REAL ESTATE IN DIGITAL FINANCE

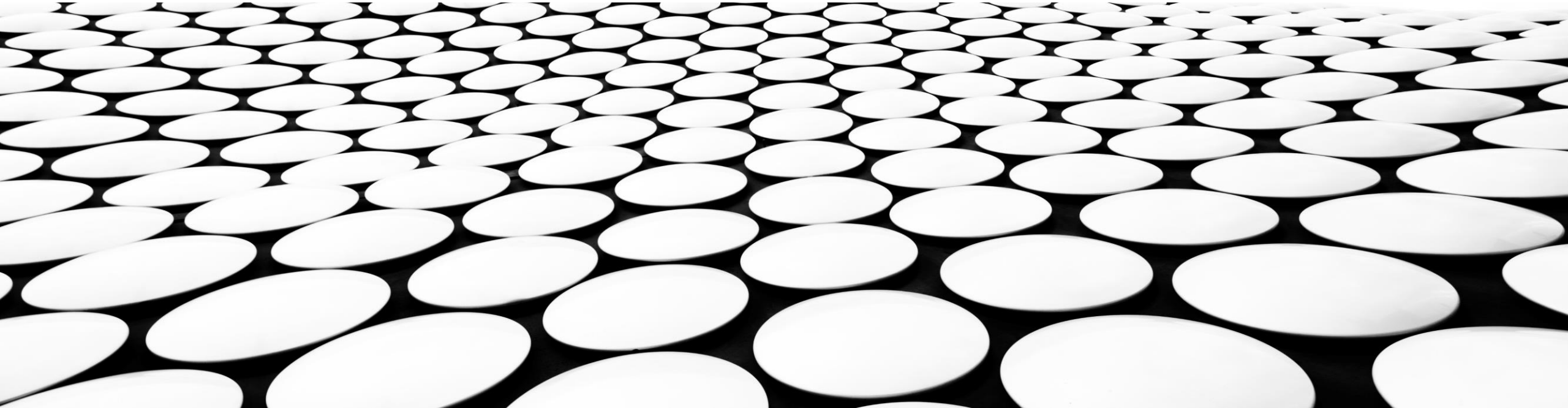
SAMUEL SIMONS

SMITH SCHOOL OF BUSINESS

UNIVERSITY OF MARYLAND, COLLEGE PARK

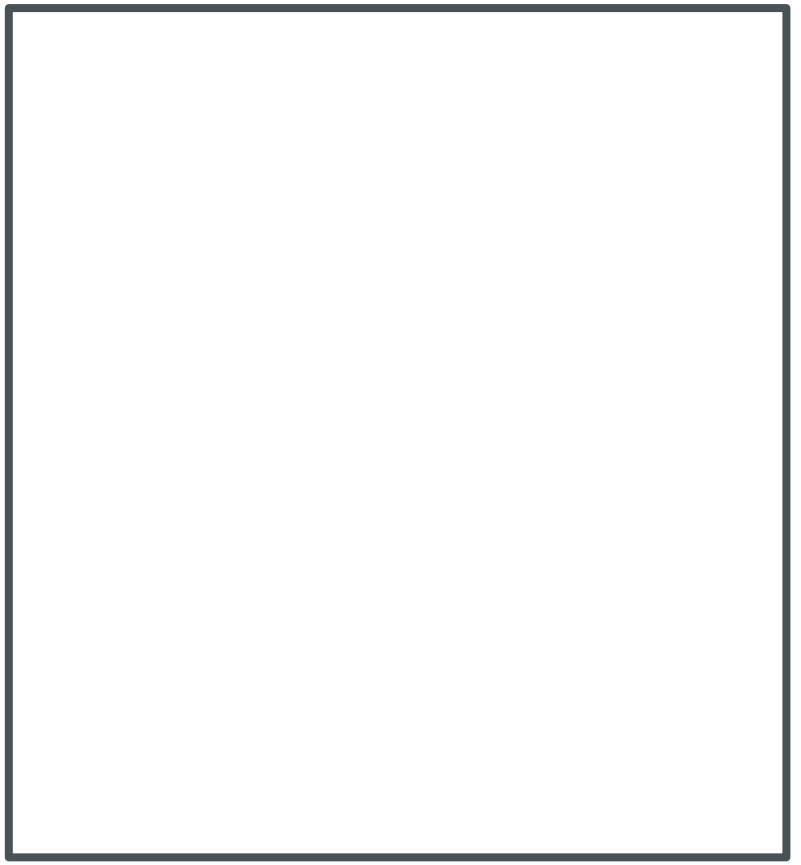
B.S. FINANCE

CLASS OF 2021



INTRODUCTION

- Blockchain overview
- Tokenization vs Securitization
- RealT Case Study (Fractional Real Estate on the Blockchain)
  - Business Model
  - Legal Structure
  - Transparency
  - Liquidity, Dividends
  - Social and Market Impact



WHAT IS THE BLOCKCHAIN?

