Lightning Network Data

Ambitious, Not Reckless

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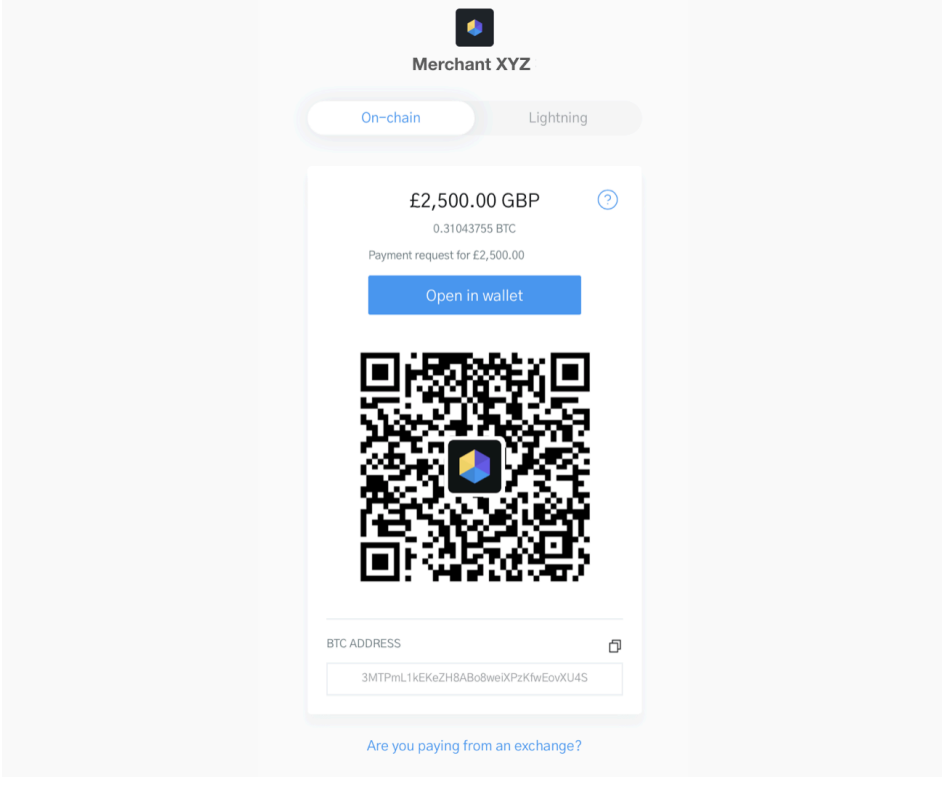
About OpenNode

OpenNode provides Bitcoin payment infrastructure for businesses everywhere:

- Processes on-chain Bitcoin transactions
- Processes instant Bitcoin transactions via the Lightning Network
- Leverages banking/exchange relationships to convert merchant funds from BTC to local currency



Lightning Network Data

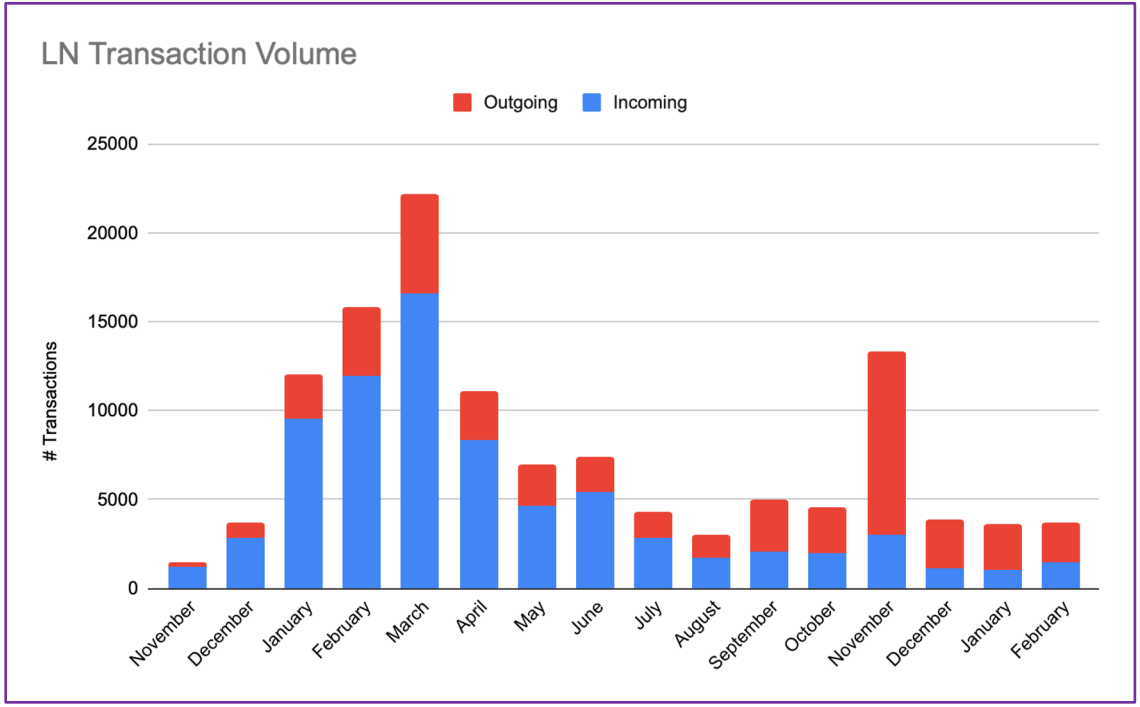
- Transactions
- Channels
- Routing & Fees

March 5, 2020

Lightning Network (Public)	?
Total Capacity	872.57 BTC
Capacity Value	$7.79M
Total Nodes	6,489
Total Channels	35,978
Tor Capacity	350.27 BTC
Percentage Tor Capacity	40.1%
Tor Nodes	1,856

