

# Automated Market Makers

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Background

# P2P Exchanges

- Order-book exchanges require middle-man



# P2P Exchanges

- Sometimes exchanges fail or are delayed



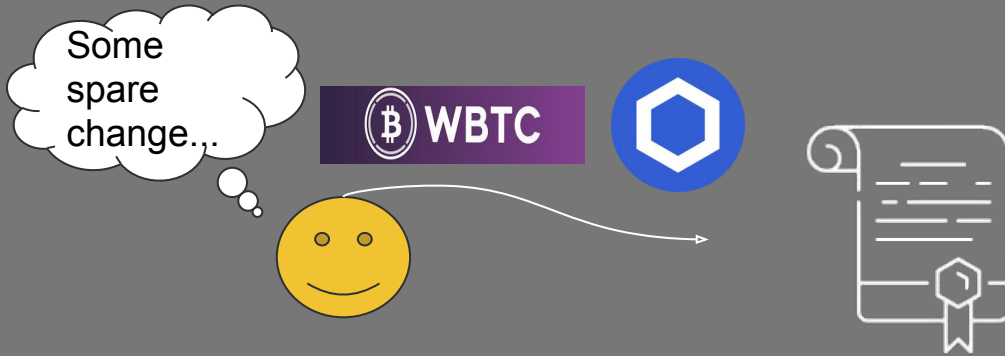
# Market Maker Exchanges

- Middle-man is smart contract