The Blockchain is a set of sperate computers that work together to maintain a ledger, or list of transactions.

It can do whatever a regular computer can do, albeit slower, but more secure.

Bitcoin, built on the first blockchain is essentially a numbered bank account, but all transactions are publicly broadcasted.

Ethereum, the largest blockchain, allows for users to send executable code along with transactions.

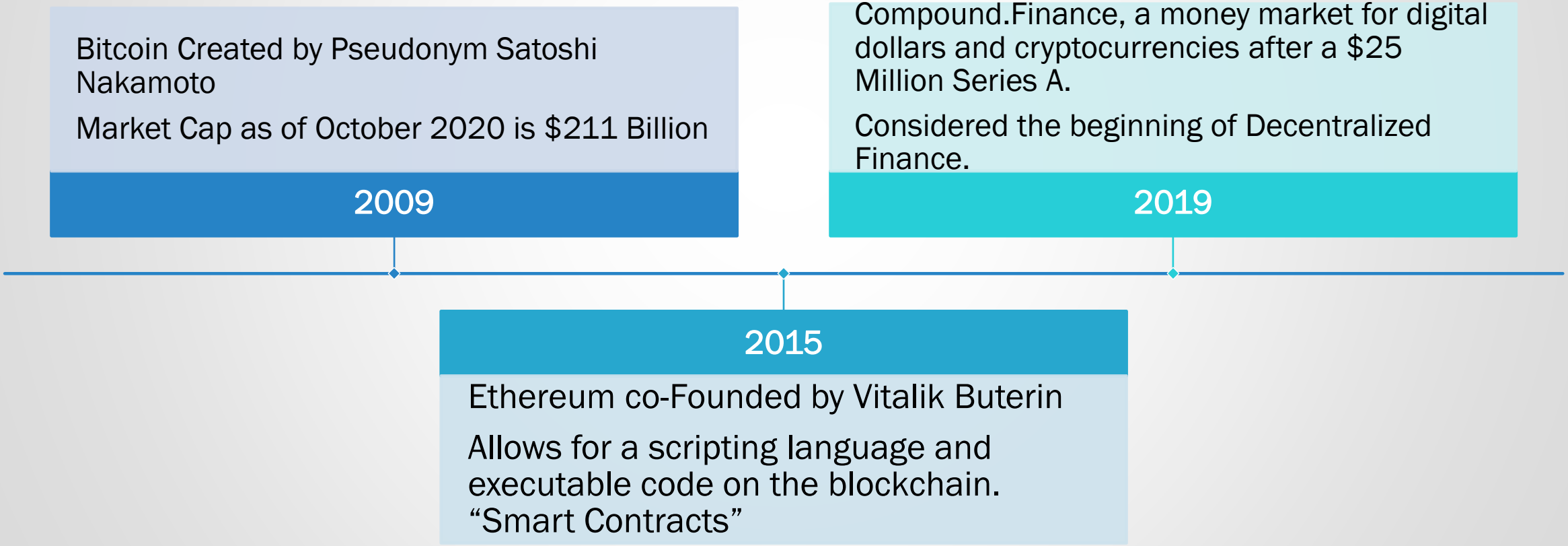
These are called “Smart Contracts” and allow for programable money and assets.

Everything that has been sent is irreversible and permanent.

COMMON MISCONCEPTIONS

- Bitcoin is anonymous
- Bitcoin has no intrinsic value
- Crypto is used to evade taxes
  - For every dollar in Bitcoin laundered, $800 in American cash is laundered
- Too volatile
  - Have you seen the stock market or forex markets lately? Better derivative markets (options, futures)

TIMELINE OF BLOCKCHAIN DEVELOPMENT



WHAT IS A SMART CONTRACT?

Also known as a smart property, smart contracts are computer protocols that facilitate, verify, or enforce the negotiation or performance of a contract, or that make a contractual clause unnecessary. Smart contracts often mirror the logic of contractual clauses.

A smart contract is like a cryptographic safe that contains value and unlocks only if specific conditions are met.

HOW DO THEY WORK?

Traditional Contracts

Dee wants to sell a product.

Tom wants to buy the product.

