

Zilliqa (ZIL)

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 **Zilliqa TL;DR**

- Blockchain-as-a-Service (BaaS) software company & public DLT
- Technology enables the next wave of Fintech, Open Finance
- Targeting \$7.2B in revenue addressable market by 2025
- Zilliqa (ZIL) could reach \$3.9B & Company could reach \$590M in value by 2025, if successful
- **Risks:** Failure to gain share, product-market-fit, crypto risks

Key Statistics

Token Price	\$0.019
Range (52W)	\$0.027/ \$0.003
Market Cap	\$196.2M
Circulating Supply	13.5B ZIL
Volume (24H)	\$7.1M

Source: Coinmarketcap, Messari
Data as of 10/21/20

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Zilliqa: Making a competitive play to capture the ASEAN Open Finance Market

Zilliqa Research Pte. LTD. (“the Company”) is the software and services company behind development of the Zilliqa DLT Network. The Singapore-based Company was founded in 2017 and is focused on refining Zilliqa’s DLT technology and deploying the platform with a focus on financial services applications in the ASEAN (“Association of Southeast Asian Nations”) region. **Zilliqa (ZIL)** is a public Distributed Ledger Technology (“DLT”) platform for decentralized applications (“dApps”). It employs sharding technology to achieve high levels of throughput and maintain low transaction fees.

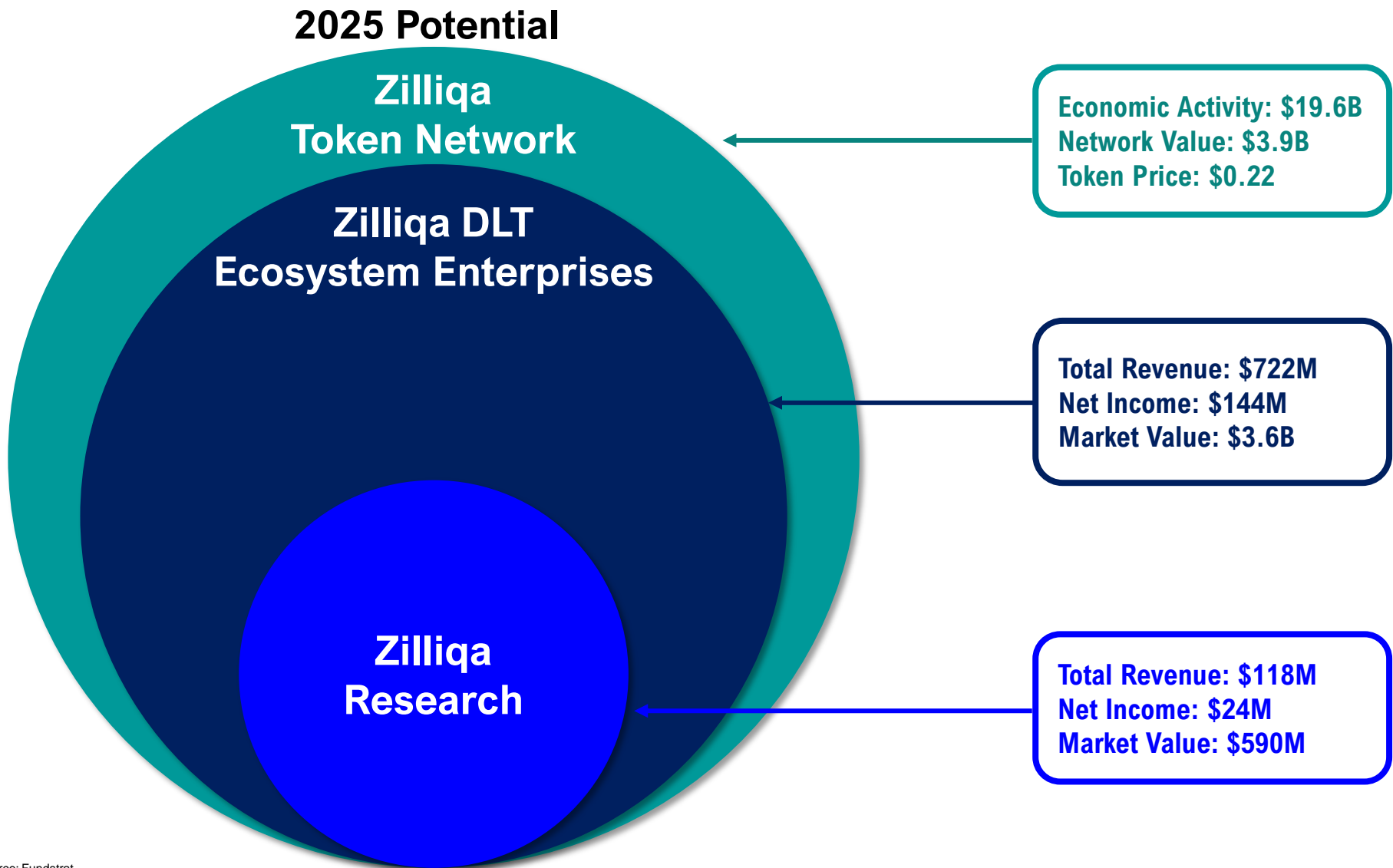
- **Zilliqa’s DLT offers a differentiated Blockchain-as-a-Service (BaaS) computing infrastructure platform.** DLTs like Zilliqa allow businesses to leverage cloud-based solutions to build, deploy and use apps, smart contracts and other blockchain functions without hosting the infrastructure. Zilliqa’s sharded DLT enables high transaction throughput, with historically low fees, and offers a new smart contracting language, Scilla, to make its network safer for deploying enterprise-grade applications.
- **First from Banking to Fintech, and now from Fintech to OpFi, Zilliqa looks focused on the right place.** Zilliqa’s DLT is designed to support a range of use cases, but the team is currently laser focused on targeting the biggest one, banking. DLT based financial services, which we refer to collectively as Open Finance (“OpFi”), represent a cost-effective way to reach underserved markets and improve upon current infrastructure, while delivering unimagined financial applications through open APIs and new data access models. Disruption opportunities span payments, remittances, lending, investing, insurance and more.
- **ASEAN OpFi represents a \$7.2B revenue opportunity for ecosystems like Zilliqa by 2025 (Slide 34).** We estimate that OpFi companies employing DLT in the region could capture 19% share from the digital banking market which represents a meager 2% of the overall ASEAN financial services market. ASEAN’s financial services market is ripe for disruption. Despite being collectively the 5th largest global economy, with rapid economic growth rates and high levels of internet penetration, ASEAN suffers from low levels of financial inclusion, with 75% of the population either unbanked or underbanked.
- **Enterprises within the Zilliqa ecosystem could be worth \$3.6B in 2025 by capturing 10% of ASEAN OpFi (Slide 35).** Companies in the Zilliqa DLT ecosystem would generate \$722M in revenue if our base model input is correct. We estimate the total value of areas where Zilliqa’s DLT can reduce costs to be ~\$360M. Of these costs, we estimate enterprises save 50% using DLT, with the remaining \$180M paid as fees to the Zilliqa DLT Network and Zilliqa Research. We assume industry net profit margins of 20% and a 25x P/E for our ecosystem valuation.
- **Zilliqa’s DLT network and the ZIL token could be worth \$3.9B and \$0.22 using our 2025 model assumptions (Slide 37).** From an assumed \$64B serviceable market using Zilliqa’s DLT, we assume 30% use the ZIL token to facilitate the financial function(s) being served (i.e. using ZIL for payments or as loan collateral) and a 5x model velocity to reach our valuation. We assume 50% or \$90M of DLT fees go to network nodes.
- **As RedHat is to Linux, Zilliqa Research is to its DLT, which could earn the Company \$118M in revenue and value it at \$590M by 2025, should it successfully execute to our base model inputs (Slide 41).** If Zilliqa Research can capture 50% of the DLT related fees (25% of savings) through provision of consulting and support services to companies building on its open-sourced network, it would earn the Company \$90M in Enterprise Support revenue. The Company could earn an additional \$9M in network fees and \$19M in block rewards, for a total of \$28M in BaaS revenue from its expected 10% Zilliqa DLT node ownership. Valuation assumes 20% profit margins on \$118M in revenue with a 25x P/E.
- **Blockchain accelerator funds drive ecosystem growth.** The launch of Zilliqa Capital, a proposed \$50M - \$200M ecosystem fund, holds the potential to strengthen the platform’s position as a leading regional player in ASEAN and APAC OpFi markets, if successfully launched (Slide 55).
- **What could go wrong?** DLT adoption in general could lag, resulting in underperformance. Zilliqa could fail to gain market share against competing DLT platforms with greater traction or alternative features. Failure to reach our assumptions (Slide 42). It’s early to estimate the market size and our approach may prove to be inaccurate as new markets emerge or fail to materialize. The Company may fail to gain product market fit and generate revenue from customers. Crypto is a volatile asset class with the potential for any token network to eventually lose significant value.

