a discipline tool, not a guarantee of profit.

COMMON MISTAKES

- DCA into very weak projects.
- Stopping the plan during a crash from fear.
- Having no exit or rebalancing rule.

KEY POINTS

- DCA reduces timing stress but does not remove risk.
- Keep crypto to a small, planned share of your overall wealth.
- Avoid leverage in long-term investing.
- Rebalance on a schedule and keep records for tax.

TEST YOURSELF

Q. Buy 1,000 at price 10, then 1,000 at price 20. Average cost?
A. Units = 100 + 50 = 150 for 2,000, so about **13.33 per unit**.

Q. Does DCA guarantee profit?

A. No; it reduces timing risk but cannot protect against a falling or failing asset.

LESSON 17 OF 32

On-chain analysis basics

Public blockchains show real activity, so you can study it. **On-chain analysis** reads data directly from the blockchain, not just price charts.

Some simple metrics: **active addresses** and **transaction counts** show usage; **exchange inflows and outflows** show whether coins are moving to exchanges (possible selling) or to private wallets (possible holding); **whale wallets** (large holders) moving coins can hint at big trades; **stablecoin supply** shows how much dry powder is in the system; **TVL** shows how much value is locked in DeFi; and **fees and revenue** show if a network is actually used. Tools like block explorers (Etherscan for Ethereum) let you verify a transaction or inspect a token's holders for free.

Be careful: on-chain data is helpful context, not a crystal ball. Wallets can belong to exchanges, can be split across addresses or be moved for reasons you cannot see, and many dashboards are built to sell you something. Always cross-check.

WORKED EXAMPLE

Before buying a new token, you open a block explorer and see that the top 3 wallets hold 70 percent of supply, and that one of them just moved a large amount to an exchange. That is a warning sign about concentration and potential selling, no matter how good the marketing looks.

Go deeper

Why on-chain data. Public ledgers let you see real activity: addresses, transfers, exchange flows, wallet balances. Explorers (Etherscan,

Solscan, mempool.space) show any transaction by hash.

Useful metrics. Exchange inflows/outflows: large inflows may precede selling, outflows suggest accumulation or withdrawal for storage. **Active addresses** and **transaction counts** show usage. **Stablecoin supply** shows available buying power. **TVL** (total value locked) shows deposited DeFi assets. **MVRV** compares market value to realised value (average cost basis): high values show most holders in large profit.

Whale watching. Tracking big wallets is popular but noisy: wallets belong to exchanges, funds and custodians, and moving coins between own wallets is not selling.

Example. 10,000 BTC move from an unknown wallet to a labelled exchange deposit address. It is a possible sell signal, not a certainty; the owner may be repositioning or posting collateral.

Tools. Dune dashboards, Glassnode, DefiLlama, Arkham, Nansen (some paid). Verify labels.

COMMON MISTAKES

- Assuming every large transfer is a sale.
- Ignoring that exchange wallets mix many users.
- Acting on a single metric.

KEY POINTS

- On-chain data shows real usage and holder behaviour.
- Check token holder concentration before buying.
- Exchange inflows can hint at selling, outflows at holding.
- Use data as context, not as a prediction.

TEST YOURSELF

Q. What does a rise in exchange inflows possibly suggest?
A. More coins are being prepared for sale, though it is not conclusive.

Q. What is TVL?
A. Total value of assets deposited in a DeFi protocol or sector.

LEVEL 3 · ADVANCED

Module 3: Trading and derivatives

Trading crypto is harder than it looks because of 24/7 volatility and leverage. Master spot trading and risk control before even looking at futures.

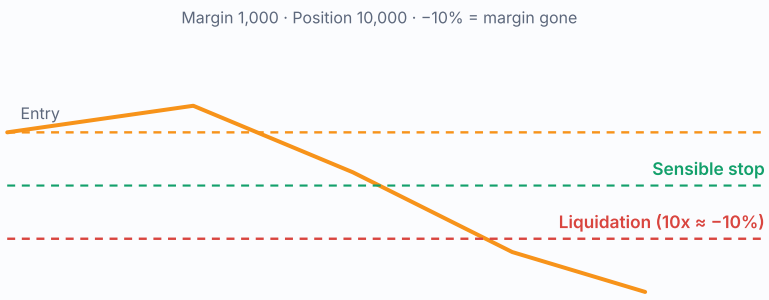
LESSON 18 OF 32

Spot trading vs futures and margin

Spot trading means you buy the actual coin at the current price and own it. Your maximum loss is what you paid, and nobody can force you out. **Margin and futures** trading let you control a larger position with a small deposit (**leverage**), and let you profit when prices fall by taking a **short** position. They also add the risk of **liquidation**: if the price moves against you by more than your margin, the exchange closes your position and you lose the deposit.

Indian regulation matters. Offshore derivatives platforms may not be authorised for Indian residents and using them can carry legal, FEMA and tax risks. There is also no Indian investor-protection scheme if such a platform fails or freezes withdrawals. Check the legal position and the platform's compliance before you trade derivatives, and be honest with yourself about whether leverage is something a beginner should ever use.

For learning, practise on a demo or paper account first. If you do use leverage later, use low leverage and a tiny position size.



With leverage, a small move against you wipes out your margin. Your stop must sit before liquidation.

WORKED EXAMPLE

You buy 1 lakh rupees of a coin on spot. If it falls 50 percent, you lose 50,000 but still hold the coin and can wait. With a 10x leveraged long position of 1 lakh on a 10,000 margin, a 10 percent fall wipes out your margin and the position is liquidated. The same chart move that is survivable on spot ends the trade with leverage.

Go deeper

Spot. You buy and own the asset. Maximum loss is your investment; no liquidation; you can hold for years.

Futures. Contracts on price, usually with **leverage** and margin. **Leverage 10x** means a 10 percent adverse move wipes out your margin. Example: 1,000 dollars margin at 10x controls 10,000 dollars; price falls 10 percent, loss 1,000, position liquidated.

Types. Perpetual futures have no expiry and use a funding rate; **dated futures** expire. **Isolated margin** limits risk to the margin in that position; **cross margin** uses your whole balance, risking everything.

Short selling. Futures allow profiting from falls, but unlimited-style loss is possible if price rises sharply.

India context. Check whether the platform you use is legal and registered for residents; many offshore derivative platforms are not regulated for Indian users.