Smart Contracts

Dee wants to sell a product. She identifies herself with her public key, sets the terms of the contract, and signs it with her private key.

Tom wants to buy the product. He finds Dee's product and signs it with his private key, transferring $ from his address to her public key.

A third party is needed to verify the contract and that the terms of the contract have been met. The process can be drawn out, and Middleman fees apply as well.

Contracts are binding and enforceable, but have to be executed by human input.

The smart contract is verified by each node on the blockchain network, checking if Dee is the owner of the product, and if Tom has enough money to purchase the product.

If the network agrees that all conditions are true, Tom automatically gets Dee's product. Dee now has Tom's $ in her account.

WHAT MAKES SMART CONTRACTS TRUSTWORTHY?

Billy Bandit steals Toms product and claims ownership of it.

Since all transactions are registered on the blockchain, anyone can inspect it. Using the unique ID of the product, we can prove Billy is NOT the owner, and that Tom is.

BLOCKCHAIN.WTF

THE TWO WORLDS OF EMERGING FINANCE

Traditional Finance

- Singular codebase or clearing house
  - Possible single point for failure
- Backed up by government
- Can handle more transactions
  - Visa can do 50,000 transactions per second
- High start up costs
- Securitization

Decentralized (Blockchain) Finance

- Censorship resistant
- Can leverage multiple exchanges simultaneously
  - Arbitrage available to all, more efficient markets
- Distributed ledger, harder to fail as a whole
- Inexpensive startup costs
- Divisible, Fractional
- Tokenization

TRADING, SELLING AND INTERACTING WITH REAL WORLD ASSETS

Securitization

- Securitization is an act of a centralized exchange placing a real-world asset on their computers and or ledger, so that others may trade within their system
- On a singular exchange, high cost of transfer
- Locked within that platform
- Comes complaint, as exchange does all the work
- Expensive to issue