Bottom line: Successful deployments in 2020 would validate the Company’s go to market strategy and the DLT’s utility in a production environment. We’ll continue looking for signs of increasing fundamental network growth, while keeping an eye on how strategic partnerships evolve over the coming months.



EXECUTIVE SUMMARY: Zilliqa ecosystem could collectively be worth \$8.1B by 2025 based on our base case model assumptions

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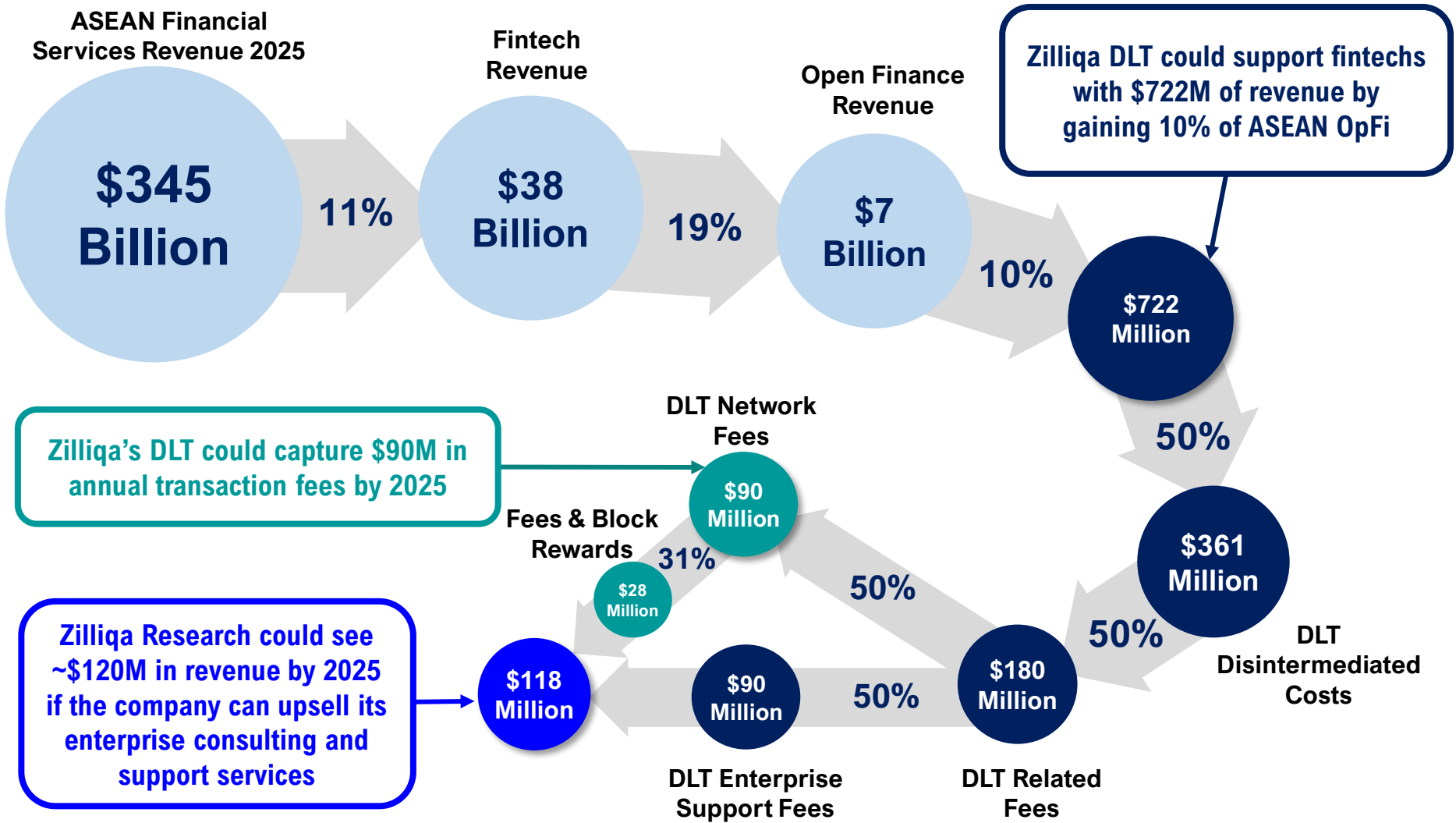


Source: Fundstrat



EXECUTIVE SUMMARY: Zilliqa Research could capture ~\$120M in revenue by 2025

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Source: Fundstrat



EXECUTIVE SUMMARY: Zilliqa highlights

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Attractive Market Opportunity

- Zilliqa is attacking the Open Finance market within the ASEAN region
- Open Finance has shown rapid growth that's reminiscent of Fintech in 2014
- ASEAN's combined \$3T GDP would rank it as the 5th largest country in the world
- Region has a large, underbanked, and internet enabled population

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Innovative Software Business Model

- Zilliqa Research's software & service + public DLT network monetization model is the next evolution of the Red Hat + Linux open-source software business model

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Differentiated Technology Platform

- Zilliqa's Distributed Ledger Technology (DLT) platform is sharded, scalable and ready for enterprise financial services applications

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Demonstrated Business Traction

- The Company has demonstrated the ability to deploy its tech, grow a consumer ecosystem, build industry partnerships and generate early sales revenue traction

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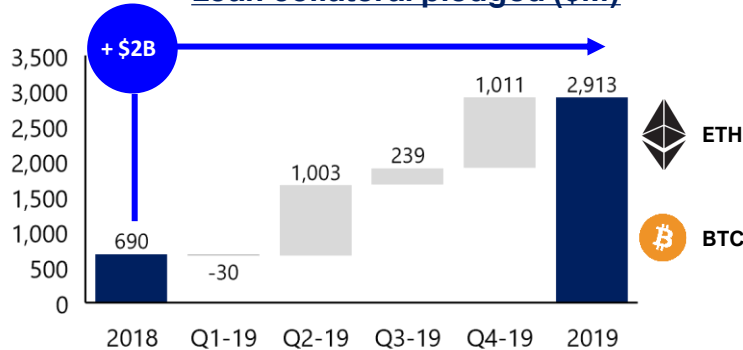
Source: Fundstrat