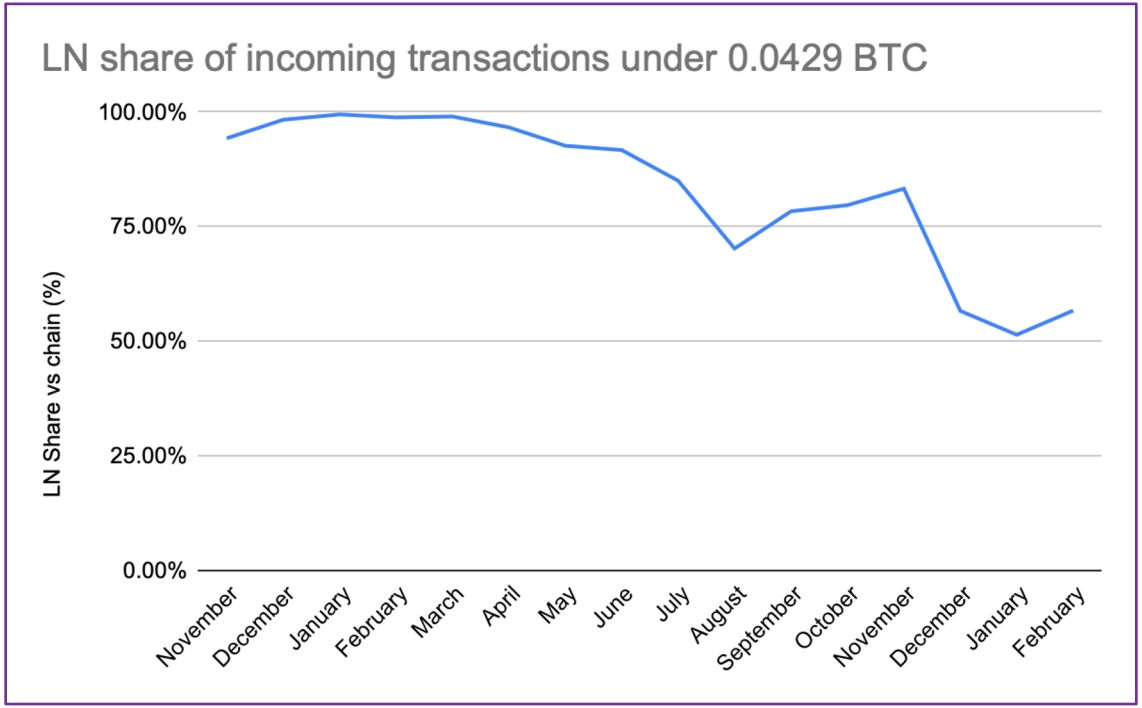
LN Transaction Volume

- Over 120K transactions processed
- Sparked 1st wave of Lapps (LN spin, Poketoshi, Kriptode, LN chess)
- Mostly Lapp volume, dies off after hype



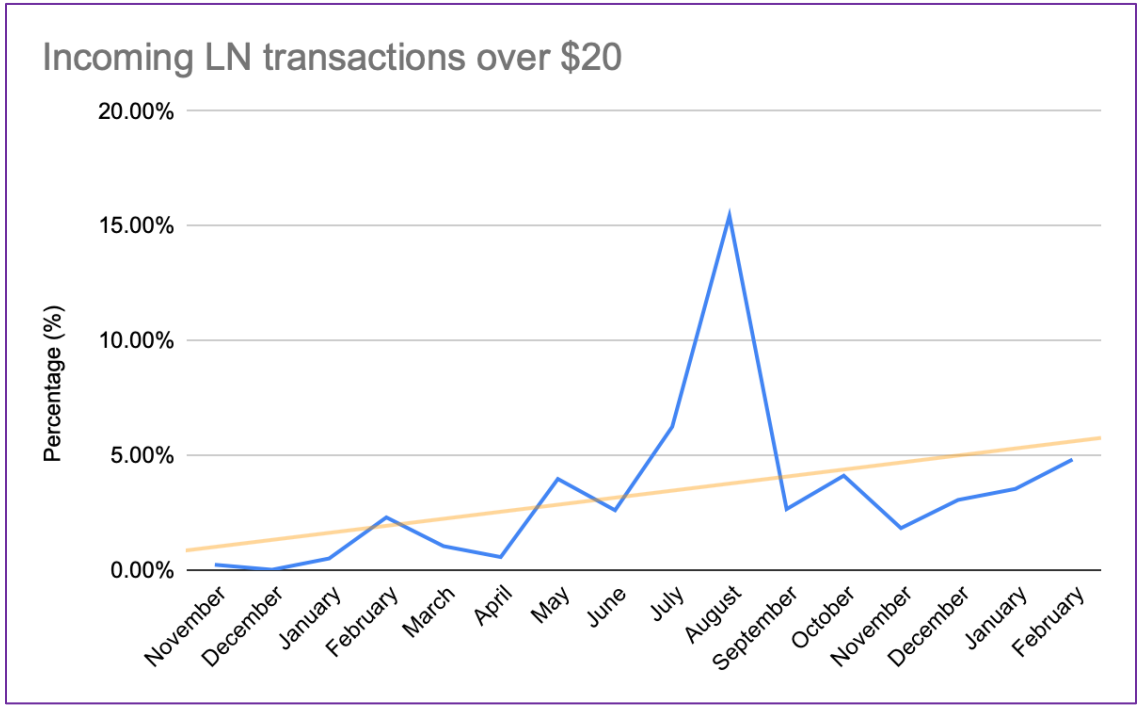
LN Transaction Volume

- In early stages, OpenNode served a number of niche Lightning enthusiasts
- As our merchant base grows, transaction values are increasing, and share of LN transactions is decreasing
- LN transactions currently represent less than 1% of total transaction value



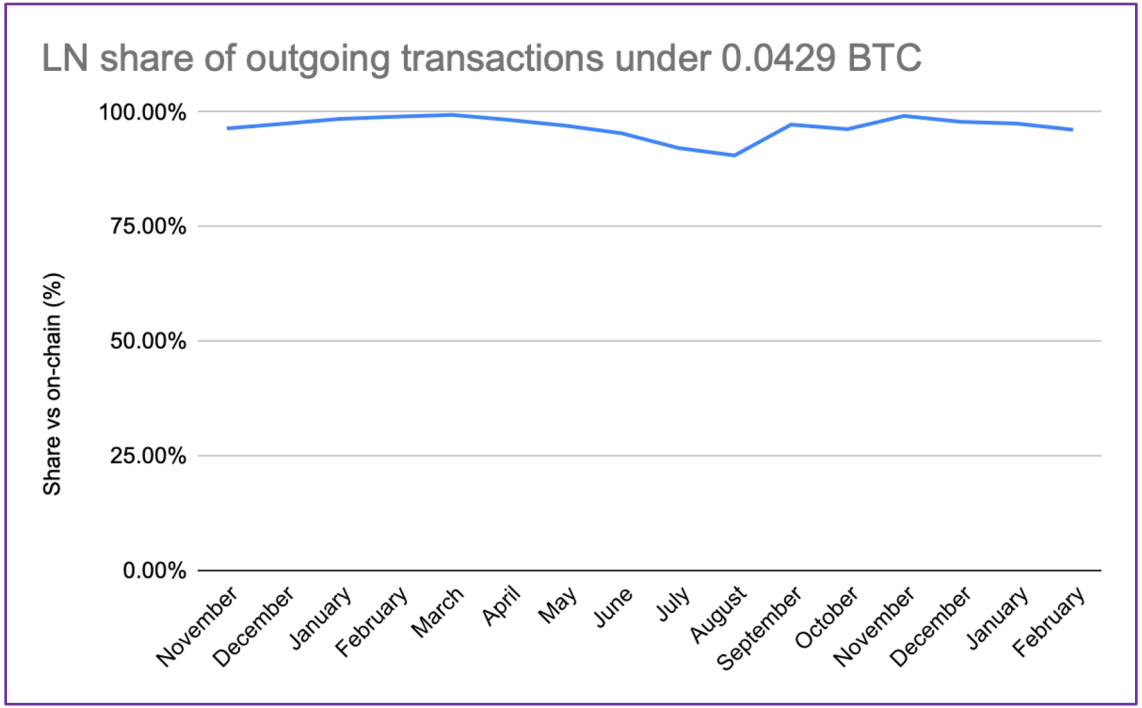
LN Transactions - Incoming

- Payment transaction volume no longer driven by Lapps
- LN usage now growing in ecommerce/services
- We expect LN use to grow significantly with new on-ramps