Rule of thumb. Beginners should avoid leverage entirely; if used, keep it low (2 to 3x) with isolated margin and a stop.

COMMON MISTAKES

- Using high leverage with a tight account.
- Using cross margin without understanding it.
- Trading on unregulated platforms with large sums.

KEY POINTS

- Spot = you own the coin. Futures = a leveraged contract that can be liquidated.
- Leverage multiplies losses as well as profits.
- Check the legal and tax position of any derivatives platform for Indian residents.
- Beginners should stay on spot and practise on demo accounts.

TEST YOURSELF

Q. At 20x leverage, what adverse move approximately wipes out the margin?
A. About **5 percent**.

Q. Isolated vs cross margin: which risks the whole balance?

A. Cross margin.

LESSON 19 OF 32

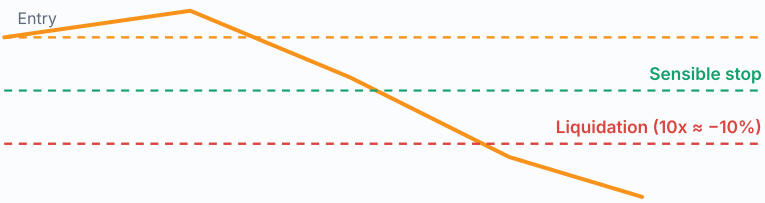
Perpetual futures, funding rates and liquidation

A **perpetual future** is a futures contract with no expiry date, the most popular crypto derivative. To keep its price close to the spot price, longs and shorts pay each other a **funding rate**, usually every eight hours. When the perpetual trades above spot (too many longs), longs pay shorts; when below, shorts pay longs. High positive funding shows crowded long positions and can precede sharp drops, a **long squeeze**; extreme negative funding can precede a **short squeeze**.

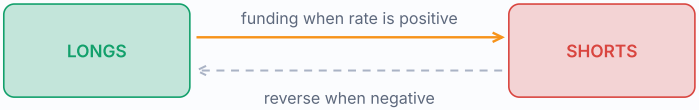
Key terms: **initial margin** is the deposit to open a position; **maintenance margin** is the minimum to keep it; **liquidation price** is where the exchange closes your position. **Isolated margin** risks only the deposit assigned to that position, while **cross margin** shares your whole balance as collateral and can lose all of it. **Open interest (OI)** is the total number of open contracts: rising OI with rising price shows new money entering; sudden OI drops show forced liquidations.

Cascading liquidations cause the violent wicks you see on crypto charts: forced closes push the price further, triggering more liquidations.

Margin 1,000 · Position 10,000 · −10% = margin gone



With leverage, a small move against you wipes out your margin. Your stop must sit before liquidation.



0.01% / 8h on $10,000 ≈ $3 per day

On perpetuals, longs and shorts exchange a funding payment every 8 hours to keep price near spot.

WORKED EXAMPLE

You open a 5x long on 20,000 rupees of margin, so the position is 1 lakh. The liquidation price is about 20 percent below your entry (before fees and funding). Funding is 0.05 percent per eight hours, so you pay about 50 rupees every 8 hours, roughly 150 rupees a day, even if the price does not move. A small wick of 20 percent kills the position.

Go deeper

Funding rate. Perpetuals stay near spot through periodic payments between longs and shorts, often every 8 hours. If funding is positive, longs pay shorts. Example: funding 0.01 percent every 8 hours on a 10,000-dollar long costs 1 dollar per 8 hours, about 3 dollars daily or ~1,095 a year (10.95 percent annualised). Extreme funding shows crowded positioning.

Liquidation price. Long at 100 with 10x isolated leverage: margin is 10 percent, maintenance margin about 0.5 percent, so liquidation is near 90.5. Fees and funding move it closer.

Mark price vs last price. Exchanges liquidate using the **mark price** (an index-based price) to avoid manipulation.

Liquidation cascades. When price drops, forced sales push it further, triggering more liquidations, causing violent wicks. Data providers show liquidation heatmaps.

Insurance fund and ADL. If a liquidated position cannot be closed at bankruptcy price, an insurance fund absorbs the loss; if empty, profitable opposite positions may be auto-deleveraged.

Safety. Use stop-losses well before liquidation, low leverage and only risk capital.

COMMON MISTAKES

- Placing the stop near or beyond the liquidation price.
- Ignoring funding costs on long-held positions.
- Entering with extreme leverage because "the setup is perfect".

KEY POINTS

- Perpetuals have no expiry. Funding rates keep them near spot.
- Isolated margin limits loss to the position. Cross margin can put your whole balance at risk.
- Crowded funding and OI show where liquidations may cascade.
- Leverage plus funding costs eat accounts fast.

TEST YOURSELF

Q. Funding 0.02 percent per 8h on a 5,000 dollar long. Cost per day?
A. Three payments x 1 dollar = **3 dollars per day**.

Q. Why do liquidation cascades happen?
A. Forced selling pushes price further down, triggering more liquidations in sequence.

LESSON 20 OF 32

Trading strategies: trend, breakout, range and mean reversion

Trend following buys strength and sells weakness, using moving averages or higher highs and lows, with trailing stops. Crypto trends strongly during bull and bear phases, so the method can produce large winners but also many small stops in choppy periods. **Breakout trading** enters when price closes above resistance with volume; false breakouts are common, so wait for closes and use a stop back inside the range.

Range trading buys near support and sells near resistance when the market is moving sideways, and needs a plan for when the range breaks. **Mean reversion** bets that extreme moves snap back toward average, for example buying after a sharp flush into a strong support level, but catching a falling knife is dangerous without a stop. **Swing trading** holds for days to weeks and suits people with jobs; **scalping** takes tiny moves many times a day and is dominated by fees and speed, so is hard for beginners.

Choose one strategy, define the rules and test them. Avoid switching strategies after two losses.

WORKED EXAMPLE

Range example: a coin moves between 100 and 120 for weeks. You buy near 102 with a stop at 98 (risk 4) and a target of 118 (gain 16), a 1:4 ratio. If it closes below 98, the range is broken and you accept the small loss and do not buy again until a new structure forms.

Go deeper

Spot swing trading. Buy pullbacks to support in an uptrend with a stop below structure; take profit at resistance. Use daily charts and risk 1 percent.