# Market Maker Exchanges

- Liquidity providers can provide stake

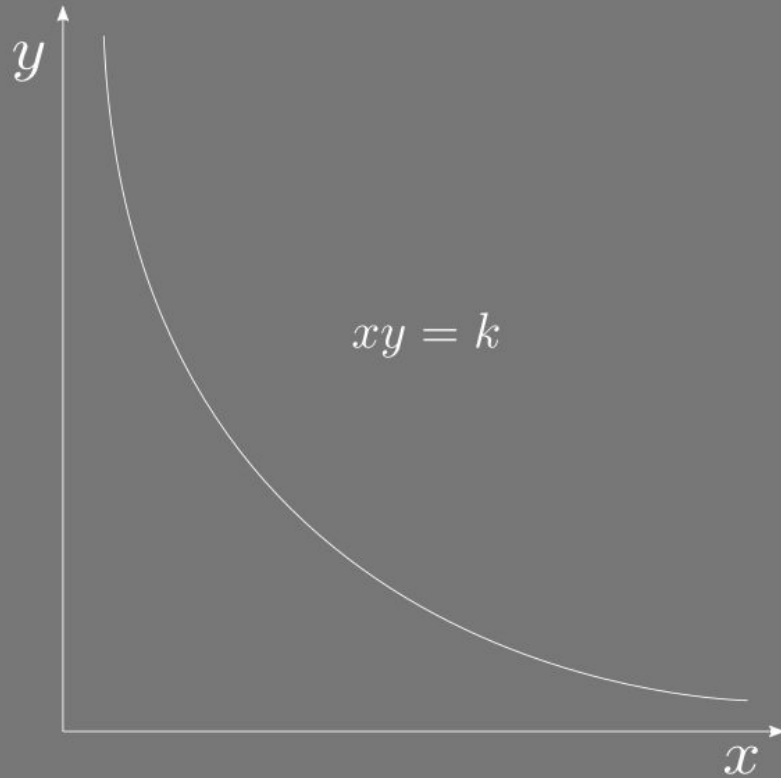


# Market Maker Exchanges

- Immediate execution of trades

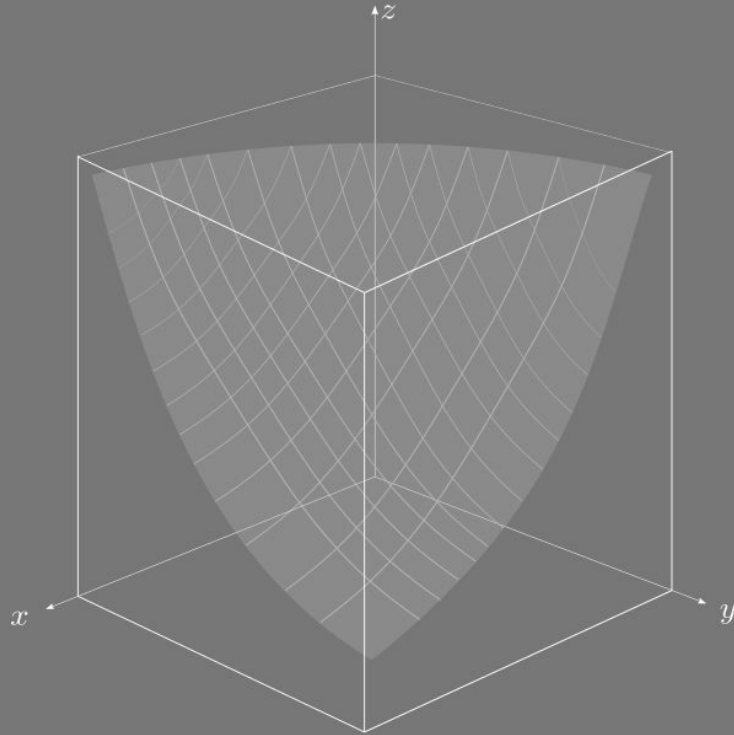


# Uniswap





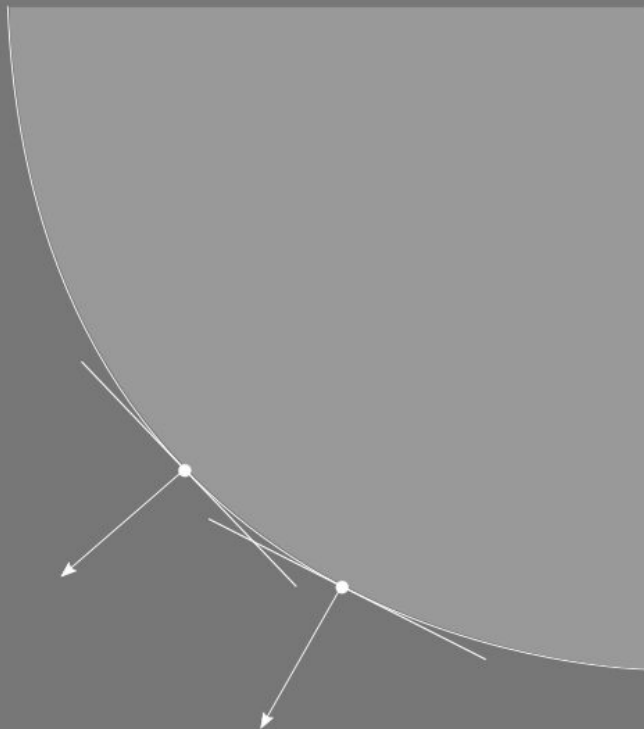
# Balancer (Multiple Assets)