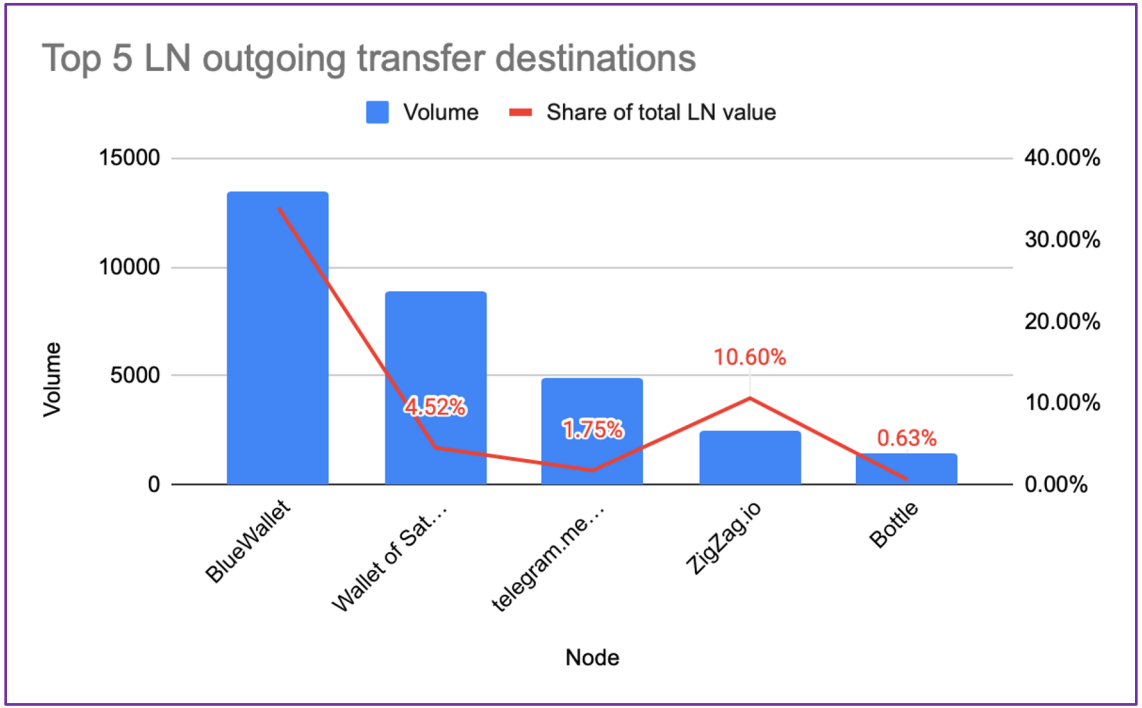
LN Transactions - Outgoing

- LN continues to dominate our Payouts
- Over 90% of Payouts are done through LN (driven by Lapps)
- Total transaction value is small when compared to on-chain & Bank transfers (less than 1%)



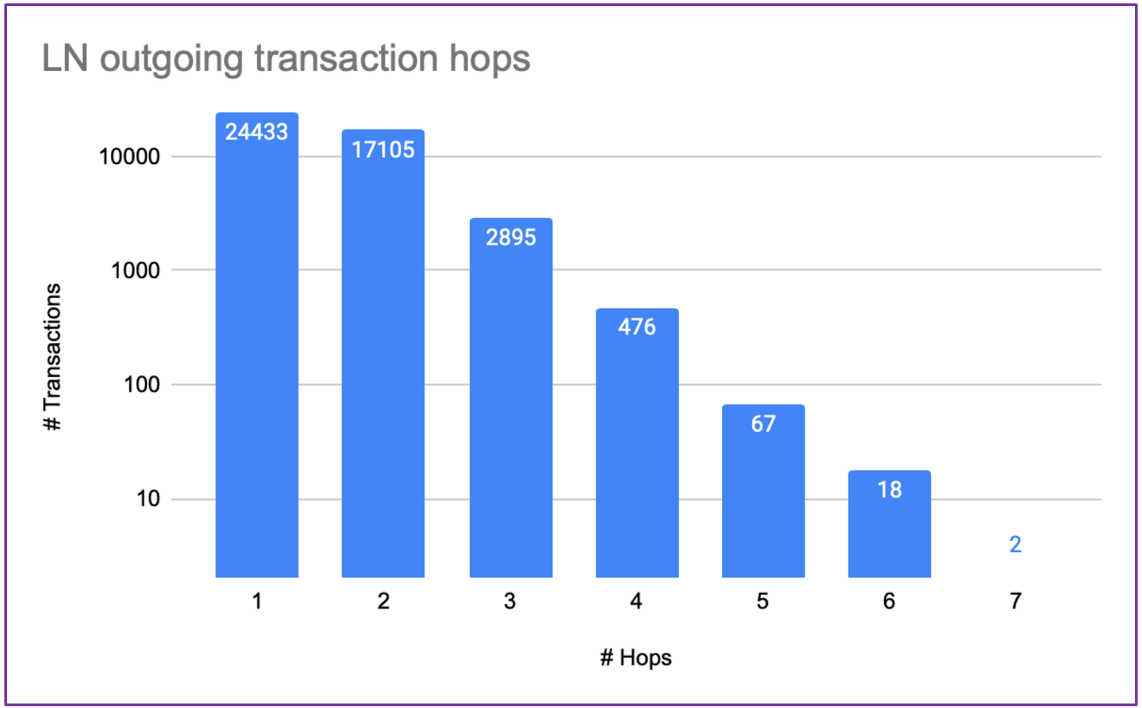
Wallets – Share of Outgoing LN Transactions

- Custodial services
- BlueWallet leads both in transaction volume & value (34% share)