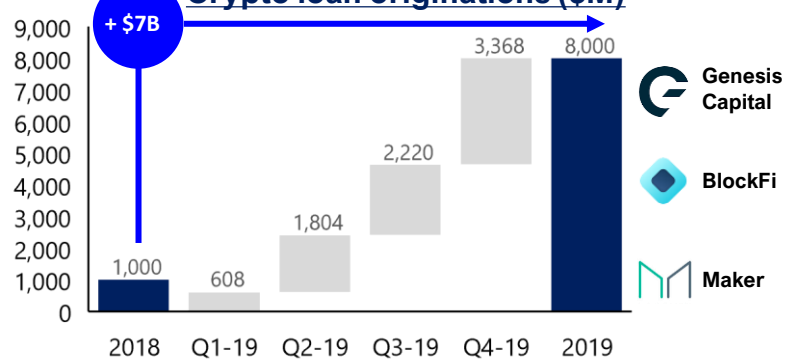
EXECUTIVE SUMMARY: Zilliqa is targeting Open Finance in ASEAN

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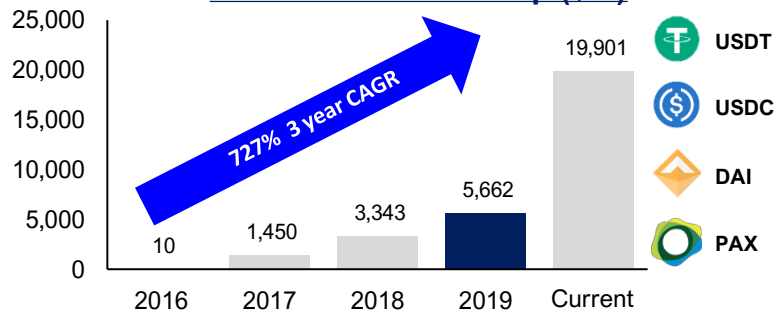
Loan collateral pledged (\$M)



Crypto loan originations (\$M)



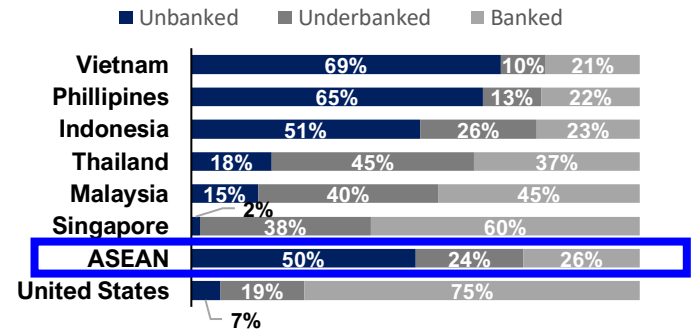
Stablecoin Market Cap (\$M)



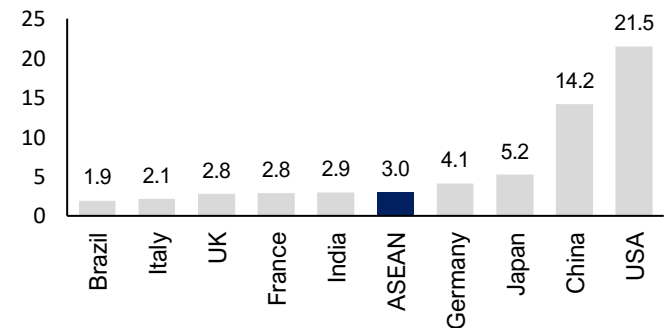
Major ASEAN countries of focus



Banking Penetration across ASEAN 2019



Top 10 countries by GDP (\$) 2019




Source: Fundstrat, Credmark, Coinmetrics, Bain \$ Co., IMF; **Unbanked:** Lack access to a bank account



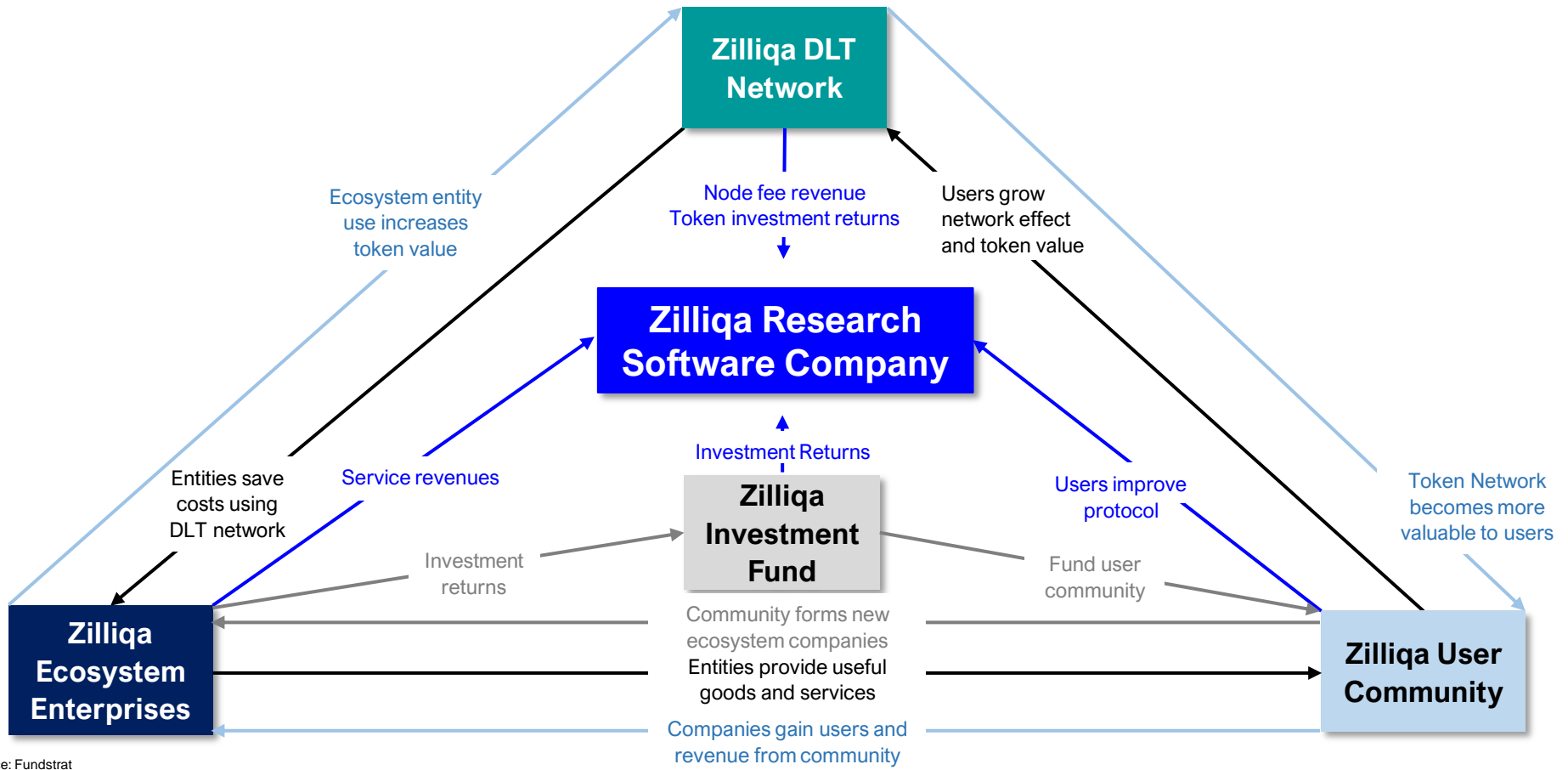
EXECUTIVE SUMMARY: The Zilliqa ecosystem is the next evolution in open-sourced software-based network-effect-driven business models