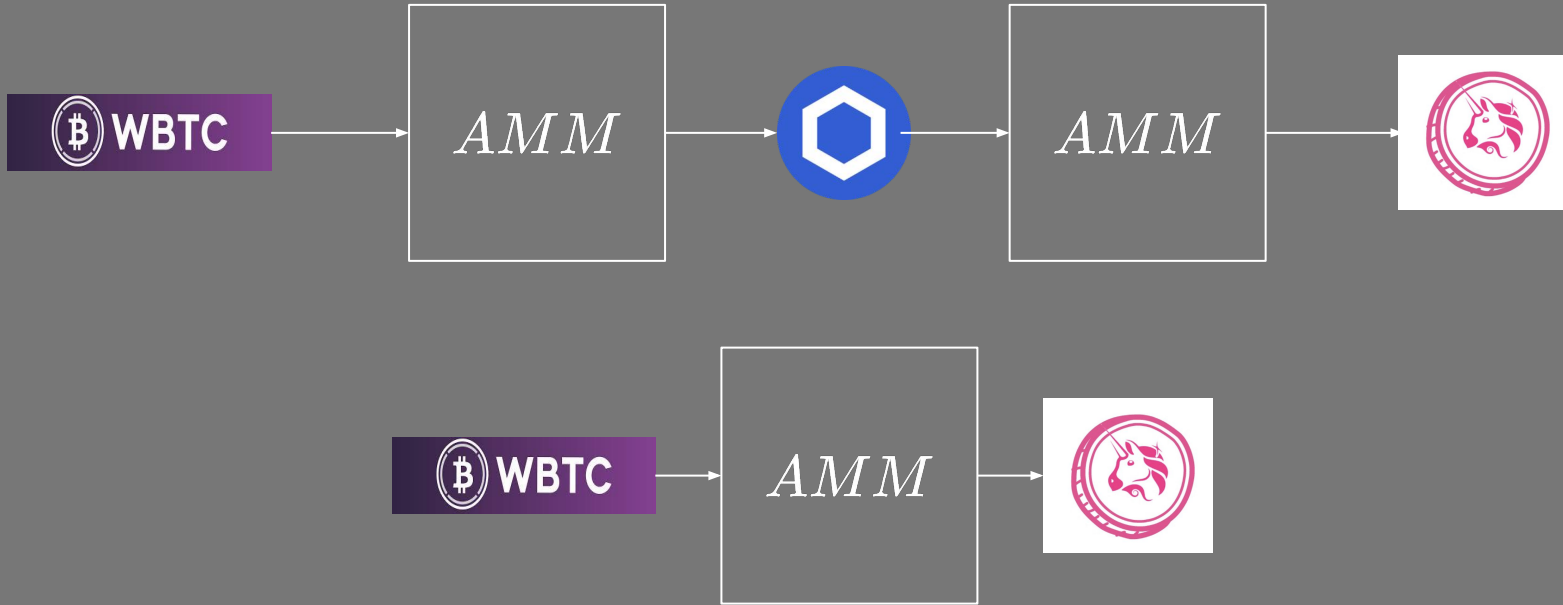
# Our Work

# AMM Axioms

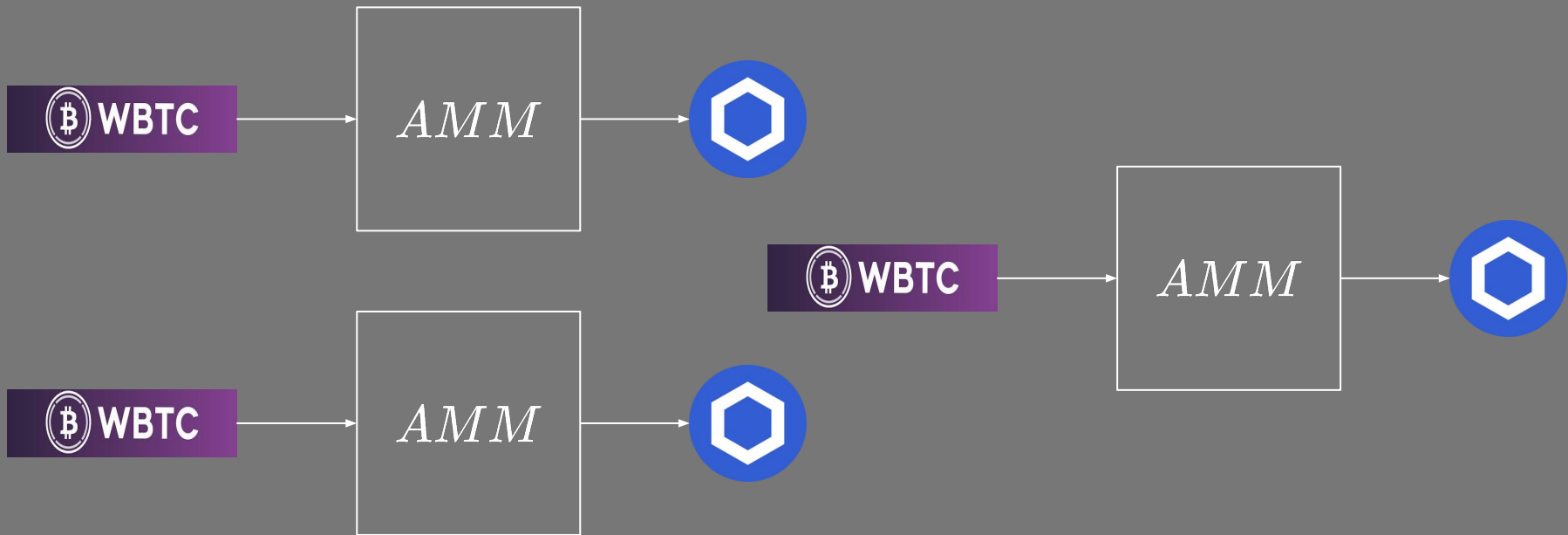
- Smooth exchange
- Stable
- Expressive
- Convex