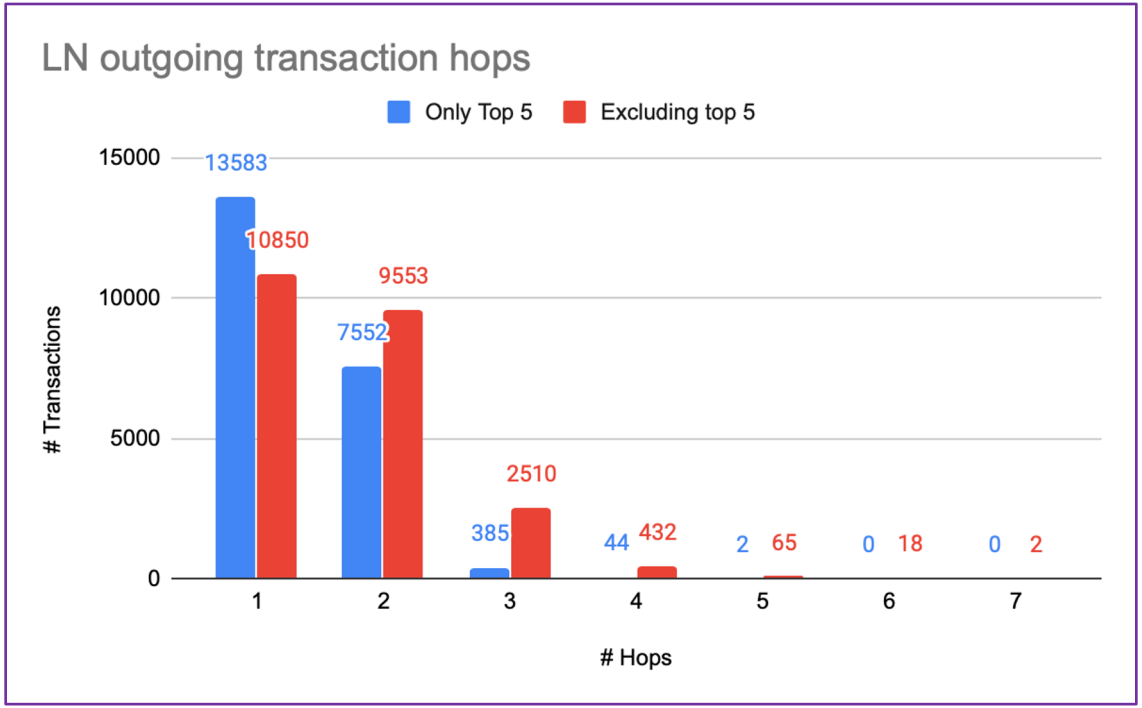
LN Outgoing Transaction Hops

- Most transactions are processed via 2 Hops (92%)
- In rare cases, we've observed as many as 7 Hops!

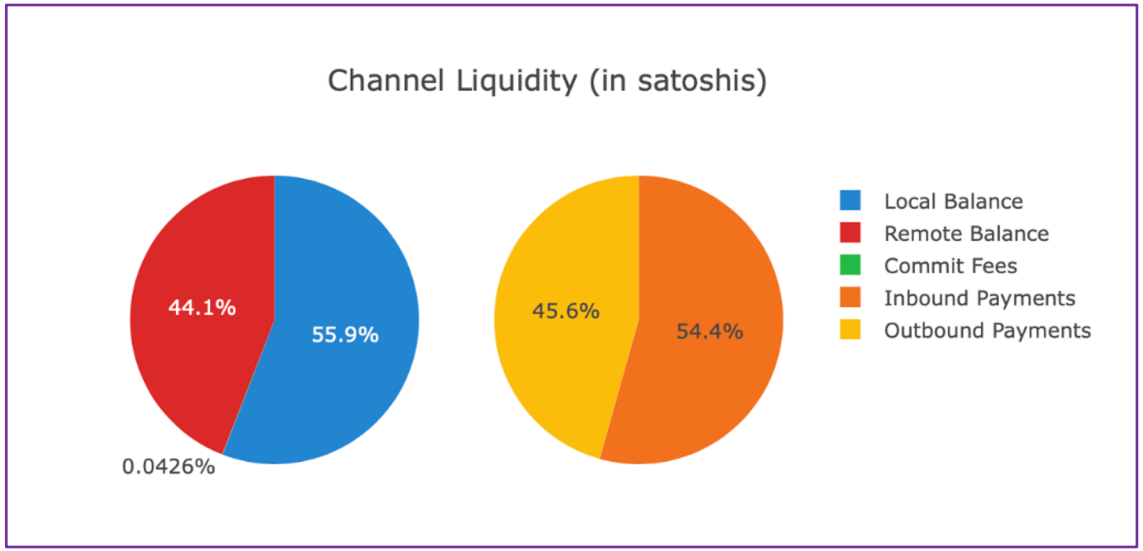


LN Outgoing Transaction Hops

- 87% of payments use at most 2 hops
- OpenNode is efficiently connected!