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 **Software Company + Open-Source Software**



 **Software Company + Open-Sourced Software + Public Crypto DLT Network**



Source: Fundstrat



EXECUTIVE SUMMARY: Zilliqa DLT Network has strong technical features and successful deployments in 2020 could validate go to market strategy

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Pros

Cons

Technical

Market

<ul style="list-style-type: none"> • Core sharding technology results in high transaction throughput and low transaction fees • Scilla programming language removes certain language vulnerabilities to improve smart contract safety • PoW + PBFT consensus protocol is resource efficient and facilitates fast transaction finality • Development effort led by academics who were among first to research blockchain network sharding • Large network with an estimated 1,700+ independent nodes running • Active community and growing application ecosystem is attractive for developers 	<ul style="list-style-type: none"> • Focus on ASEAN OpFi market creates opportunity to secure dominant position in an expanding market • Ecosystem partnerships showcase Zilliqa Research's go to market strategy. Further monetization of 2020 rollouts could validate company value proposition • Zilliqa Research dedicated significant time upfront to refine its sharding technology before deployment. This could give it a leg up on other platforms that are just now taking measures to increase scalability • Rapid transaction finality and enhanced smart contract safety features could drive enterprise adoption
<ul style="list-style-type: none"> • Transaction throughput untested in real-world production environment • Scilla smart contract language could be a barrier to acquiring new developers who are more familiar with other programming languages • Zilliqa Research still runs a meaningful percentage of nodes on the network 	<ul style="list-style-type: none"> • Zilliqa is in competition with several different DLT platforms with similar attributes/capabilities • Zilliqa prioritized focusing on tech and only recently launched smart contracts on its platform in Jun '19. To date, it has less adoption compared to other larger DLT platforms that launched as early as 2015 • The dApp ecosystem is still in very early stages and use cases could be slow to emerge

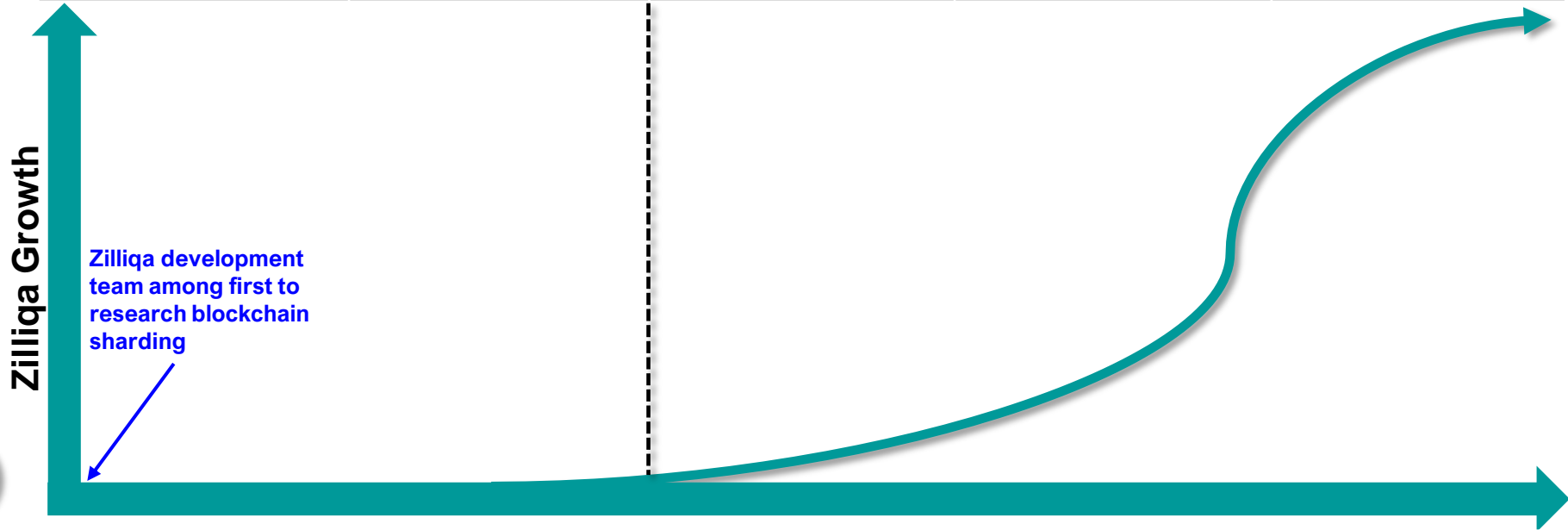
Source: Fundstrat



Project Roadmap: 2020 marks a shift in primary focus towards deploying DLT technology

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Founding Research & Development	Initial Launch Product Deployment	Go To Market Proof of Concepts	Product Market Fit Customer Traction	Rapid Growth Growth & Scaling
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	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025+
Market	<ul style="list-style-type: none"> Zilliqa Research formed 		<ul style="list-style-type: none"> Token generation event ZilHive program launched Strategic partnerships formed 							
Technical	<ul style="list-style-type: none"> "A Secure Sharding Protocol For Open Blockchains" research paper published 		<ul style="list-style-type: none"> Mainnet launched Smart contracts launched on Mainnet 		<ul style="list-style-type: none"> Transaction throughput validated in production Developer toolkits released Privacy features added 		<ul style="list-style-type: none"> Network becomes more decentralized Layer 2 development 			<ul style="list-style-type: none"> Cross-chain functionality with public and enterprise chains

Source: Fundstrat, Zilliqa



EXECUTIVE SUMMARY: Recent strategic initiatives could be catalysts for ecosystem

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1) Seed Node Staking and Governance Token Launch

- Zilliqa introduced non-custodial staking in October 2020 for its seed nodes. By delegating (“locking up”) ZIL tokens to staked seed nodes, token holders can earn a portion of block rewards.
- In conjunction with the introduction of staking, Zilliqa introduced a governance token, gZIL which is earned as a reward for staking and aims to grant long-term token holders the ability to become decision makers in the ecosystem.
- More information on staking and the gZIL governance token can be found [here](#).

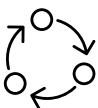
Seed nodes: Special nodes that do not participate in validating transactions (consensus) but instead archive historical transaction data. Nevertheless they serve as direct access points (for end users and clients) to the core Zilliqa network and are important in providing services like block explorers.

Seed Node Staking; The idea of staking is to pre-qualify seed hosts by requiring them to stake a certain minimum amount of ZILs for the duration of the service provided. Within this duration, the host presents regular proofs of its ability to provide the service and in return, is rewarded a proportional amount of ZILs. This approach aims to both promote widespread participation and ensure an acceptable level of performance from participants.