# Serial Composition

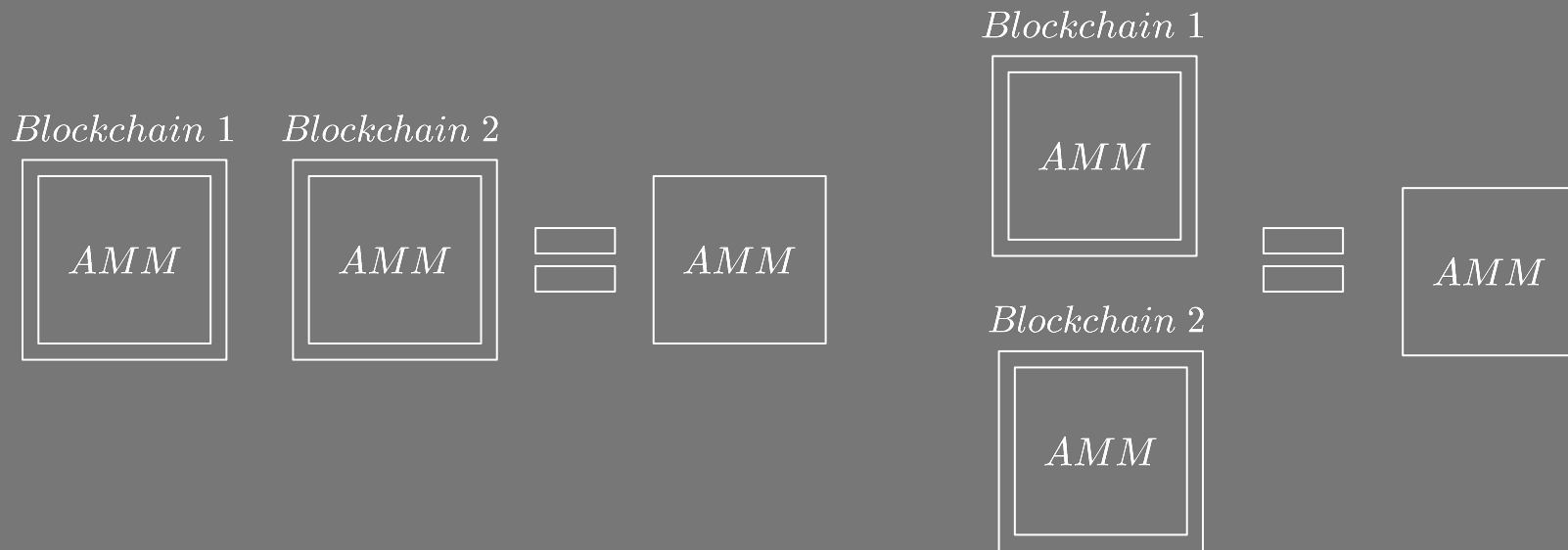


# Parallel Composition

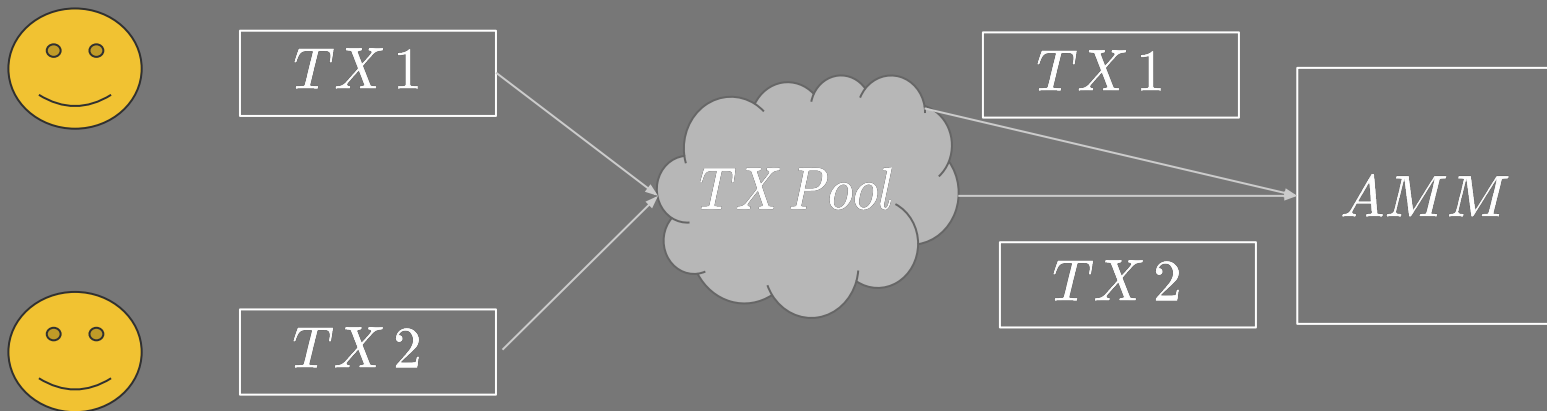


# Current Work

# Cross-chain AMMs



# Handling Frontrunning





Questions?