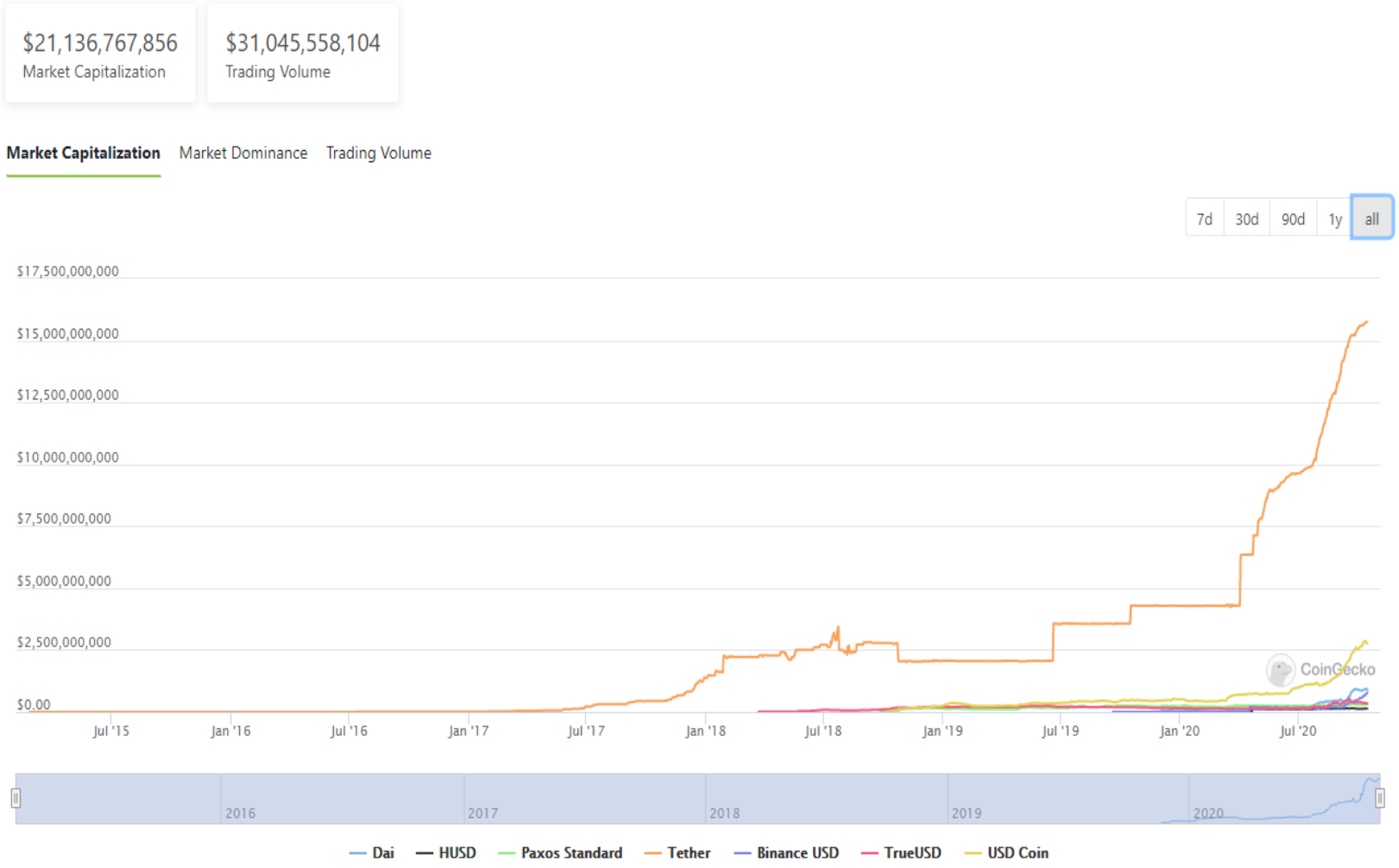
Tokenization

- Tokenization is an act from an asset owner placing their asset on a blockchain, so that anyone may interact as they please, from any system or computer
- Provable, “public” ownership
- Move between platforms and contracts
- Many use cases
  - Utility, payment, debt, equity, ownership deed
- Cheap to issue

TOKENIZATION EXAMPLES

- Digital Dollars
  - $20 Billion in all stablecoins
  - Backed up by bank accounts, FDIC
- Paxos Gold
  - $66 Million
- Bond markets
  - Hundreds of millions
  - Could be trillions with additions of muni bonds
- RealT Real Estate
  - Over $2 Million
  - Divisible shares of rental property

Digital Dollars by Market Capitalization.
Source: CoinGecko



REALT.CO

A CASE STUDY FOR THE DEMOCRATIZATION OF AMERICAN REAL ESTATE INVESTMENT

BUSINESS MODEL

PLATFORM

TOKENIZATION SERVICE

MARKETPLACE

RENT DISPERSAL

SUPPLY SIDE FINANCE OF THE UNDERLYING INVESTMENTS

ASSET PRICE: $65,944.44

SOLD OUT

Property Highlights

Expected Yield	**11.34%**
Rent per Token	$5.75 / year
Token Price	$50.73
Total Tokens	1,300
Property Type	**Single Family**
Neighborhood	Yorkshire Woods
Square Feet	914
Lot Size	4,356
Bedroom/Bath	3 Bed. / 1 Bath

All financial statements of property yield are best estimates based on current conditions, and can change at any time.

We are targeting the above equity multiple for investors; however, no assurance can be given that you will obtain any return on investment, and there is a risk that you can lose your entire investment.

Financials

Gross Rent / year	$10,200.00
Gross Rent / month	$850.00
Monthly Costs	- $226.67
Property Management (8.00%)	- $68.00
RealT Platform (2.00%)	- $17.00
Property Taxes	- $91.67
Insurance	- $50.00
Utilities	Tenant-Paid
Net Rent / month	$623.33
Net Rent / year	**$7,479.96**
Asset Price	**$65,944.44**
Expected Yield	**11.34%**

securitizastion - Google Search | Security (finance) - Wikipedia | tokenized security - Google Search | (no subject) - massnomis@gmail.c | 10048 Grayton St, Detroit, MI 4822 | 10048 Grayton St, Detroit, MI 4822

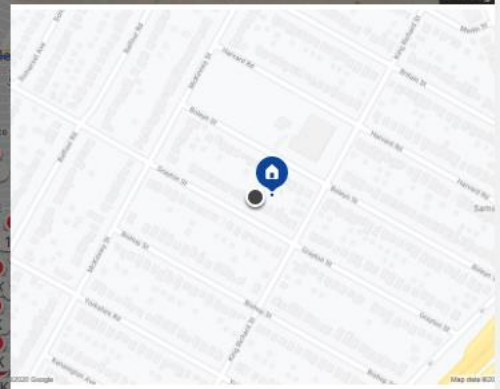
zillow.com/homedetails/10048-Grayton-St-Detroit-MI-48224/88771359_zpid/

Buy Rent Sell Home Loans Agent finder

Manage Rentals Advertise Help Sign in

Detroit, MI | For Sale

Showing 500 of 621 results in this area



Zillow

Edit Save Share More Close

-- bd | 1 ba | 1,059 sqft

10048 Grayton St, Detroit, MI 48224

Off market | Zestimate®: $33,330 | Rent Zestimate®: $925/mo

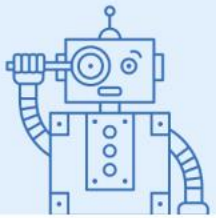
Est. refi payment: $216/mo Get current rates

Home value | Owner tools | Home details | Neighborhood details | Similar homes

Home value

It looks like this property has **missing facts**, which can affect the accuracy of home value estimates.