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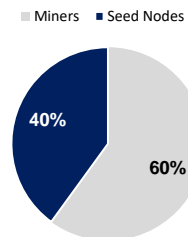
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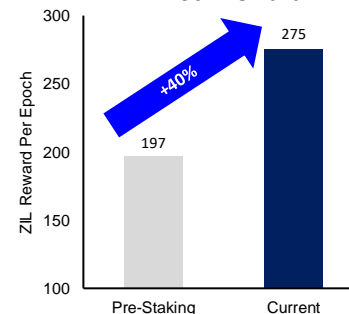
2) Changes to Network Economics:

- In conjunction with the introduction of seed node staking, seed node operators’ share of block rewards was increased from 5% to 40%. Additionally, the global block reward was increased by 40% and miners share of the reward was reduced from 95% to 60% (resulting in a net decrease in actual mining rewards per epoch of ~12% for miners).
- Additionally, transaction (“gas”) fees which were previously remitted directly to miners, will now be recycled into the pool of block rewards and paid out on a 60/40 basis to miners and seed nodes, respectively.

Block Reward Distribution



Block Reward



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3) Launch of Decentralized Exchange, ZilSwap:

- Zilliqa launched its first decentralized exchange “DEX”, ZilSwap, in October 2020.
- ZilSwap allows users to trade ZIL or ZRC tokens directly on the Zilliqa blockchain from their wallets and employs an automated market maker on top of a permissionless liquidity protocol.
- Token holders now have the opportunity to earn ZIL by adding tokens to liquidity pools on ZilSwap and earning as market makers.



Source: Fundstrat, Zilliqa



EXECUTIVE SUMMARY: Downside risks to our thesis

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- It is early to estimate the size of the addressable market, and our valuation approach may prove to be inaccurate should some predicted markets fail to materialize or other assumptions not hold.
- Zilliqa Research could be slow to or ultimately fail to execute on monetizing its consulting, support, and training services offering.
- Competition for strategic partnerships from other DLT companies could result in lower than expected market share or reduced pricing power.
- Technical malfunctions and potential attacks on the network could stifle adoption of Zilliqa's DLT technology.
- Emergence of Central Bank Digital Currencies (CBDCs) could slow adoption of public DLT technology and result in fewer revenue generating opportunities for platforms such as Zilliqa.
- Regulators in certain jurisdictions may choose to view ZIL as a security, possibly leading some network participants to exit the marketplace for compliance concerns.
- The opinions expressed in this report are the beliefs of the author at the time of publication. Fundstrat does not commit to updating this report and is not responsible for any independent investment decisions made by a reader, based on this and / or any other sources of information.

Source: Fundstrat



EXECUTIVE SUMMARY: Upside potential to our thesis

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- Zilliqa's DLT could achieve a larger share of the ASEAN Open Finance market than our 10% base case assumption.
- Successful launch of the Zilliqa Capital ([Slide 55](#)) ecosystem fund could accelerate ecosystem growth and provide upside that is not included in our current forecasts.
- Zilliqa Research could achieve dominant positioning in the ASEAN market and expansion into other major markets such as India could follow sooner than expected.
- Penetration into other end markets such as digital advertising, supply chain management, and gaming could spur increased adoption and value capture that is not included in our current forecast.
- Forward looking regulatory policies in key jurisdictions could prove to be a key differentiator and accelerate strategic partnership formation and market share capture.
- The platform could achieve a higher level of decentralization sooner than expected thus reducing the likelihood of network downtime or technical malfunctions.

Source: Fundstrat



Introduction to Zilliqa



Overview: Zilliqa Research & DLT Network



Co-Founder and President:	Amrit Kumar
Headquarters:	Singapore
Founded:	2017

Summary

- **Zilliqa Research Pte. LTD.** (“the Company”) is the software and services company behind the development of the Zilliqa DLT platform. The Company was founded in 2017 when it was spun out of Anquan Capital, a DLT research company.
- **Zilliqa DLT Network** is a public distributed ledger technology (“DLT”) platform for decentralized applications (“dApps”). The platform employs network sharding technology to achieve high levels of throughput and launched smart contracts on its mainnet in Q2 ’19.
- **Upcoming catalyst:** Successful deployments in 2020 would validate the Company’s go to market strategy and the DLT’s utility in a production environment.

Company Objectives

- Monetize Zilliqa’s DLT technology by providing advisory services to companies building on Zilliqa’s DLT platform
- Pursue strategic partnerships and seek revenue generating opportunities across Zilliqa’s DLT ecosystem
- Establish Zilliqa as a leading ASEAN DLT platform with a focus on Open Finance
- Improve and optimize DLT technology to facilitate widespread adoption

DLT Platform Features

- High transaction throughput and low fees at scale using sharding technology
- Low transaction latency (typically 45 – 90 seconds) and fast transaction finality
- Specialized smart contract programming language (Scilla) aims to reduce smart contract vulnerabilities

DLT Value Proposition

- Generate cost savings for businesses and reduce the need for third-party intermediaries
- New business model creation such as asset tokenization, lending platforms, and low-cost payments/remittance businesses
- High throughput and low fees support adoption across several verticals

