The tokenomics of Pump.fun

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What is Pump.fun?

Pump.fun is a Solana-based marketplace that allows users to create and trade memecoins. The platform was launched in January 2024 and quickly gained significant traction, facilitating over $2.5B in trading volume within two weeks.

- *Within a year, the platform generated **over US$571M in revenue** through fees.*
- *Pump.fun has consistently represented over 57% of Solana DEX transactions monthly since August 2024.*

But what are memecoins?

Memecoins are cryptocurrencies that originate from internet memes or are created to follow trends, often having little utility outside trading and conversion.

The potential for a memecoin to spike rapidly gives a high-risk, high-reward potential for traders to make significant returns quickly.

Dogecoin is perhaps one of the best known examples of a memecoin, originally created to make fun of Bitcoin.

So how does it work?

Token creation

Users pay a creation fee of 0.02 SOL

Token launch

*800 million tokens are placed into **bonding curve.***

*Pump.fun uses a constant product rule x * y = k for pricing.*

Users buy into token

The goal is to sell off these 800 million tokens

Signals enough demand + liquidity to begin wider trading. Pump.fun now steps in to kick the token to a larger market.

Transition event

Once a token reaches a market cap of US$69k on Solana or US$420k on Blast, the project must raise 85 SOL to graduate.

This requirement ensures sufficient liquidity before it moves beyond Pump.fun's internal bonding curve.

At this stage, the bonding curve stops minting new tokens to cap the token supply.

The creator is also awarded 0.5 SOL as an incentive.

Migration

Pump.fun migrates the liquidity from its internal bonding curve pool to the Raydium DEX.

Pump.fun deposits US$12k worth of liquidity (SOL + the memecoin) into Raydium and mints Liquidity Provider (LP) tokens to represent ownership of this liquidity.

The way you can think of this is that Pump.fun issues a receipt that this US$12k is issued into the pool, then destroys the receipt - so the creator cannot claim to own this money and withdraw it. These tokens are locked into the pool and only used for trading.

Liquidity locking

The LP tokens representing the pooled assets are burned, permanently locking the liquidity.

This prevents creators from withdrawing funds and executing rug pulls.

Trading

The token becomes tradable on Raydium. Users can swap it directly against SOL or other paired assets.

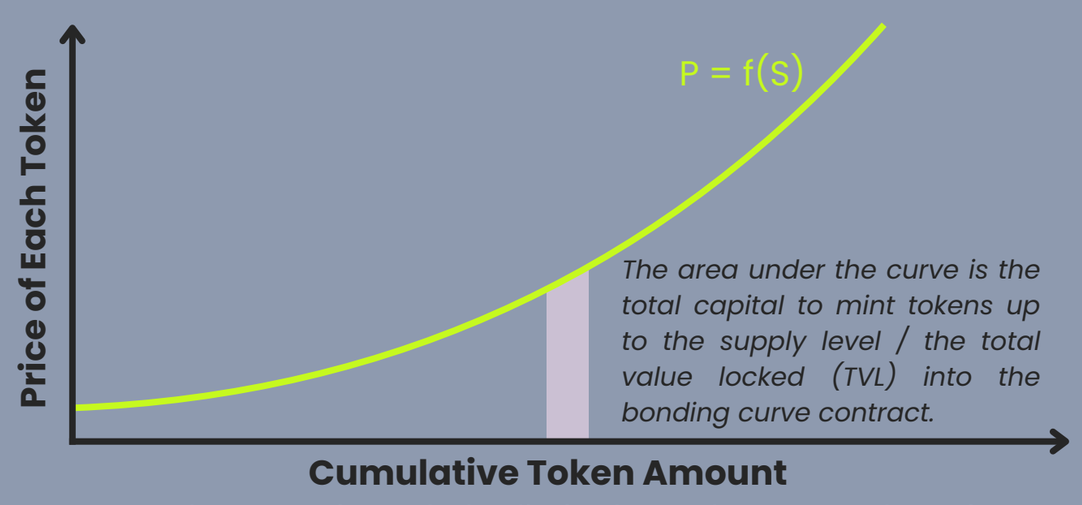
The bonding curve's price-discovery phase ends, and the token's value is now determined by free-market supply/demand on Raydium. Large holders can still dump tokens, but the locked liquidity prevents total collapse.

Pump.fun earns revenue through:

- A 1% swap fee on all trades conducted on the platform.
- Listing fees when tokens graduated to Raydium or other decentralized exchanges.
  - 6 SOL out of the 85 SOL raised is paid to Pump.fun as a listing fee.

But what is a bonding curve?

A bonding curve is a mathematical function that defines the price of a token based on its supply within a bonded market.



As more tokens are issued, the limited supply causes the price per token to rise.

When tokens are purchased, they are minted (created), and when sold, they are burned (destroyed). This dynamic adjusts the circulating supply - the bonding curve ensures that price changes reflect demand.

Bonding curves enable continuous liquidity without requiring a traditional buyer or seller - tokens can always be bought or sold at prices determined by the curve.

Pump.fun's pricing mechanism

Pump.fun's pricing system has a pre-virtual pool that initially contains 30 SOL and 1,073,000,191 tokens.

The joint curve pricing function is

$$\text{Tokens obtained, y} = 1073000191 - \frac{32190005730}{30 + x}$$

Where x is the $SOL purchased.

Source: Binance

What made Pump.fun so special?

1. ***Ease of creating tokens** by automating complex processes (e.g. smart contract deployment, liquidity setup) and low costs*
   - ***Reduced adoption barrier** to new platform, making onboarding seamless*
2. ***Innovative tokenomics** (e.g., bonding curves) rewarded early adopters while ensuring fair pricing.*
   - ***Gave users a reason to get in early**, kickstarting the marketplace flywheel*
3. ***Anti-rug-pull measures** built trust among users.*
   - ***Solved a major pain point** especially for memecoin trading.*