Trend following. Ride Bitcoin while it stays above the 200-day average; exit on a weekly close below. Simple rules often outperform complicated ones in large trends but suffer whipsaws.

Range trading. Buy near range support and sell near resistance with stops outside the range; works in low volatility.

Funding and basis trades. Hold spot and short perpetual futures to collect positive funding (market-neutral). Risks: exchange risk, margin management and funding turning negative. Returns are modest and not risk-free.

Event strategies. Token listings, unlocks, upgrades: price often rises into a known event and falls after ("buy rumour, sell news"), but it is crowded.

Backtesting. Test on at least one full bull and bear cycle with fees and slippage.

Expectation. Most active retail traders lose money; start small and keep a journal.

COMMON MISTAKES

- Treating a funding trade as risk-free.
- Switching strategies after each losing streak.
- Ignoring fees and slippage in backtests.

KEY POINTS

- Trend following wins big but has many small losses.
- Wait for candle closes on breakouts to avoid fake-outs.
- Range and mean-reversion trades need a plan for when the range breaks.
- Scalping is cost-heavy and hard for beginners.

TEST YOURSELF

Q. What does a spot-long, perp-short funding trade aim to earn?
A. The funding payments, while staying roughly neutral to price moves.

Q. Name one risk of that trade.
A. Exchange failure, margin or liquidation on the short side, or funding turning negative.

LESSON 21 OF 32

Liquidity, stop hunts and market structure in crypto

Crypto markets are full of **stop hunts** and **liquidity sweeps**. Many traders put stops just under obvious lows or just above obvious highs. Large players, who need liquidity to fill big orders, may push price through these areas, triggering the stops, and then reverse.

Understanding **market structure** (sequence of swing highs and lows) lets you see where such sweeps happen. A sweep of a previous low that quickly reclaims the level and closes back above it, with strong buying, can be a sign that selling is exhausted. A clean break and close below with follow-through, in contrast, suggests real weakness.

Practical advice: do not place stops at the exact obvious level; place them a little beyond a swing point or use ATR distance. Do not chase moves in thin hours. Look at where liquidations cluster (many data providers show liquidation heatmaps) because price is often drawn toward those clusters, but treat such data as an input and not a certainty.

WORKED EXAMPLE

Price has held above 100 five times, so many stops sit at 99.5. One night the price wicks to 98.8, triggers those stops and instantly returns above 101. A trader with a stop at 99.5 lost; a trader who sized small with the stop at 97 (below the sweep zone) stayed in and later made the move.

Go deeper

Liquidity. Resting orders (stops and limits) around obvious highs and lows act as magnets. Price often sweeps equal highs or lows and reverses ("stop hunt"). In crypto this is amplified by leverage and thin weekend books.

Order book analysis. Depth, large walls (may be spoofed and cancelled), bid/ask imbalance. Do not rely on a single visible wall.

Open interest (OI). Rising price with rising OI suggests new longs entering (trend strength); rising price with falling OI suggests short covering (weaker). Falling price with rising OI suggests new shorts.

Market structure. Same HH/HL logic as stocks. A sweep of a prior low followed by a close back above, on strong volume, is a common reversal setup with a stop below the sweep low.

Example. BTC range low 58,000; price wicks to 57,400 then closes 58,600; OI dropped sharply (longs liquidated). A long with stop at 57,300 risks about 1,300 for a possible 3 to 4 times reward.

Caution. These setups fail often; confirm and keep risk small.

COMMON MISTAKES

- Treating order-book walls as permanent.
- Entering on the sweep without confirmation.
- Ignoring higher-timeframe trend.

KEY POINTS

- Obvious levels attract stop hunts.
- A quick sweep and reclaim can signal exhaustion. A clean close below signals weakness.
- Place stops beyond the obvious level, sized by ATR.
- Liquidation maps show where fuel sits but do not predict direction.

TEST YOURSELF

Q. Price rises while open interest falls. What does that suggest?
A. Short covering rather than fresh buying, which is a weaker rally.

Q. Why can order-book walls mislead?
A. They can be spoofed and cancelled before price reaches them.

Reading derivatives data: open interest, funding and liquidations

Professional crypto traders watch derivatives data to see how crowded the market is.

Open interest with price: rising price and rising OI means new longs are entering, a healthy trend; rising price with falling OI means shorts are closing, a weaker move. Falling price with rising OI means new shorts are entering. **Funding rate:** persistently high positive funding suggests over-leveraged longs and raises the risk of a drop; persistently negative funding suggests crowded shorts. **Long/short ratios** show positioning but may be misleading since they count accounts, not size. **Liquidation data** shows how many positions were wiped out; a large long-liquidation spike during a sell-off often marks forced selling that may be near exhaustion. **Basis** is the difference between futures and spot prices and shows leverage demand.

No indicator works alone. Combine derivatives data with market structure and your own risk plan, and do not trade only because a number is "extreme".

WORKED EXAMPLE

Price rallies 12 percent over four days, open interest climbs 25 percent and funding rises to very high positive levels. That looks like many leveraged longs piling in at once. A small dip can force liquidations and cascade. A cautious trader may avoid buying here or may reduce size, instead of chasing.

Go deeper

Key datasets. Open interest, **funding rate**, **long/short ratio**, **liquidations**, **options open interest and implied volatility**, and the **basis** between futures and spot.

Reading funding. Strongly positive funding with rising price means leveraged longs are crowded; the market may be vulnerable to a flush. Deeply negative funding with a falling price shows crowded shorts and risk of a squeeze.

Basis. Futures price above spot is **contango**; annualised basis = (futures minus spot)/spot x 365/days. Example: spot 100, quarterly future 103 in 90 days: 3 percent x 365/90 = 12.2 percent annualised, which institutions may harvest.

Options. Put/call ratio, max pain levels (where option sellers lose least) and skew show positioning around expiries, mostly on Deribit and CME.

Use. These tell you about positioning and risk, not direction. Combine with price structure.

Caution. Different exchanges report different numbers; use aggregate data.

COMMON MISTAKES

- Treating positioning data as a prediction.
- Using data from a single exchange only.
- Ignoring that crowded trades can stay crowded for long.