Is this your home? Claim it and update home facts!



Zestimate

$33,330

ZESTIMATE RANGE
$24,000 - $47,000

LAST 30 DAY CHANGE
-$216 (-0.6%)

Zestimate history & details

Estimated net proceeds
$24,271

Est. selling price of your home $ 33,330

Sort by: Newest

$148,000 3 bds | 1 ba | 1,299 sqft
12711 E Outer Dr, Detroit, MI 48224
House for sale

$75,000 3 bds | 2 ba | 1,674 sqft
3620 Haverhill St, Detroit, MI 48224
House for sale

$29,900 8,712 sqft lot
12423-33 E Mcnichols Rd, Detroit, MI 48205
Lot / Land for sale

1 day on Zillow

ASSET PRICING

Real Estate appraiser’s three approaches to value	
Cost Basis	Least used model
Comparable Sales	Zillow, supply side
Income	Bond, Dividend paying security Rental property
Potential for arbitrage	Difference between rental property and home ownership

LEGAL STRUCTURE

Each investment is a separate LLC

Fair and accurate disclosure of all aspects.

Sale to US Accredited Investors, as defined under Regulation D of the Act.

Sale to non-US persons, under Regulation S of the Act.

Private Placement Memorandum, Subscription Documentation.

REALT MARKET OVERVIEW

$2M sales in 2 years

Regulation S, Regulation D

New properties every week

Previous Properties

	TOKEN PRICE	TOKENS	ASSET PRICE	EXPECTED YIELD	RENT / TOKEN	UNISWAP	ETHERSCAN
18276 Appoline St Detroit MI 48235	$52.32	1400	$73,244.44	11.9%	$6.23	VIEW	VIEW
25097 Andover Dr Dearborn Heights MI 48125	$53.13	1400	$74,388.89	11.06%	$5.88	VIEW	VIEW
8342 Schaefer Highway Detroit MI 48228	$50.83	4000	$203,333.33	12.59%	$6.40	VIEW	VIEW
10024-28 Appoline St Detroit MI 48227	$145.56	4000	$582,200.00	11.47%	$16.70	VIEW	VIEW
16200 Fullerton Ave Detroit MI 48227	$128.95	3800	$490,000.00	16.01%	$20.65	VIEW	VIEW
9943 Marlowe St Detroit MI 48227	$63.75	1000	$63,750.00	12.39%	$7.90	VIEW	VIEW
5942 Audubon Rd Detroit MI 48224	$77.73	750	$58,300.00	10.38%	$8.07	VIEW	VIEW
20200 Lesure St Detroit MI 48235	$69.40	1000	$69,400.00	10.24%	$7.11	VIEW	VIEW
9336 Patton St Detroit MI 48228	$62.70	1000	$62,700.00	10.25%	$6.42	VIEW	VIEW

BENEFITS OF TRANSPARENCY

- All transactions data is public
  - buying, selling, rent payments
    - Amounts and participants
  - Primary market, Secondary market
    - Large amounts of liquidity including Bid-Ask spread
    - Live secondary pricing data
- Transparency in pricing assets
- No money laundering

ASSET PRICE: $65,944.44

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Expected Yield	**11.34%**

Transactions | Erc20 Token Txns | Loans | Analytics | Comments

Latest 1 ERC-20 Token Transfer Event

Txn Hash	Age	From		To	Value	Token
0x864dd92c288ca0e0e...	3 days 21 hrs ago	0x259d5cdbfe8d2da4e...	IN	0x9a650fbfe1611598c6...	3	RealToken D ... (REALTO...)