Source: Fundstrat, Bitwise



Business Model: Zilliqa is the next evolution in open-sourced software



Software Company +
Open-Sourced Software +
Public Crypto DLT Network



Red Hat

Software Company +
Open-Sourced Software



Microsoft

Software Company +
Proprietary Software



1990

2000

2010

2020

2030+

Source: Fundstrat

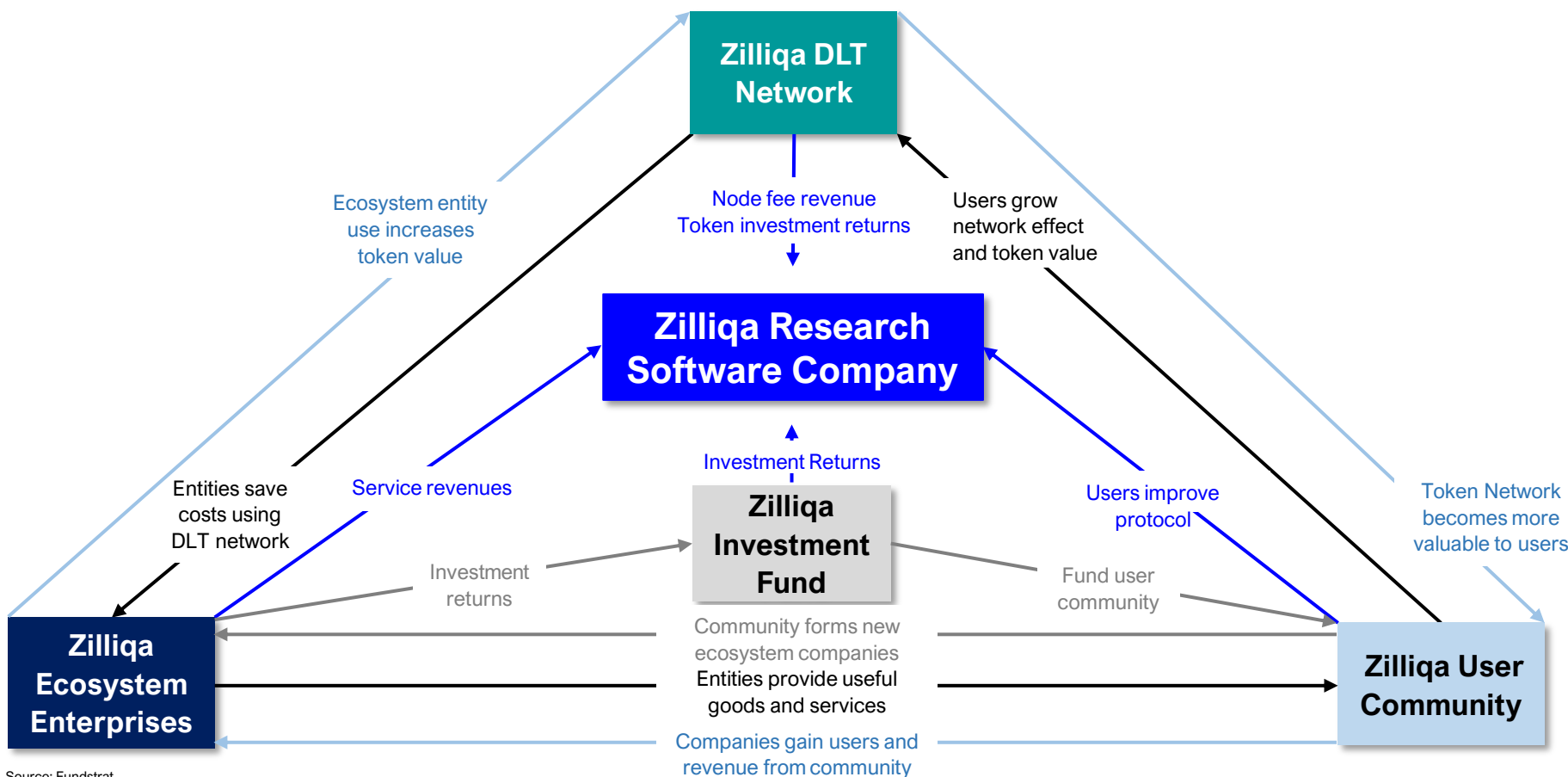


Ecosystem: Network effect and value creation feedback loop design

Blockchain-based open-source software business models produce unique network effects that drive a value creation feedback loop.

- Assuming Zilliqa Research executes on its efforts to grow the Zilliqa ecosystem, network effects could begin to kick in whereby increased usage of the DLT generates value at both the Company and DLT Network/Token levels.

Figure: Zilliqa Research value creation feedback loop



Source: Fundstrat



Zilliqa Research: Revenue monetization opportunities

As the development arm behind Zilliqa’s public DLT network, Zilliqa Research is uniquely positioned to capitalize on the growth of the ZIL ecosystem.

- The Company’s future monetization levers span Enterprise Support Revenue and Blockchain-as-a-Service Revenue.

Figure: Zilliqa Research Revenue Model Potential



Source: Fundstrat



Zilliqa Ecosystem Enterprises: Select collaborations



- **Company:** Regulated provider of e-money and e-payment services in Singapore, offering payment products for personal and business needs
- **Why Zilliqa:** Deliver cost-saving solutions for digital businesses by removing friction in payments and providing greater transparency
- **Milestone:** Launch of Singapore dollar (XSGD) stablecoin in Q1 '20 on Zilliqa blockchain



- **Company:** Alliance of capital markets intermediaries aiming to deliver enhanced liquidity for private market securities through digitization
- **Why Zilliqa:** Leverage Zilliqa smart contract tokenization capabilities to build out regulated security token platform
- **Milestone:** Expected launch of security token platform in Q3 '20



- **Company:** Ad-Tech company aiming to eliminate fraud, build trust in media supply chains, and maximize return on investment for companies
- **Why Zilliqa:** Scalability and cost effectiveness of Zilliqa to facilitate ad verification
- **Milestone:** First customers expected to be onboarded in Q3 '20



- **Company:** One of the world's largest media agencies, responsible for a large majority of GroupM/WPP's global marketing billings and campaigns
- **Why Zilliqa:** Enhance supply chain reconciliation processes for Mindshare's client, Pepsico
- **Milestone:** Blockchain trial generated an estimated 28% boost in supply chain efficiency by using Zilliqa smart contracts

Source: Fundstrat, Zilliqa, TheDrum



Zilliqa DLT Network: Technology features

Performance

- Zilliqa achieved 2,800+ transactions per second in a test net environment
- Low transaction fees enable use of Zilliqa DLT for high volume and low value transactions

Decentralization

- Permissionless consensus with an estimated 1,700+ independent nodes on the network
- Zilliqa team is taking steps to reduce its participation in the network
 - Number of nodes run by Zilliqa Research has declined from ~1,600 in Mar '19 to ~670 currently and further efforts to achieve higher levels of decentralization are underway

Security

- Proof of Work (PoW) to establish network identities and prevent sybil attacks
- Practical Byzantine Fault Tolerance (PBFT) to reach network consensus
- Scilla smart contract programming language aims to improve smart contract safety

Regulatory Compliance

- Zilliqa is adding tools that enable dApps to comply with applicable KYC/AML regulations
- Strategic ecosystem partners have received or are awaiting regulatory approval for product roll outs

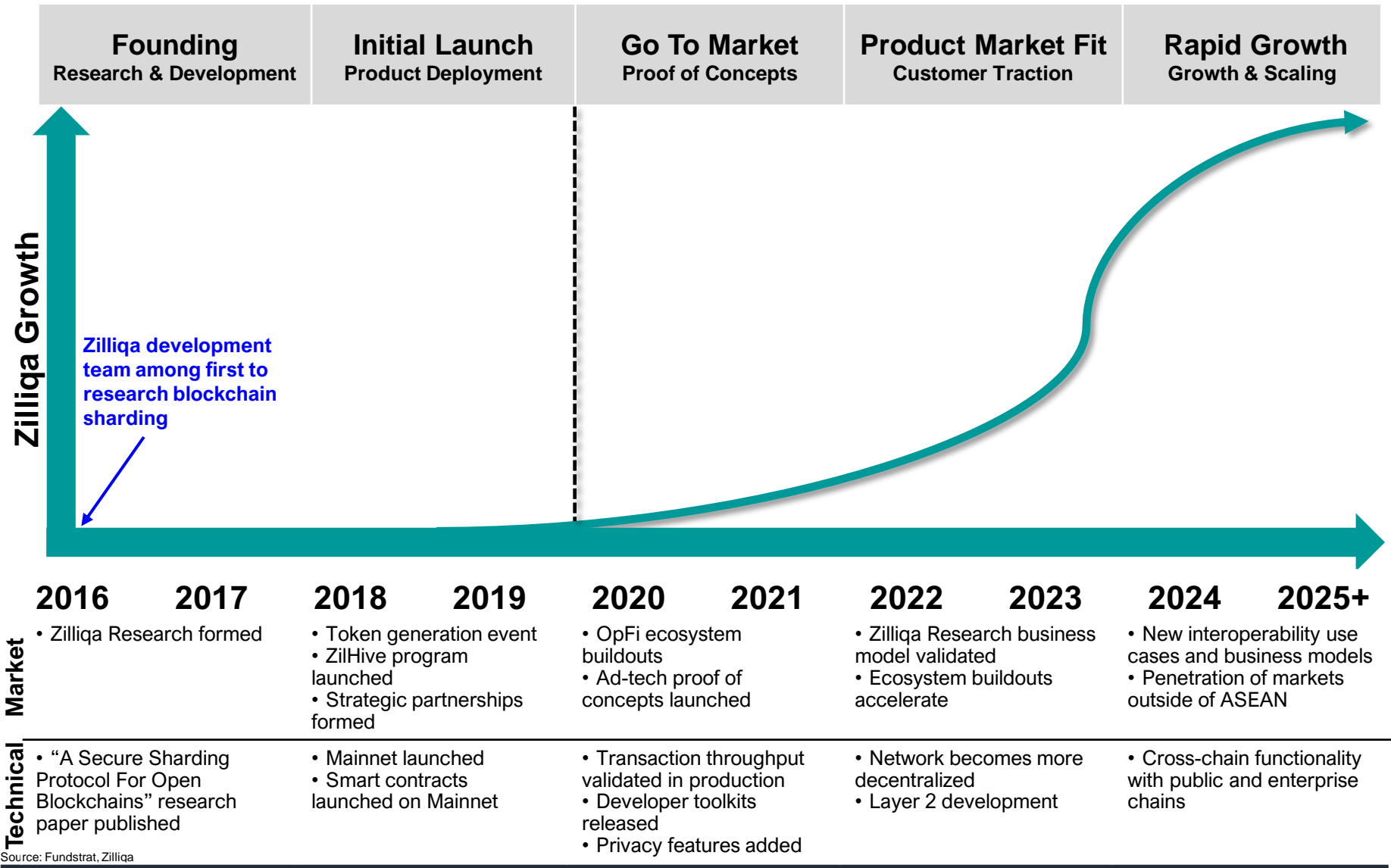
Governance

- Changes to the protocol are currently decided by the core development team. Going forward, material protocol changes will be voted on by super majority of nodes