KEY POINTS

- Price up with OI up = new money. Price up with OI down = short covering.
- Extreme funding shows crowding, not a guaranteed reversal.
- Use data with structure, not alone.
- Large liquidation spikes often come near exhaustion, but not always.

TEST YOURSELF

Q. Spot 200, 60-day future 204. Annualised basis?
A. 2 percent x 365/60 = about **12.2 percent**.

Q. What can very high positive funding warn about?
A. Crowded leveraged longs, raising the risk of a sharp flush if price dips.

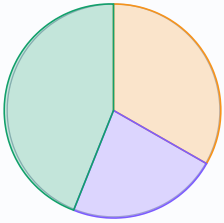
LESSON 23 OF 32

Portfolio construction and rebalancing in crypto

Because crypto is so volatile, portfolio structure matters more than picking the next winner. A simple structure is a **core-satellite** approach: a core of the largest, most established assets (for most people Bitcoin and Ethereum) and a small satellite of higher-risk ideas, each position sized so that going to zero would not hurt.

Set **position limits**, for example no single altcoin above 2 to 5 percent of your crypto portfolio. Remember that most altcoins fall together when Bitcoin falls, so ten altcoins are not truly diversified. Hold some **stablecoins** as dry powder and as protection from volatility. **Rebalance** at set intervals or when allocations drift, which makes you take some profit from winners and add to laggards.

Track your holdings in one place with cost basis. Review your thesis for each satellite position every quarter and sell positions where the reason for owning them has disappeared, rather than waiting for a recovery.



Equity (growth)

Debt (stability)

Gold / other (cushion)

Rebalance when one drifts too far

Spreading money across different assets reduces the damage when one of them falls.

WORKED EXAMPLE

A portfolio: 60 percent Bitcoin, 25 percent Ethereum, 10 percent in five satellite projects at 2 percent each and 5 percent stablecoins. A satellite coin triples and becomes 6 percent, so the rule says trim it back to 2 percent and put the profit into the core or stablecoins.

Go deeper

Structure. A simple framework: **Core** (BTC and ETH, 60 to 80 percent of crypto), **Satellites** (quality large and mid-caps, 15 to 30 percent), **Speculation** (small caps, 0 to 10 percent). Crypto itself should be a limited share of net worth, such as 5 to 10 percent for many people, depending on risk tolerance.

Rebalancing. Example: target 70:30 BTC to alts. After an alt rally the mix is 55:45; sell some alts and buy BTC to return to 70:30, locking in gains systematically. Do this by schedule (quarterly) or by thresholds.

Correlation. In sell-offs most crypto assets fall together; holding 20 coins is not diversified.

Custody plan. Split between exchange (for trading), hot wallet (small), and cold storage (long-term). Document recovery steps for family.

Records and tax. Track every buy, sell and swap with date and value in INR for the tax return.

Goal-based sizing. Decide the maximum drawdown you accept; for example if a 70 percent fall in crypto must not exceed 5 percent of net worth, crypto's share must be at most 7 percent.

COMMON MISTAKES

- Holding dozens of correlated tiny positions.
- Letting speculative coins grow to dominate the portfolio.
- Keeping no records for tax.

KEY POINTS

- Core of established assets plus a small satellite of risky ideas.
- Cap each altcoin position at a small percentage.
- Altcoins are highly correlated with each other and with Bitcoin.
- Rebalance on schedule and review each thesis regularly.

TEST YOURSELF

Q. Crypto is 20 lakh of a 2 crore net worth and falls 70 percent. Impact on net worth?
A. Loss of 14 lakh = **7 percent of net worth**.

Q. Why rebalance?
A. To lock in some gains from the winners and restore the intended risk mix.

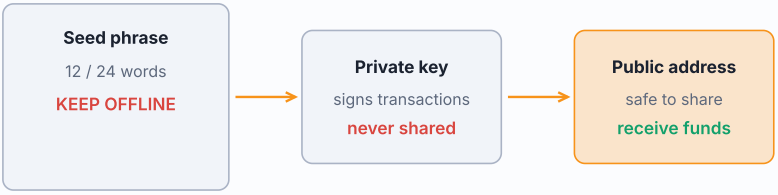
LESSON 24 OF 32

Advanced security: hardware wallets, multisig, approvals and rug pulls

As your holdings grow, so does the incentive to attack you. Upgrade your security in layers.

Use a **hardware wallet** for long-term holdings, buy it only from the manufacturer, and never use one that arrives pre-initialised with a seed phrase. Consider a **multi-signature (multisig) wallet**, which needs approval from several keys to move funds, for large amounts or shared funds. Keep a separate **hot wallet with small balances** for daily DeFi use. Use a dedicated clean device or browser profile for crypto and keep it updated.

Be careful with **token approvals**: when you interact with DeFi, you often approve a contract to spend your tokens; unlimited approvals to a malicious or hacked contract can drain your wallet. Review and revoke old approvals regularly with a tool such as a block explorer's approval checker. Recognise **rug pulls**: warning signs include anonymous team, locked liquidity missing, a few wallets owning most of the supply, sell restrictions in the contract (honeypots) and promotion aimed at hype. Read what a transaction does before signing it and be wary of signing messages you do not understand.



Your private key signs transactions. The seed phrase can rebuild every key, so it must never be shared.

WORKED EXAMPLE

You used a new DeFi app once and gave it an unlimited approval for your stablecoins. Months later the app's contract is hacked. The attacker uses your old approval to drain your stablecoins even though you have not touched the app since. If you had revoked the approval after use, or approved only the exact amount, you would have kept your money.

Go deeper

Hardware wallet practice. Buy direct from the manufacturer, initialise yourself, verify addresses on the device screen. Use a **passphrase** (25th word) for a hidden wallet, understanding that losing it means losing funds.

Multisig. Require 2 of 3 keys to sign; stores keys in different locations. Good for large sums and family planning; more complex to set up.

Operational security. Dedicated clean device or browser profile for crypto, never storing seed phrases digitally, avoid public Wi-Fi for

transactions, segregate email for exchange accounts, and use a hardware security key (FIDO2) where supported.

Approvals. Review and revoke token approvals (via revoke tools or explorer features) regularly. Prefer limited approvals to unlimited.

Social engineering and SIM swap. Attackers may port your phone number; use authenticator apps, not SMS, and set a SIM PIN with your carrier.