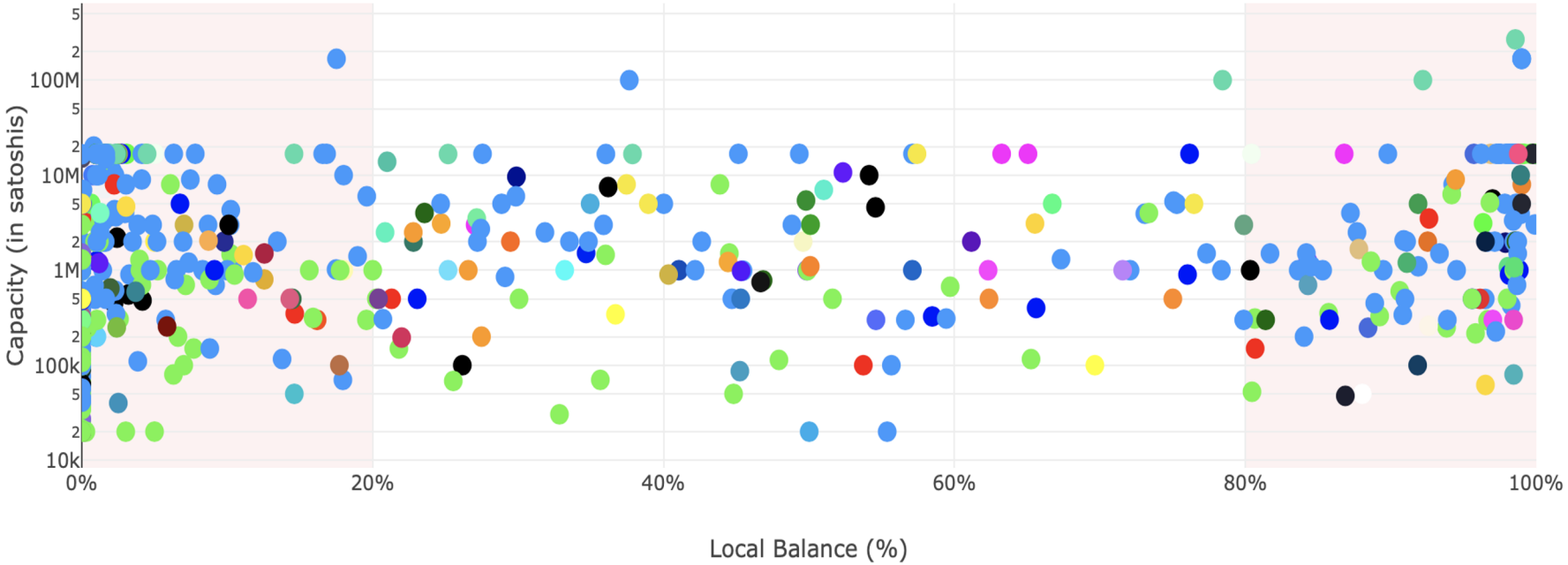


08 Channels

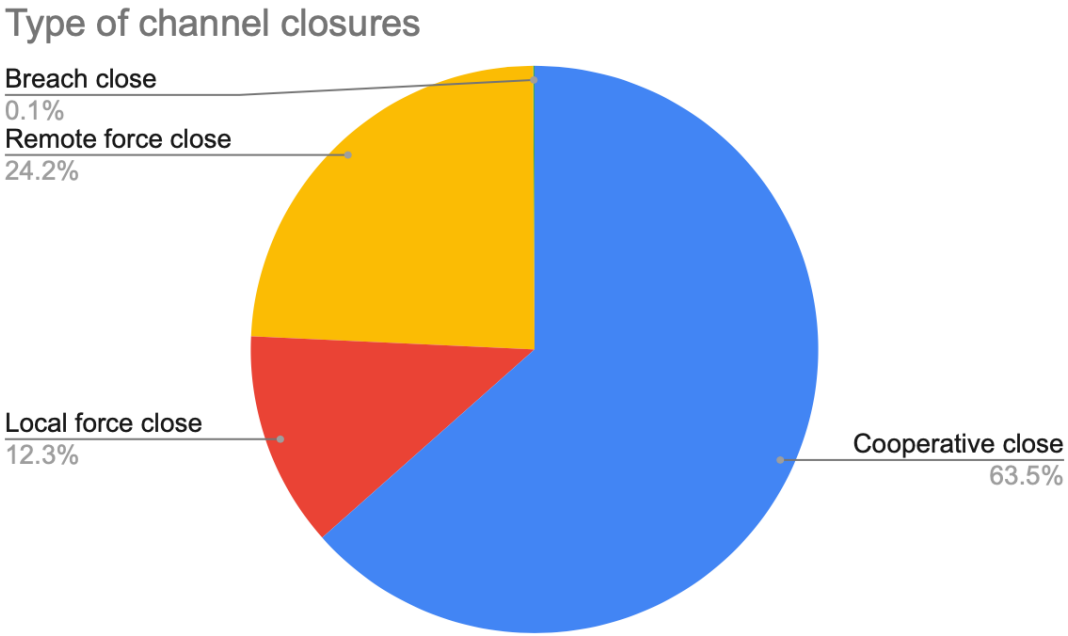


- 822 Channels currently open
- Liquidity balanced
- Inbound vs Outbound payments well balanced

Channel Capacity vs. Relative Balance

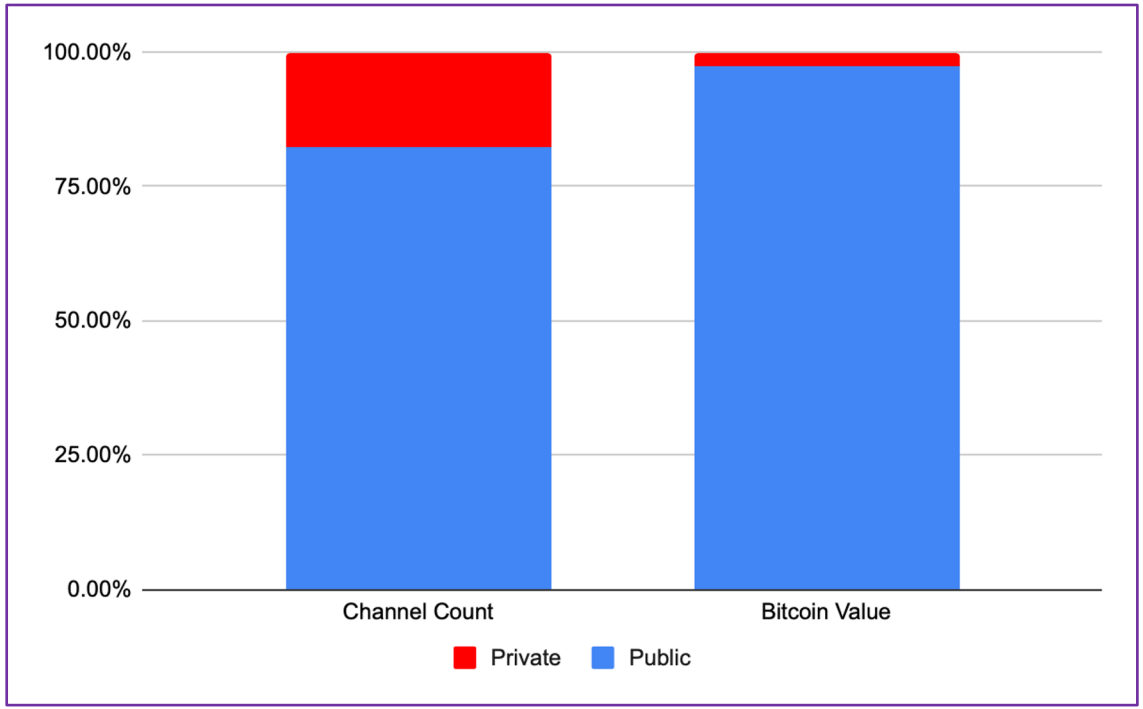


Channel Closures



- 36.5% Force-closes
- 1 Breach close (July 2018)
- 1 Abandoned channel
- Avg channel duration: 24166 Blocks – 5 ½ months