Source: Fundstrat



Project Roadmap: 2020 marks a shift in primary focus towards deploying DLT technology



Source: Fundstrat, Zilliqa



Zilliqa's leadership is comprised of business professionals and academics with extensive experience building and investing in technology businesses

Business Leadership

Technical Leadership



Juzar Motiwalla
Co-Founder and Chief Strategist

- Seasoned venture capitalist with extensive investment and board-level experience with global startups
- Involved with multiple leading US and Japanese firms with successful M&A exits
- Prior to venture capital, Juzar was CEO of a 350-person computer science research lab in Singapore



Colin JG Miles
Chief Commercial Officer

- Seasoned entrepreneur who has built companies across S.E. Asia and Europe
- Previously VP Sales at minimob; Currently Board Director at NextID and AdStamp
- Chairman Emeritus of Mobile Ecosystem Forum (MEF) Asia



Amrit Kumar
Co-Founder & President

- Researcher at National University of Singapore
- PHD in Computer Science from Inria, France
- Published several academic papers on blockchains and smart contracts at top tier conferences such as OOPSLA, ESORICS, DSN



Max Kantelia
Co-Founder & Board Member

- 25+ years' experience building professional services and technology firms in Europe
- Co-Founder of Anquan Capital in Singapore and on the board of Aeriandi and untapt
- Selected by EY as one of Asia's Top 100 FinTech contributors in 2016



Michael Conn
Head of Corporate Development at Zilliqa Research
CEO at Zilliqa Capital

- 20+ years' experience in finance, blockchain, and investments
- Founder, CEO and Director of Ether Capital
- Founder and Managing Partner at Quail Creek Ventures



Saayan Choudhury
Senior Director - Commercial Technology

- Previously Lead Engineer at GroundLabs in Singapore
- Founded a successful computing outsourcing company, Versine
- PhD in Computer Engineering from RMIT University in Australia and an Executive MBA from INSEAD



Market Opportunity



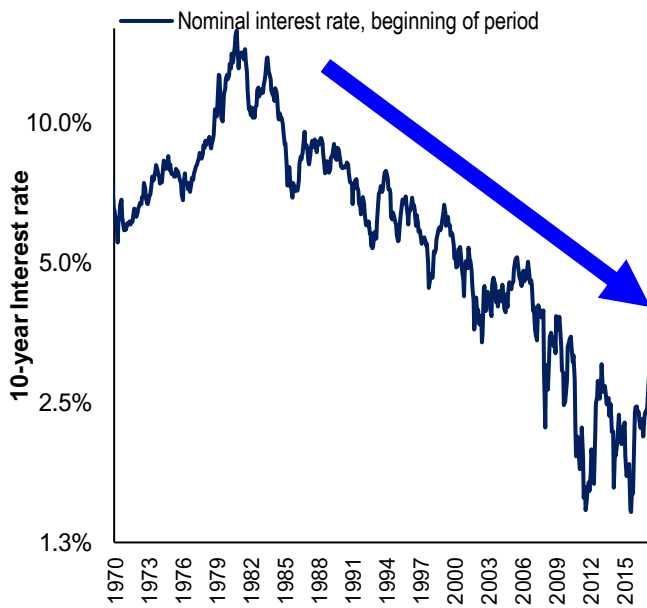
The true cost of the “Financial” system

One would think bank and financial sector profits would generally follow the trend in interest costs of lower rates = lower profits.

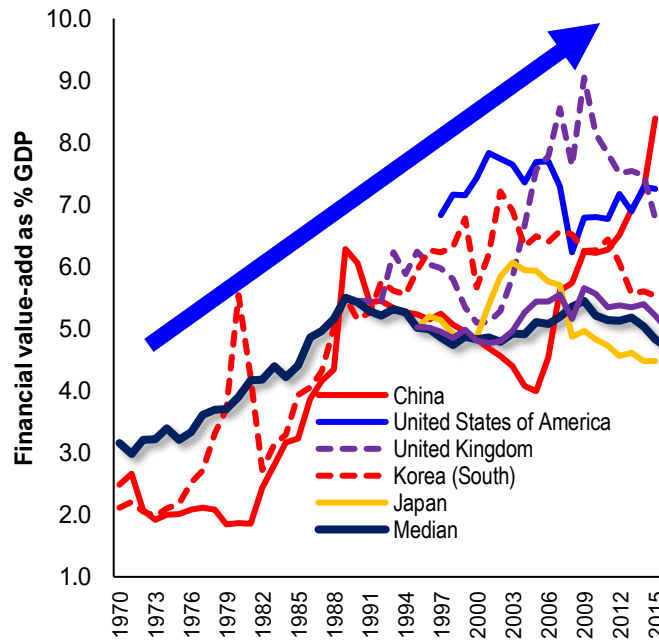
- **But despite falling interest rates, the financial sector’s share of GDP has been increasing, and banks continue to make money regardless, as shown below.**

Figure: US 10-yr yields and Financial Value-Add Since 1970

Since 1970, interest rates have generally been falling...



But the Financial sector has grown despite this...



Banking value capture is **6%** of all GDP.

The average person spends almost **a month** per year (~3.5 weeks) to pay for “right to use” financial system.

Facebook rev per user (ad sales) **~\$25 per year**. For banks, **\$860-\$1,000 annually** (global).

