Token Spammers, Rug Pulls, and Sniper Bots
An Analysis of the Ecosystem of Tokens in Ethereum and in the Binance Smart Chain

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DEXes allow anyone to create a market for a token.
Decentralized exchanges employ smart contracts
Liquidity Pools
Liquidity Pools

Swap

Trader

Token A

Token B

Token A & Token B

Deposit

Liquidity Provider

LP-Token
Goals

In our work, we study the ecosystem of the tokens and liquidity pools.
Blockchains

Ethereum

Binance Smart Chain
4 billion transactions
How long are tokens used?
Lifetime
Token creation

Lifetime

Last transaction
60% of tokens have a lifetime of less than 24 hours

1-day tokens
How many 1-day tokens are in a liquidity pool?

33.1% on Ethereum

94.8% on the Binance Smart Chain
Who creates the tokens?
Who creates the tokens?

1% of addresses are responsible for creating over 20% of the tokens.

More than half of the tokens created by the token spammers are 1-day tokens.
Rug Pulls
Rug Pull

1. Token creation
2. LP creation
3. Add liquidity
4. Swap
5. Remove liquidity

Gain = 1 ETH - fee
How extensive is the phenomenon?

Liquidity pools with a 1-day token and whose single liquidity provider removes all the liquidity

21,742 Ethereum’s LP
272,349 BSC’s LP

80.7% of liquidity pools with a 1-day token are rug pulls
Profits
Profits

<table>
<thead>
<tr>
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<th>Successful</th>
<th>Unsuccessful</th>
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</thead>
<tbody>
<tr>
<td>ETH</td>
<td>61.9%</td>
<td>38.1%</td>
</tr>
<tr>
<td>BSC</td>
<td>39.1%</td>
<td>60.9%</td>
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</table>
The average gain per rug pull is $33 in BSC and $2,538 in Ethereum.

On Ethereum users tend to invest more money.

The average cost per rug pull is $9 for BSC and $380 for Ethereum.

The investment needed to perform this kind of rug pull is low.
Who buys the tokens?
Sniper Bots

Automated tools designed to buy tokens before anyone else, and as soon as possible

They scan the mempool for new liquidity pools

194 Sniper Bots 243,024 Liquidity Pools 27% Swaps
Conclusions

More than half of the tokens have a life of less than 24 hours (*1-day tokens*).

A few addresses create a large number of tokens (*Token Spammers*).

The rug pull phenomenon is present in both of the analyzed blockchains.

Sniper bots perform a substantial percentage of the swaps.
Thanks

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