Public vs. Private Channels



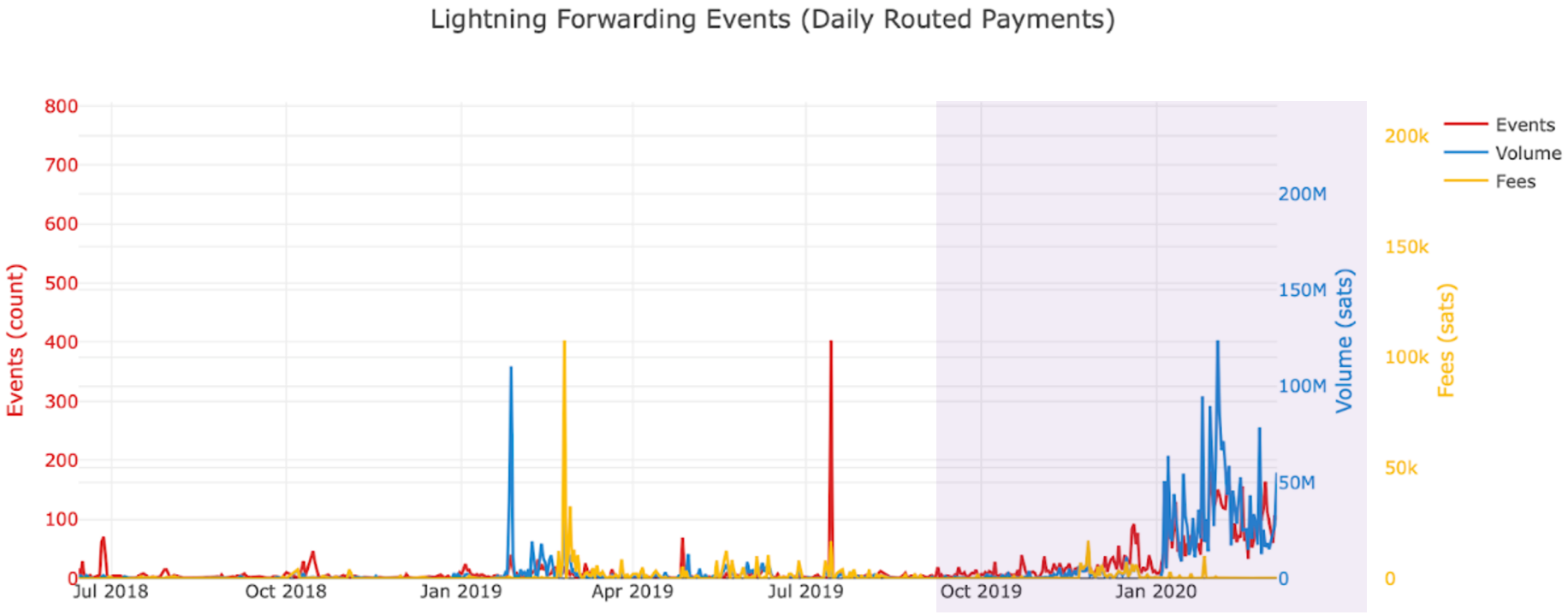
Bitmex Research

- 72% Public channel count
- 82% Public channel value

Our data

- 82% Public channel count
- 97 % Public channel value
- Avg Public channel value is 8x bigger than private

Routing & Fees



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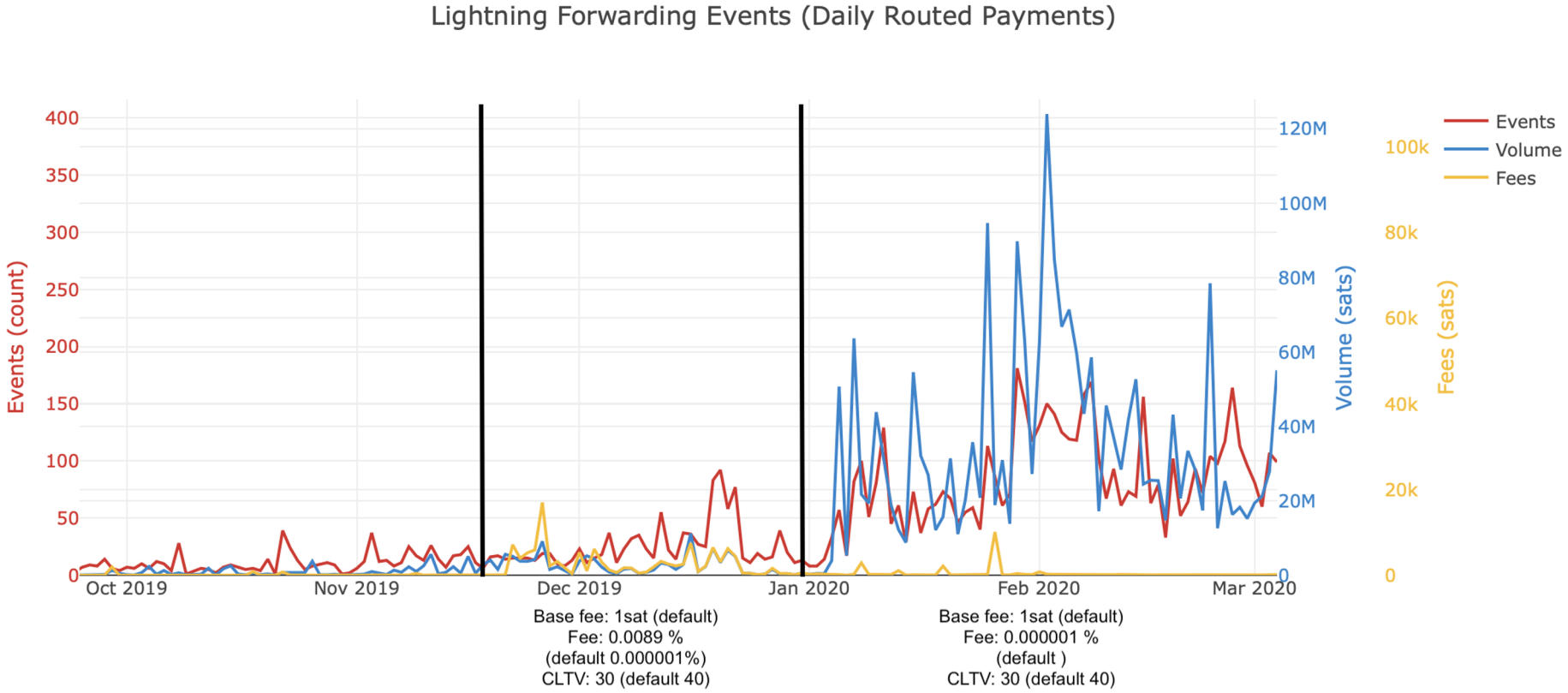