Physical safety. Do not publicise holdings; avoid doxxing, and keep backups in separate secure places. Consider inheritance: how will family recover assets if something happens to you?

Test your recovery with a small wallet before relying on it.

COMMON MISTAKES

- Storing seed backups only in one place.
- Using SMS authentication on exchange accounts.
- Leaving old unlimited token approvals active.

KEY POINTS

- Use hardware wallets and consider multisig for large amounts.
- Keep a small separate hot wallet for DeFi.
- Review and revoke token approvals regularly.
- Check for rug pull signs before buying new tokens.

TEST YOURSELF

Q. What does a 2-of-3 multisig require?
A. Any two of three designated keys must sign to move funds.

Q. Why prefer authenticator apps over SMS codes?

A. SMS can be hijacked via SIM swap, while authenticator codes are generated on your device.

LEVEL 4 · PRO

Module 4: Risk, psychology, tax and regulation

The final layer: protect your money, protect your mind and follow the rules. Laws and tax rules for crypto change often, so confirm current rules with a qualified professional.

LESSON 25 OF 32

Risk management for a 24/7, high-volatility market

Crypto can fall 30 percent in a day and trades while you sleep. Your risk rules must fit that.

Risk a **small fixed percentage per trade**, often 0.5 to 1 percent, and calculate size from your stop distance: **quantity = rupees at risk divided by (entry minus stop)**. Because crypto is volatile, stops are wider, so the position size will be smaller than you expect, and that is correct. Decide **total exposure** and a **maximum drawdown** at which you stop and review. Avoid leverage until you have a long record of consistent results, and never use leverage you cannot afford to lose. Do not add to losing positions without a plan.

Plan for 24/7: use stop-loss orders that live on the exchange instead of relying on yourself to be awake, avoid holding oversized leveraged positions overnight and set price alerts. Never trade money you need for rent, EMIs or emergencies, and never borrow to invest.

Also plan for counterparty risk: do not keep everything on one exchange, and withdraw profits periodically.



Wider stop → smaller size. Same rupee risk.

Size the position from the money you accept to lose, not from how confident you feel.

WORKED EXAMPLE

Capital 1,00,000 rupees, risk 1 percent = 1,000. Entry 100, stop 92 (an 8 percent stop due to volatility), so risk per coin is 8. Quantity = 1,000 / 8 = 125 coins, worth 12,500 rupees, just 12.5 percent of capital. A stop-out costs 1,000 and the position is small even though it feels tiny compared with your account.

Go deeper

Risk per trade. Same fixed-fraction principle: risk 0.5 to 1 percent of trading capital per trade. Quantity = risk amount / stop distance. With volatility far higher than stocks, expect smaller sizes: capital 2,00,000, risk 1 percent = 2,000, stop 6 percent from entry gives position = 2,000/0.06 = **33,333 rupees**.

Leverage rule. Your effective leverage should keep the liquidation price far beyond your stop. A stop at 5 percent with 10x leverage (liquidation near 10 percent) is workable; a stop at 8 percent with 20x (liquidation near 5 percent) is not, since you get liquidated before your stop.

Portfolio limits. Maximum total open risk 3 to 5 percent; maximum exposure to one theme (for example AI coins) 25 percent of the crypto allocation; keep a stablecoin reserve for opportunities and emergencies.

Counterparty risk. Exchange failure, stablecoin de-peg, bridge hacks, and regulatory change are risks that charts cannot show. Spread funds and withdraw profits.

Black-swan plan. Decide in advance what you will do if BTC falls 30 percent in a day: who you tell, what you sell, what you keep.

COMMON MISTAKES

- Placing a stop beyond the liquidation level.
- Keeping all funds on one exchange.
- Having no plan for extreme moves.

KEY POINTS

- Size from the stop distance. Wide stops mean small positions.
- Avoid leverage and never borrow to invest.
- Use exchange-side stops and alerts for a 24/7 market.
- Spread counterparty risk across wallets and venues.

TEST YOURSELF

Q. Capital 1,00,000, risk 2 percent, stop 8 percent away. Position size?

A. Risk 2,000; position = 2,000/0.08 = **25,000 rupees**.

Q. Why must the liquidation price be beyond your stop?

A. Otherwise the exchange liquidates you before your stop-loss can protect the position.

LESSON 26 OF 32

Psychology: FOMO, FUD and discipline

Crypto amplifies emotion more than any other market. Social media, large moves and stories of overnight riches create **FOMO**: buying near the top because others are making money. **FUD** (fear, uncertainty, doubt) spreads during falls and pushes people to sell at the bottom. Both are crowd emotions, and following the crowd at extremes is expensive.

Overtrading is common because the market never closes. The urge to check prices constantly leads to impulsive trades. **Hodl as an excuse** is the other trap: refusing to sell anything because "it will come back", even when the original reason to hold has gone. **Get-rich-quick** thinking leads to leverage and tiny coins.

Defences: write your plan and your exit conditions, limit chart-checking to set times, avoid following influencers who sell courses or coins, turn off price alerts you do not need, take a day off after a big loss or win and measure yourself against your process and not your profit this week. Remember that nobody posts their losses.



Emotions peak at the wrong time: euphoria near the top, panic near the bottom. Rules protect you from both.

WORKED EXAMPLE

A coin is up 80 percent in a week and everyone online says it will go much higher. You feel urgent need to buy. Instead you check your plan: it says never to buy a coin that has risen more than 30 percent in a week. You skip the trade. Two weeks later it has given back all the gains. The rule protected you from your emotion.

Go deeper

Crypto-specific traps. 24×7 markets create **sleep-deprivation and constant-checking** habits; extreme volatility magnifies FOMO and panic; social media amplifies herd behaviour; the "number go up" culture normalises risky leverage.

Typical emotional cycle. Excitement, euphoria (buying the top), anxiety, denial, panic (selling the bottom), regret. Awareness of the cycle helps you act against it with rules.

Practical rules. Set price alerts instead of watching screens; set trading hours; remove apps from the home screen; write your plan before the

trade; do not trade after losses without a cooling-off period; do not check portfolio value daily if you invest long term.

Loss processing. A losing trade is a cost of doing business when risk is controlled. A loss beyond plan needs a review: what rule did I break?

Example. A trader sees a 15 percent pump, buys late, price reverses 10 percent, they average down thrice and are liquidated. The rule "no entries more than one ATR from the base" would have blocked the entry.