[Download CSV Export]

Our First Transaction

RealToken D 10048 Grayton St Detroit MI Token Holders

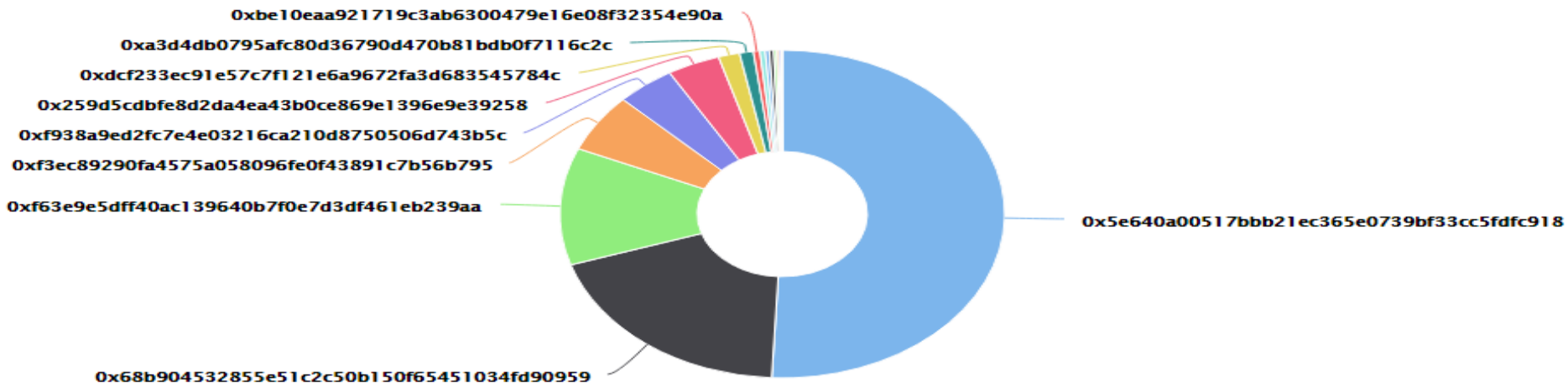
Range: Top 100

The top 100 holders collectively own 100.00%
(1,300.00 Tokens) of RealToken D 10048 Grayton St Detroit MI

Token Total Supply: 1,300.00 Token | Total Token Holders: 16

RealToken D 10048 Grayton St Detroit MI Top 100 Token Holders

Source: Etherscan.io



(A total of 1,300.00 tokens held by the top 100 accounts from the total supply of 1,300.00 token)

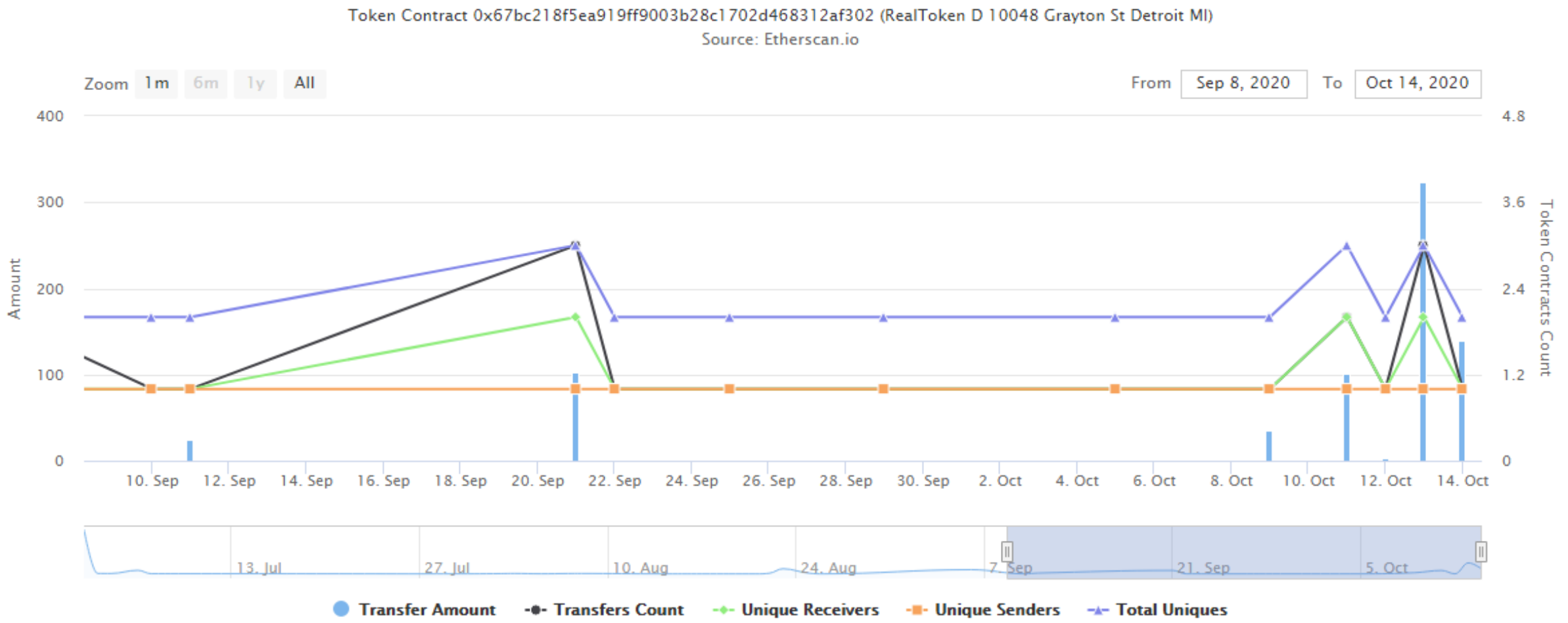
Rank	Address	Quantity (Token)	Percentage
1	0x5e640a00517bbb21ec365e0739bf33cc5fdfc918	660	50.7692%
2	0x68b904532855e51c2c50b150f65451034fd90959	250	19.2308%
3	0xf63e9e5dff40ac139640b7f0e7d3df461eb239aa	150	11.5385%
4	0xf3ec89290fa4575a058096fe0f43891c7b56b795	75	5.7692%