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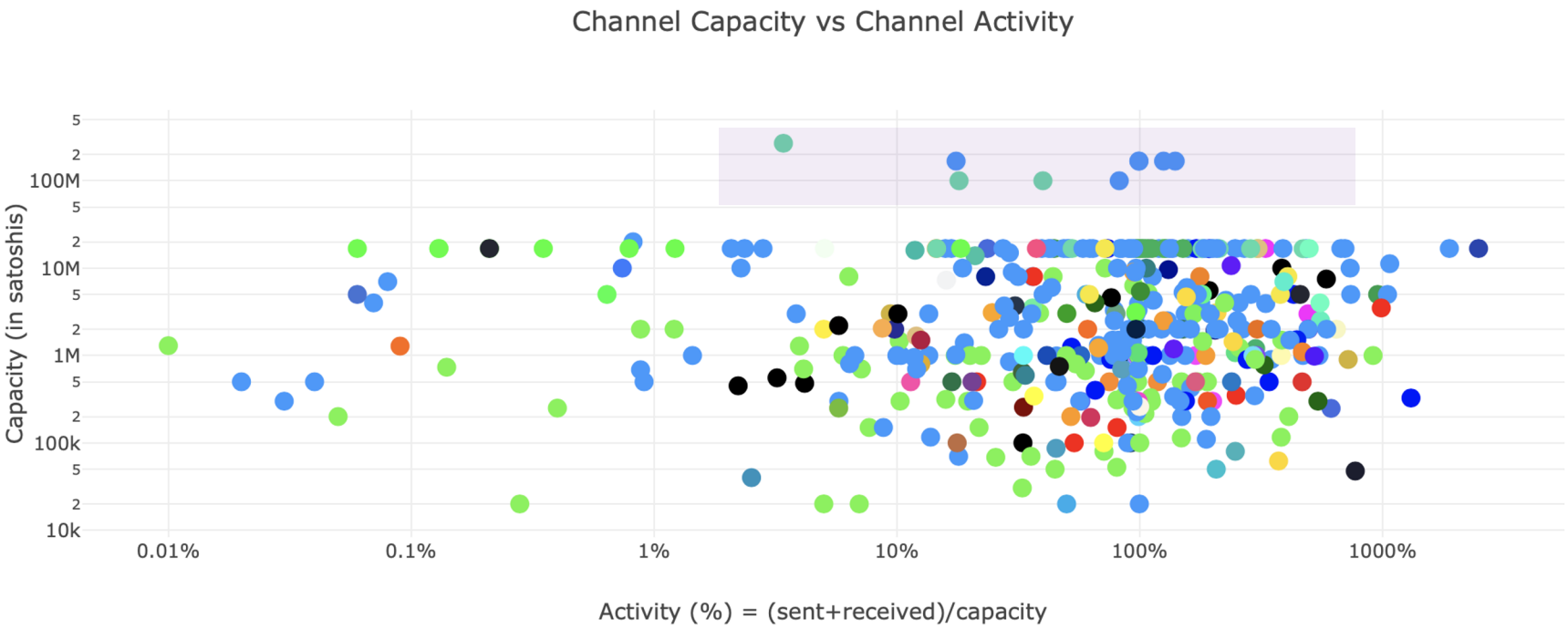

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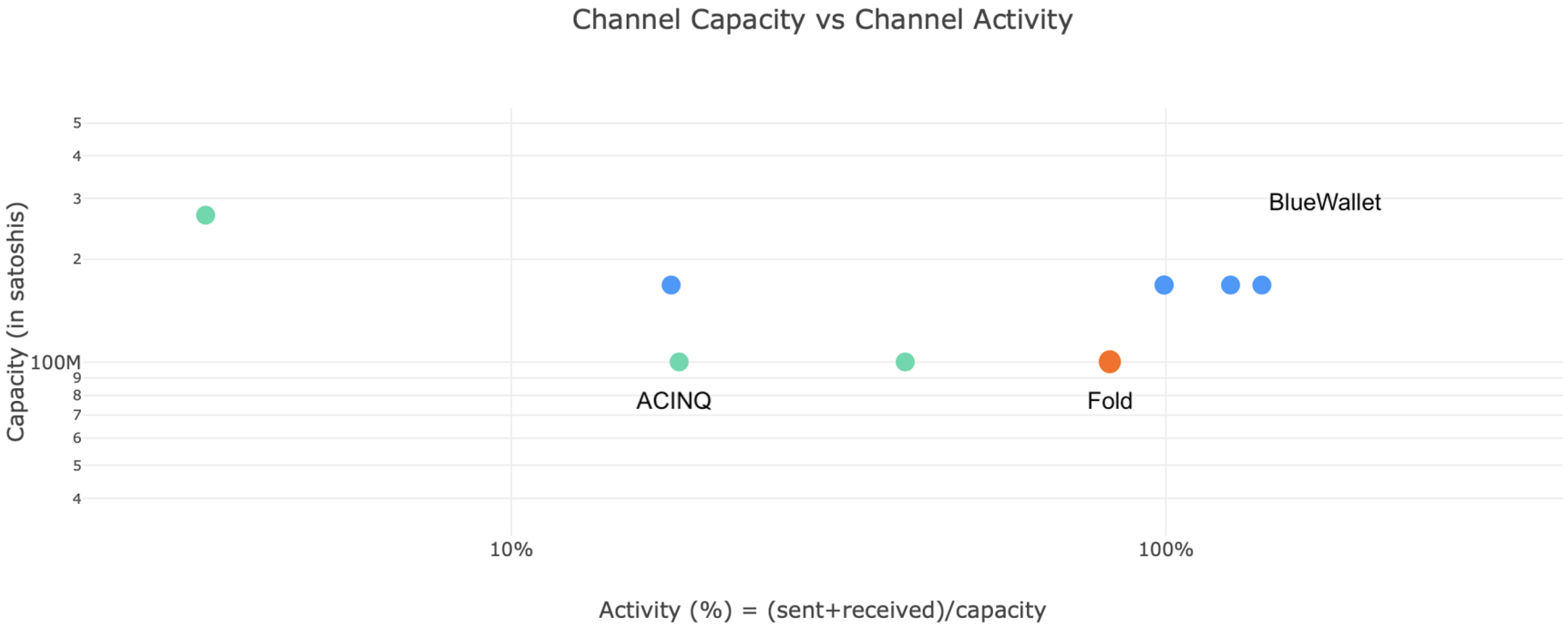
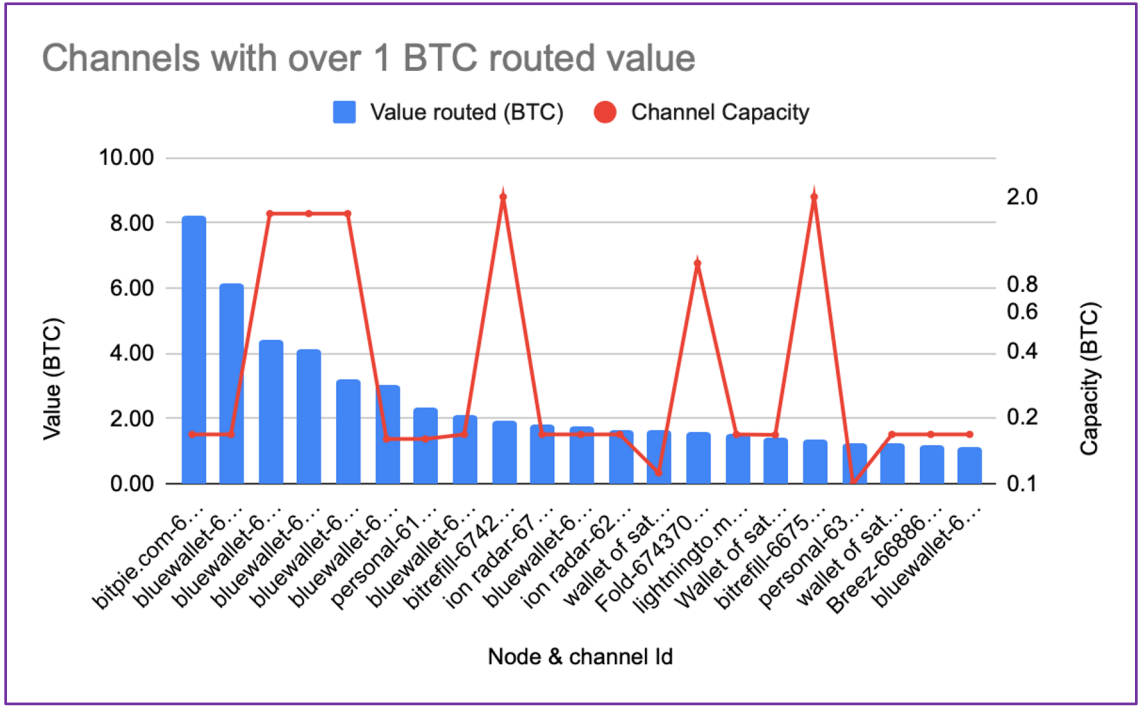