Wellbeing. If crypto affects sleep, mood or relationships, step back and talk to someone you trust.

COMMON MISTAKES

- Checking prices constantly through the night.
- Averaging down a leveraged position.
- Making decisions based on social media sentiment.

KEY POINTS

- FOMO and FUD are crowd emotions that mark extremes.
- Do not check prices all day. Set review times.
- Do not follow influencers who profit from your buying.
- Hold only what you still have a reason to hold.

TEST YOURSELF

Q. How do alerts help psychologically?
A. They remove the need to watch constantly, reducing impulsive trades and stress.

Q. What should you do after a loss outside your plan?

A. Review which rule you broke and pause before trading again.

LESSON 27 OF 32

Crypto taxation in India

India taxes crypto as a **virtual digital asset (VDA)**. The key rules, which may be amended, so always verify the current position with a chartered accountant:

Gains from the transfer of VDAs are taxed at a flat **30 percent** under Section 115BBH, plus surcharge and cess. You can deduct only the **cost of acquisition**; no other expenses such as exchange fees, internet or electricity are allowed. **Losses from one VDA cannot be set off** against gains from another VDA or against other income, and they cannot be carried forward. Also, a **1 percent TDS** (tax deducted at source) under Section 194S applies on transfers above specified thresholds; the exchange usually deducts it, and it is credited against your tax, but in peer-to-peer deals the buyer may need to deduct it. Gifts of VDAs can also be taxable in the hands of the receiver.

Because each transaction counts, including swapping one coin for another, keep a clear record of every purchase, sale and swap with date, amount, price and fees. Report VDA income in your return in the dedicated schedule, even if you only made a loss, and keep your TDS certificates. Exchanges charge GST on their fees as well.

WORKED EXAMPLE

In one year you make a profit of 1,00,000 rupees on coin A and a loss of 60,000 on coin B. Because losses cannot be set off, tax is charged at 30 percent on the 1,00,000 profit, which is 30,000 plus cess, even though your real net gain is only 40,000. This can make frequent trading very expensive after tax.

Go deeper

Framework (verify current law). In India, gains from transfer of **virtual digital assets** (VDAs) have been taxed at a flat rate (30 percent plus cess) with **no deduction** for expenses other than the cost of acquisition, and **losses cannot be set off** against other income or carried forward as per the rules introduced in 2022. A **1 percent TDS** applies on transfers above specified thresholds. Rules may change, so check the latest Budget and Income Tax Department guidance.

Illustration (method only). Buy at 1,00,000, sell at 1,50,000: gain 50,000. Tax at 30 percent = 15,000, plus cess. A different asset with a 20,000 loss cannot offset this gain under current rules. Fees on trading are not deductible.

Taxable events. Selling for INR, swapping one crypto for another, spending crypto, and (in many views) certain airdrops and mining or staking income at receipt. Gifts and transfers between your own wallets have their own treatment.

Record-keeping. Date, asset, quantity, INR value at purchase and sale, fees, exchange statements, and TDS certificates (Form 26AS / AIS).

Compliance. Report VDA transfers in the ITR schedule for VDA; disclose foreign exchange accounts where applicable. Consult a CA familiar with crypto.

COMMON MISTAKES

- Assuming losses can be set off against other gains.
- Forgetting that crypto-to-crypto swaps are taxable.
- Not saving exchange statements for each year.

KEY POINTS

- Flat 30 percent tax on VDA gains. Only cost of acquisition is deductible.
- Losses cannot be set off or carried forward.
- 1 percent TDS applies on transfers above thresholds.
- Keep full records and confirm current rules with a chartered accountant.

TEST YOURSELF

Q. Why is frequent trading expensive in the current tax framework?
A. Gains are taxed at a flat rate with no expense deduction and losses cannot be set off, so costs and losses add up.

Q. Name three records to keep for tax.
A. Purchase and sale dates and INR values, exchange statements, and TDS records.

LESSON 28 OF 32

Regulation and legal position in India

India has no single comprehensive crypto law at the time of writing. The government has said it considers crypto assets risky, and the RBI has repeatedly raised concerns. At the same time, the government taxes crypto and requires exchanges to register with FIU-IND for anti-money-laundering compliance. Crypto is **not legal tender**, and holding or trading is not specifically banned for individuals, but the rules can change.

Practical consequences: there is no regulator-backed investor protection or deposit insurance for crypto, so if an exchange fails you may not get your money back. Offshore platforms add FEMA and tax complications. Promotional rules apply: advertisements must carry risk warnings. Maintain good records for tax and for any enquiry about the source of your funds, since banks may ask questions about large crypto-related transfers.

Treat regulatory risk as part of your risk plan: laws can change quickly, so avoid putting more into crypto than you could afford if access or taxes changed. Follow official sources such as the Ministry of Finance, RBI and SEBI for updates, and consult a lawyer for specific situations.

WORKED EXAMPLE

A friend transfers 10 lakh rupees from an overseas platform into his bank account and is asked by the bank to explain the source. Because he kept his trade records, exchange statements and tax filings, he can show the money is from his own earlier purchases. Another person with no records faces a long, stressful process.

Go deeper

Status. Crypto in India is not banned, nor is it legal tender. It is a taxed asset class. Exchanges must register with **FIU-IND** under anti-money-laundering law and follow KYC. Policy has been evolving, with periodic discussion papers and RBI statements; a comprehensive law has not been settled, so assume change is possible.

Investor implications. Choose compliant exchanges. Offshore platforms not registered for Indian users carry added legal, withdrawal and recovery risks. Stablecoin and DeFi use has no specific investor protection framework.

No guarantees. Unlike securities regulated by SEBI, there is no investor-compensation fund for crypto exchange failures. Complaints rely on courts, consumer forums and cybercrime reporting.

Cross-border. Foreign-exchange rules (FEMA) apply to overseas remittances; check limits and reporting requirements before buying on foreign platforms.

Global trends. Many countries are building licensing regimes (for example the EU's MiCA). Regulatory announcements can move markets sharply.

Habit. Follow official sources and keep your own records; do not rely on social media interpretations of legal changes.

COMMON MISTAKES

- Assuming "not banned" means "fully protected".
- Using unregistered offshore platforms for large sums.
- Relying on hearsay about new regulations.