Transfers Holders Info Read Contract Write Contract Analytics Comments

Token Contract Overview

Time Series: Token Contract Overview

Wed 1, Jul 2020 - Tue 13, Oct 2020



LIQUIDITY AND DIVIDENDS

- Shareholders can place shares in escrow to be market makers
  - Still receive rental payments
  - Receive profits of bid ask spread
  - Must place both buy side and sell side orders
  - Automated Market Makers
- Dividends are paid without ex-dividend date
  - Those who own at payment time receive payment
  - No weird price swing to calculate expected dividend

Token Transfers ERC-20

For 0x15071ab7c223285a8a125e45771763l0b7a3c508

Featured: BeaconScan Guild Warz Set up ETH 2.0 Medalla Testnet validators and win more than $1,000 in rewards! Create Guild.

A total of 328 txns found

First < Page 1 of 7 > Last

Txn Hash	Age	From		To	Value	Token
0x92ab7ca9ed8ee54cd...	2 days 23 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	0.646493	USD Coin (USDC)
0x3286f286539fb22820...	10 days 21 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	0.565681	USD Coin (USDC)
0x10ace1f995acb23b8...	17 days 23 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	0.330827	USD Coin (USDC)
0xc7028369864f33b41...	20 days 3 hrs ago	0x15071ab7c223285a8...	OUT	0x2fd29d419ecbdc11a...	817.441948	USD Coin (USDC)
0x4ff2304dc183a1cd4f...	20 days 21 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	689.08	USD Coin (USDC)
0x1006ab8364888d55a...	22 days 19 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	0.307485	USD Coin (USDC)
0x81d40990ef19aeca6...	29 days 20 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	0.994521	USD Coin (USDC)
0xde4746f6008a113f3e...	31 days 6 hrs ago	0x15071ab7c223285a8...	OUT	0xe3f200a3ab0202321...	9	RealToken 59... (REALTO...)
0x25bf05e6b66f84ce94...	36 days 7 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	1.392329	USD Coin (USDC)
0xb98b894055108cb90...	40 days 17 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	3.372213	USD Coin (USDC)
0xa7d6264fd156dbc53f...	50 days 10 hrs ago	0xa5d8c45538ccbb2d7...	IN	0x15071ab7c223285a8...	76.56	USD Coin (USDC)
0xc80da4d2f65681e72...	50 days 20 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	1.3923	USD Coin (USDC)
0xa4a1087d19493d44a...	50 days 20 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	1.97995	USD Coin (USDC)
0x8ac2554aff1c10b109...	57 days 21 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	2.7846	USD Coin (USDC)
0xedec1b2316ed635e3...	57 days 21 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	3.9599	USD Coin (USDC)
0x797a99223556772bd...	71 days 19 hrs ago	Disperse.app	IN	0x15071ab7c223285a8...	1.3923	USD Coin (USDC)