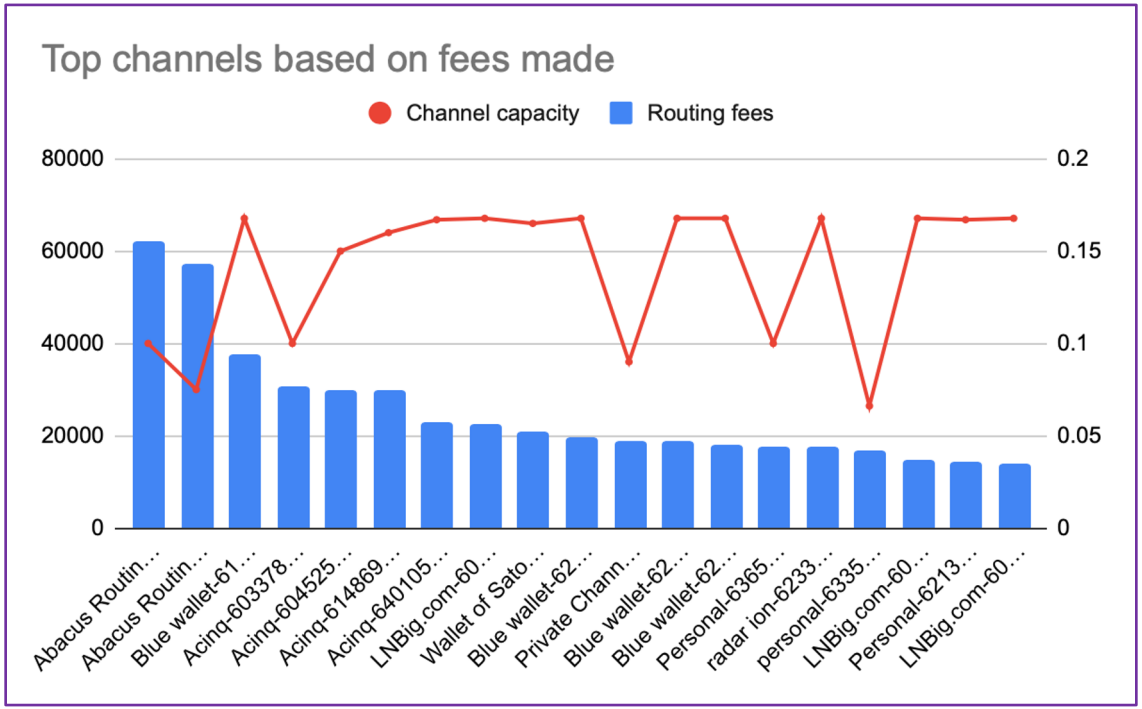
Routing & Fees

- 1% of Total channels routed over 1 BTC
- 70% are non-wumbo channels
- BlueWallet is the most common channel owner
- 2 channels are non-business nodes/services



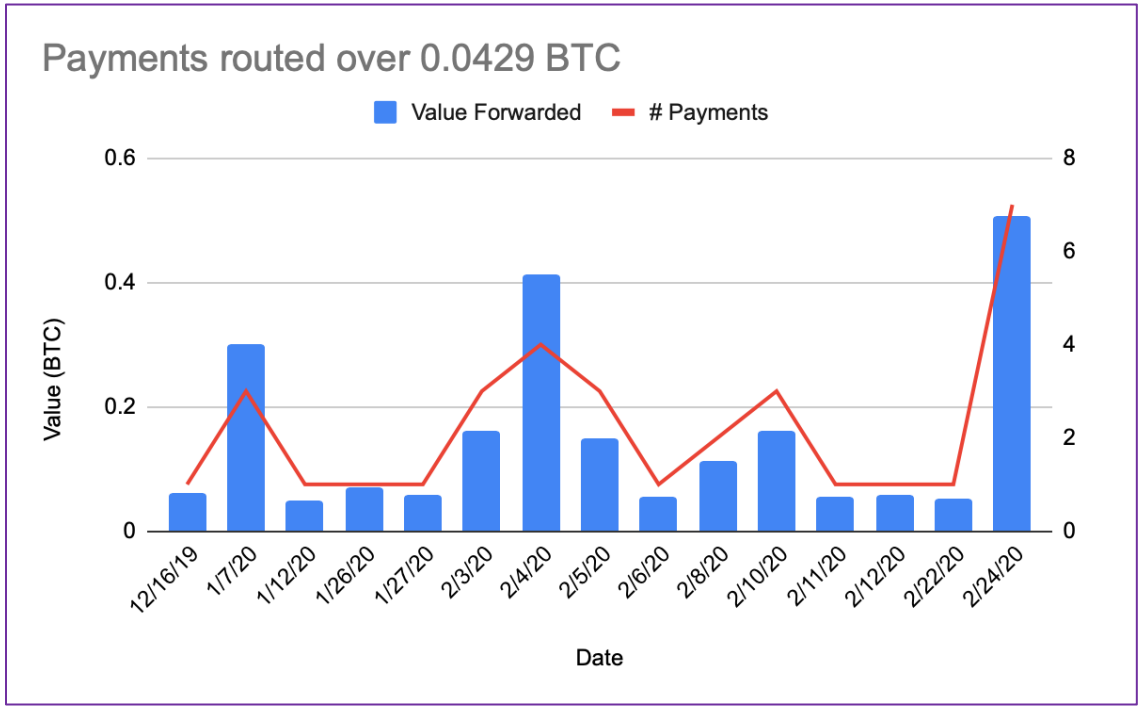
Routing & Fees

- ACINQ & BlueWallet own most of the top earning channels
- 1 Private channel is among the top earners
- Abacus Routing owns the 1st and 2nd most profitable channels - they were the initiator



Routing & Fees

- Service/node started accepting payments over the default limit
- Largest single forwarded amount: 0.05 BTC
- Previous hops: ACINQ, BlueWallet, LNBig
- Outgoing channels: ACINQ, Bitfinex, Bitrefill



Conclusions

- Shift from micro-transactions to larger transactions size on the network
- Most people use custodial wallets, but ACINQ & Breez are getting traction
- Increasing demand for Wumbo channels (high channel activity); however, AMP may change this
- Lots of opportunities in the fee market
- Some node operators lifted default payment limit size

“The most reckless aspirations have sometimes led to extraordinary success.”

Luc de Clapiers