KEY POINTS

- There is no comprehensive crypto law and no investor-protection scheme.
- Crypto is taxed, and exchanges register with FIU-IND for AML compliance.
- Keep records so you can explain the source of funds.
- Regulation can change quickly. Build that into your risk plan.

TEST YOURSELF

Q. Is crypto legal tender in India?
A. No; it is a taxed asset but not legal tender.

Q. Why prefer FIU-registered exchanges?
A. They follow KYC/AML rules and are within the Indian compliance framework.

LESSON 29 OF 32

Macro, liquidity and institutional flows

Crypto does not live in a bubble. Global **liquidity** (how much money is available and how cheap it is) strongly affects risk assets. When major central banks, especially the US Federal Reserve, cut interest rates or expand liquidity, money tends to flow into risk assets such as tech stocks and crypto. When rates rise or liquidity tightens, risk assets often struggle. A strong US dollar (watch the **DXY index**) is often a headwind for crypto.

Institutional flows matter too. The launch of regulated spot Bitcoin and Ether ETFs in some countries gave large investors an easy way to buy, and their daily inflows and outflows are watched as a sign of demand. Big events, such as interest rate decisions, inflation reports and major regulatory news, can cause sudden volatility, so mark them on your calendar.

Use macro as context: if the broad market is under stress, take smaller positions in crypto. But do not trade macro headlines blindly; the market often moves before or against what the news suggests.

WORKED EXAMPLE

An inflation report comes in higher than expected, so markets fear rates will stay high. The dollar index rises, stock futures fall and Bitcoin drops 5 percent in an hour. A trader who knew the report was due had already reduced size and widened stops, while another trader with a full leveraged position was liquidated.

Go deeper

Why macro matters. Crypto behaves as a high-beta risk asset: it often rises when liquidity expands and falls when it contracts. Important drivers: **interest rates** (Fed decisions), **dollar strength (DXY)**, **inflation data (CPI)**, **real yields**, **Treasury liquidity**, and **equity market risk appetite (Nasdaq correlation)**.

Example chain. Hot inflation data leads to expectations of higher rates, which strengthens the dollar and raises yields, so risk assets fall; Bitcoin may drop 5 percent within hours of a surprise CPI print.

Crypto-specific liquidity. Stablecoin market cap growth signals new capital; **ETF flows** (spot Bitcoin ETFs) show institutional demand; exchange reserves show available supply.

Event calendar. FOMC meetings, CPI/PPI releases, jobs reports. Many traders reduce size or avoid leverage around them.

Limits. Correlations change over time; there are also crypto-specific events (hacks, regulation, listings) that macro cannot predict. Use macro for context and risk management.

COMMON MISTAKES

- Using macro to predict exact turning points.
- Holding heavy leverage into major data releases.
- Ignoring crypto-specific risks because macro looks favourable.

KEY POINTS

- Global liquidity and interest rates affect crypto like other risk assets.
- A rising dollar is often a headwind. ETF flows show institutional demand.
- Mark major economic events on a calendar and reduce risk around them.
- Context helps, but do not trade headlines blindly.

TEST YOURSELF

Q. Why might Bitcoin fall after a hot CPI print?
A. Higher rate expectations tighten liquidity and strengthen the dollar, reducing demand for risk assets.

Q. Why watch stablecoin supply?
A. Growth suggests new capital entering the crypto market; shrinkage suggests capital leaving.

LESSON 30 OF 32

Bots, automation and copy trading

Trading bots can run your rules 24/7 without emotion. Common types: **grid bots** place buy and sell orders at set intervals inside a range, **DCA bots** buy at schedules or after drops, and **signal or strategy bots** execute rules from indicators. They suit a market that never sleeps, but they are not magic. A grid bot can accumulate losses in a strong trend, and any bot is only as good as the strategy behind it.

Before running a bot, **backtest** the idea on historical data with fees and slippage, **paper trade** it, then go live with a tiny amount and watch it. Protect yourself: use exchange **API keys with trading permission only and no withdrawal permission**, restrict by IP address if possible, never share your keys, and set a maximum loss kill switch.

Be very careful with **copy trading, signal sellers and "AI trading bots" that promise fixed returns**. Fixed monthly return claims are a classic scam sign, and a good past record can be shown selectively. Many fake bots exist solely to take deposits.

> **WORKED EXAMPLE**
>
> You run a simple DCA bot that buys 2,000 rupees of a coin every Monday. You set the API key to allow trading but not withdrawal. If the key were leaked, an attacker could trade with your balance but could not send your coins out. The key restriction limited the damage.

Go deeper

Types of bots. Grid bots place buy and sell orders at intervals within a range, profiting from oscillation; **DCA bots** buy periodically or on dips; **trend or signal bots** act on indicator rules; **arbitrage bots** exploit price gaps across exchanges (competitive and low-margin).

Grid example. Range 90 to 110, 10 grids, 2 per grid. Each completed up-and-down cycle earns about 2 per unit minus fees. If price breaks below 90 you hold losses; if it breaks above 110 you miss further profit. Grid bots do well in sideways markets and poorly in strong trends.

API safety. Create API keys with **trade only** permission, **no withdrawal** permission, and IP whitelisting. Never share keys; rotate them.

Risks. Bugs, exchange outages, runaway orders, and strategy decay. Always set max position size, daily loss limits and a kill switch.

Scams. "Guaranteed profit" bots and copy-trading schemes are a major scam category; no bot guarantees returns.

Testing. Paper-trade or use tiny capital for weeks before scaling, and check logs daily.

COMMON MISTAKES

- Giving a bot withdrawal permissions.
- Running a grid bot through a strong trend with no stop.
- Buying "guaranteed profit" bots.

KEY POINTS

- Bots automate rules but cannot create an edge from nothing.
- Backtest, paper trade, then start with tiny size.
- API keys should never have withdrawal permission.
- Fixed-return bots and signals are classic scams.

TEST YOURSELF

Q. Which API permissions are safe for a trading bot?
A. Trade (and read) only, with withdrawals disabled and IP whitelisting enabled.