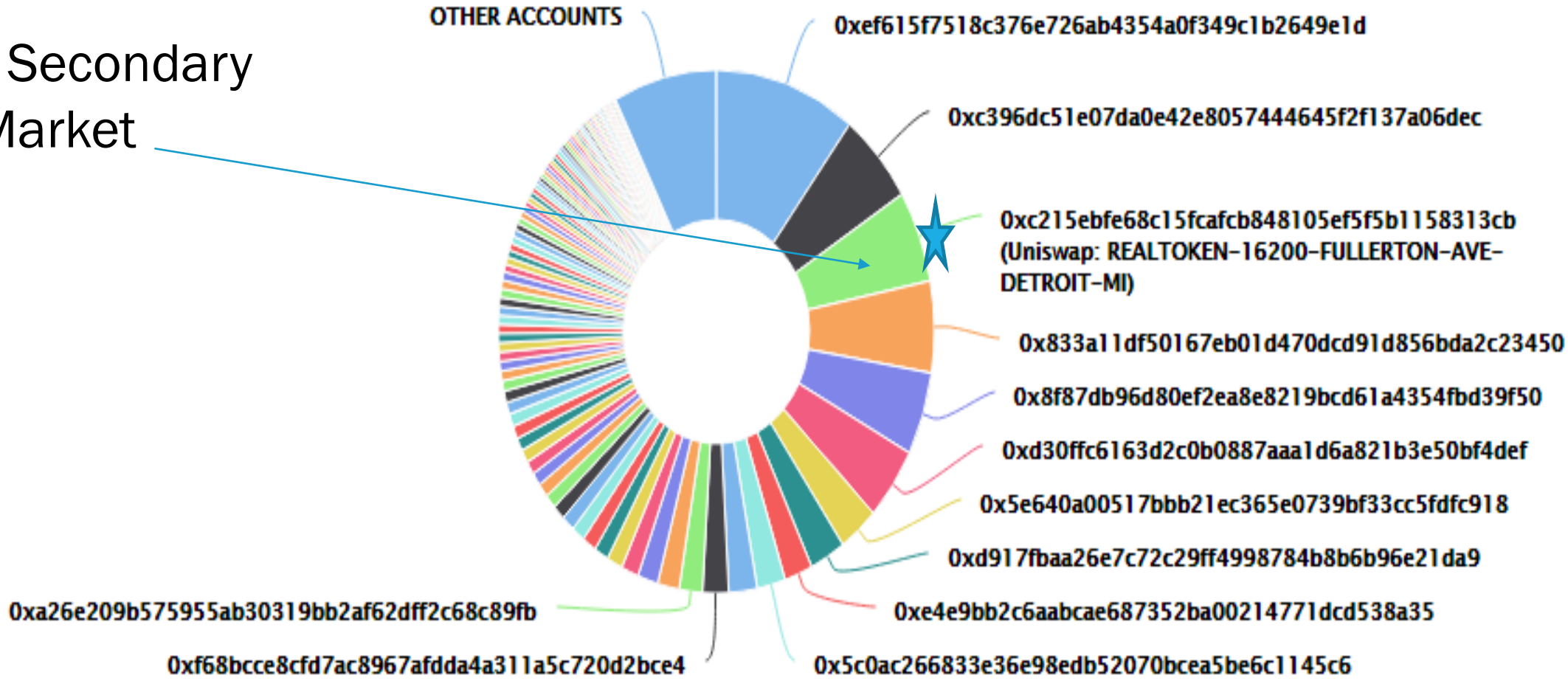
The top 100 holders collectively own 92.36%
(3,509.57 Tokens) of RealToken 16200 Fullerton Ave Detroit MI

Token Total Supply: 3,800.00 Token | Total Token Holders: 279

RealToken 16200 Fullerton Ave Detroit MI Top 100 Token Holders

Source: Etherscan.io

Active Secondary Market



SOCIAL AND MARKET IMPACT

- RealT Statement on why Detroit.
  - “Detroit, one of the fastest growing major cities in America and best kept real estate secrets, is rich with history, and possesses a colorful cultural fabric. Despite being among the 15 largest metro areas in the US, Detroit drivers spend the least amount of time in traffic during peak periods. Beyond automotive innovation, Detroit is home to dozens of startup incubators, and is surging on Inc.’s list of top 50 cities to start a business*. Root for the Lions, Tigers, Pistons and Red Wings, or enjoy the outdoors with over 200 miles of hiking trails nearby, 9 state parks, and over 3200 miles of coastline to explore. There’s something for everyone here, because Detroit is for everybody.”
- Vast majority of marketplace are Detroit homes.
  - Many are section 8
- Properties are inexpensive; section 8
  - Especially during Covid, section 8 has been a large benefit (consistent payments, government underwriting)
- Buying up real estate with interested capital partners will help redevelop neighborhoods; appreciation to property values

CONCLUSION

- Blockchain Innovation
- Tenants can buy equity
- Long term appreciation value
- Efficient rent Dispersal
- Quality of secondary market, enabling liquidity.
- Ease of use
- Everybody can be an investor
- Private and restricted public equity

QUESTIONS/ADDITIONAL RESOURCES

- RealT.co
- Ask me anything
  - Seriously