Q. When does a grid bot perform poorly?
A. In strong one-directional trends that exit the range.

The scam catalogue: how to recognise fraud

Knowing the scripts protects you better than any app. The most common frauds targeting Indian investors:

Fake exchanges and trading apps show impressive profits, then block withdrawals and demand "tax" or "fees" to release your money. **Task and part-time job scams** first pay small sums for liking videos, then ask you to invest in crypto "tasks". **Pig butchering** means a stranger befriends you online, builds trust over weeks, then guides you to a fake investment platform. **Impersonation** of exchange or police staff pressures you into transferring funds. **Fake airdrops and giveaways** use celebrity photos and ask you to connect your wallet. **Ponzi and MLM crypto schemes** pay old investors with new investors' money and promise fixed daily or monthly returns. **Rug pulls** and **pump-and-dump groups** on social media push low-cap tokens to sell to followers. **Recovery scams** target previous victims, promising to retrieve lost funds for a fee.

Defence: if returns are guaranteed, high and fast, it is a scam. Never pay "fees" to withdraw your own money. Verify platforms through independent sources. Report quickly on 1930 and cybercrime.gov.in.



No one can guarantee returns. Verify, slow down, never share keys.

Most scams follow the same script. Spot the pattern and walk away.

WORKED EXAMPLE

After a few friendly chats, a person you met online says they earn daily from a "private exchange" and helps you deposit 20,000 rupees. The dashboard shows 40,000 within a week. When you try to withdraw, the site demands 10,000 as "tax". That demand is the final move of the scam; paying leads to more demands.

Go deeper

Pig butchering. A stranger builds a friendship or romance online, then introduces a fake trading platform with fabricated profits; victims deposit more until withdrawals are blocked. Warning signs: unsolicited contact, move to private chat, a "mentor" with sudden wealth, a platform not on legitimate app stores.

Rug pulls and honeypots. Check whether liquidity is locked, whether contract ownership is renounced, concentration of holders (top wallets owning most supply) and whether you can sell a small test amount. Tools like token scanners help but are not foolproof.

Address poisoning. Scammers send tiny transfers from addresses that look like yours (same first and last characters) hoping you copy the wrong address from history. Always copy from the original source and verify the full address.

Wallet drainers. Fake mint pages or airdrops ask you to sign a transaction that gives the attacker approval to spend tokens. Read what you sign; use a separate wallet for experiments.

Fake recovery services. People who lost money are targeted again by "recovery agents" demanding upfront fees.

Response. Disconnect, revoke approvals, move remaining funds to a new wallet, preserve evidence and report to cybercrime channels.

COMMON MISTAKES

- Copying a recipient address from transaction history.
- Signing wallet requests without reading them.
- Paying upfront fees to "recover" lost funds.

KEY POINTS

- Guaranteed or very fast returns signal fraud.
- Never pay fees or taxes to release your own money.
- Strangers who guide you to invest are running a script.
- Report fast to 1930, cybercrime.gov.in and your bank.

TEST YOURSELF

Q. What is address poisoning?
A. Sending tiny transactions from lookalike addresses so victims later copy the wrong address from history.

Q. First action if you signed a malicious approval?

A. Revoke the approval and move remaining assets to a fresh wallet immediately.

LESSON 32 OF 32

Your roadmap from beginner to professional crypto trader

A professional in crypto is not the person who finds the next 100x coin. It is the person who is still in the game after several cycles because their risk was controlled.

A sensible path: **Stage 1** learn the basics, security and tax, and make a first tiny purchase. **Stage 2** learn tokenomics, project research and on-chain basics, and build a small core of established assets with DCA. **Stage 3** learn technical analysis and pick one strategy; paper trade it for several months. **Stage 4** trade spot with small real size, keep a journal and measure results in R multiples. **Stage 5** study derivatives data and market structure, and only if the law permits and you have a proven record, test low leverage with a very small account. **Stage 6** review quarterly; scale up only after proof; keep taxes and records in order.

Throughout, keep an emergency fund, keep crypto at a sensible share of your net worth, secure your keys, keep learning and treat every claim of easy money as a warning.

WORKED EXAMPLE

Anita spends two months learning, then DCAs 3,000 rupees a month into Bitcoin and Ethereum and keeps them in her own hardware wallet. Separately, for a year she paper trades a trend strategy, then trades spot with 20,000 rupees at 0.5 percent risk per trade with a journal. She keeps a spreadsheet of all transactions for tax. After a year with a positive record she raises her trading risk slightly, never touching her long-term holdings.

Go deeper

Stages. (1) **Foundations** (0 to 3 months): wallets, exchanges, security, tiny buys, a journal. (2) **Understanding** (3 to 12 months): tokenomics, on-chain data, one market cycle of observation, DCA discipline. (3) **Skill** (1 to 3 years): one strategy with measured expectancy, risk and tax handled, custody setup mastered. (4) **Professional**: research, development or trading as a business with a legal and tax structure.

Milestones. Zero security incidents; 100 logged trades or 12 months of DCA records; a written plan and portfolio policy; crypto limited to a pre-decided share of net worth; tax records complete each year.

Career paths. Research analyst, on-chain analyst, developer (Solidity, Rust), security auditor, community or growth roles, trading. Learn by building: read protocol docs, publish analysis, contribute to open-source.

Habits. Read primary sources (whitepapers, governance forums, audits), follow a few credible researchers, ignore noise, and review your decisions every quarter.

Honest outlook. The space has real innovation and real fraud. Survive first, learn second, scale third.

COMMON MISTAKES

- Jumping to leverage trading before learning security and risk.
- Chasing every narrative without depth in any.
- Scaling position size before you have a track record.

KEY POINTS

- Survive first. Profit comes from staying in the game.
- Core holdings with DCA, plus a small, rule-based trading account.
- Paper trade, journal, then scale up slowly.
- Keep security, taxes and records in order at every stage.

TEST YOURSELF

Q. Name two milestones before increasing exposure.
A. For example a full year of clean records with no security incidents and a written portfolio policy.

Q. What does "survive first, learn second, scale third" mean?
A. Protect capital and security before pursuing returns, then deepen skill, and only then grow size.

Final notes

You have reached the end of this guide. Knowledge only helps when it becomes habit: keep risk small, keep records and keep learning.

Next steps: take the quiz for this market and use the glossary on learnwithkrisu.com when a term is unclear. Revisit lessons whenever a topic feels weak.

Education only. Not investment advice. Past examples do not predict future results.