Source: Fundstrat, Bloomberg

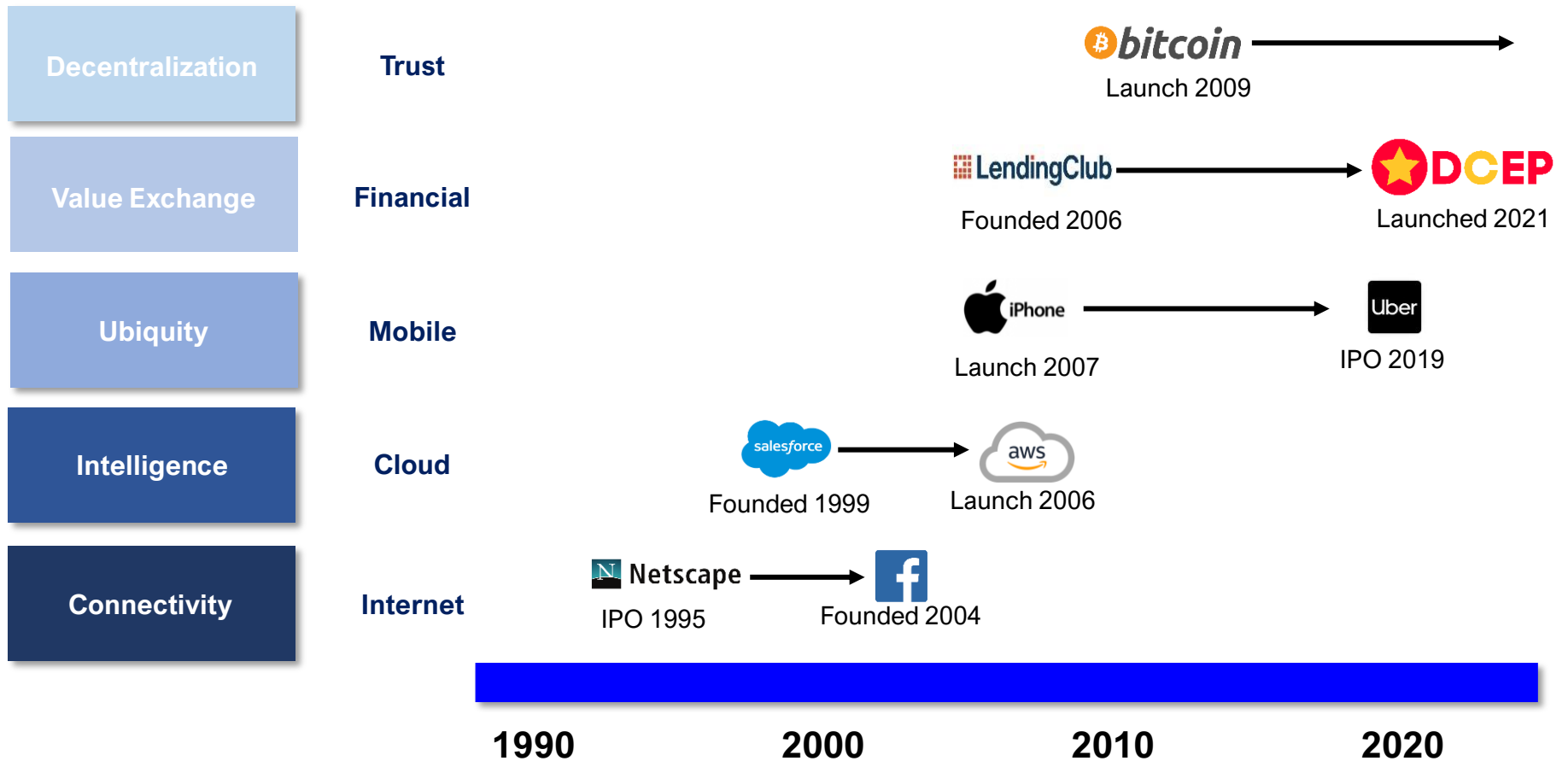


The platform technology stack is reshaping the delivery of banking

From internet, to cloud, to mobile... Fintech was the fourth platform in the technology stack... and now blockchain is the fifth.

- The use case for crypto, blockchain and DLT value capture is replacing “Trust” in traditional financial systems with decentralized blockchain software and capturing productivity gains.

Figure: The New Technology Stack



Source: Fundstrat, Bain Capital Ventures

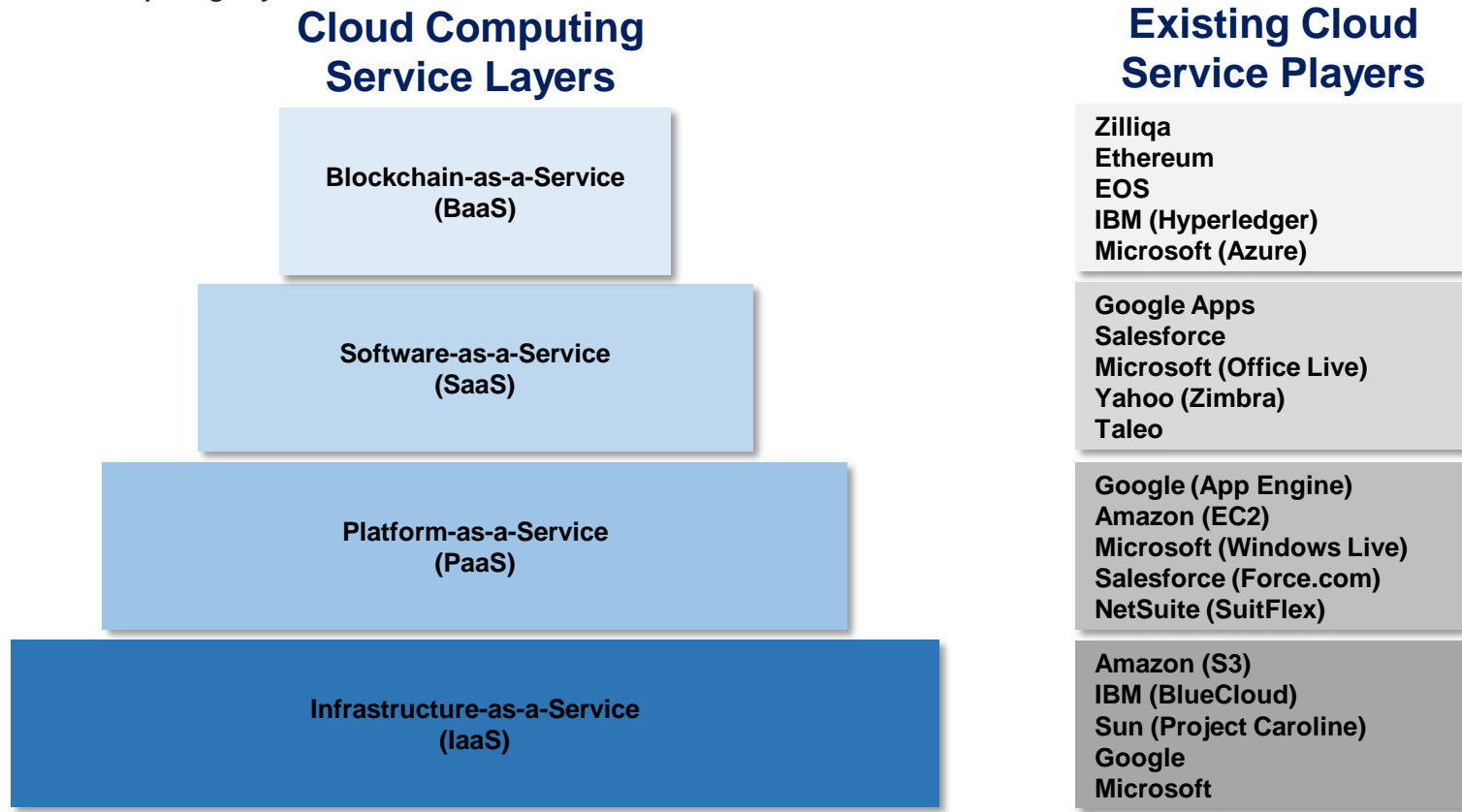


Blockchain-as-a-Service (BaaS) extends the cloud computing stack

The rise of cloud computing enabled an entire wave of internet start ups to emerge without needing to bear the cost and burden of physically managing computer servers, which led to the development of new unimagined software applications.

- **BaaS allows businesses to use cloud-based solutions to build, host and use their own blockchain apps, smart contracts and functions on blockchain infrastructure developed by a vendor.**
- **As Cloud Computing transformed the internet, BaaS has the potential to enable fintechs to offer trust minimized Open Finance DLT applications without needing to bear the infrastructure costs.**

Figure: Cloud Computing Layers



Source: Fundstrat

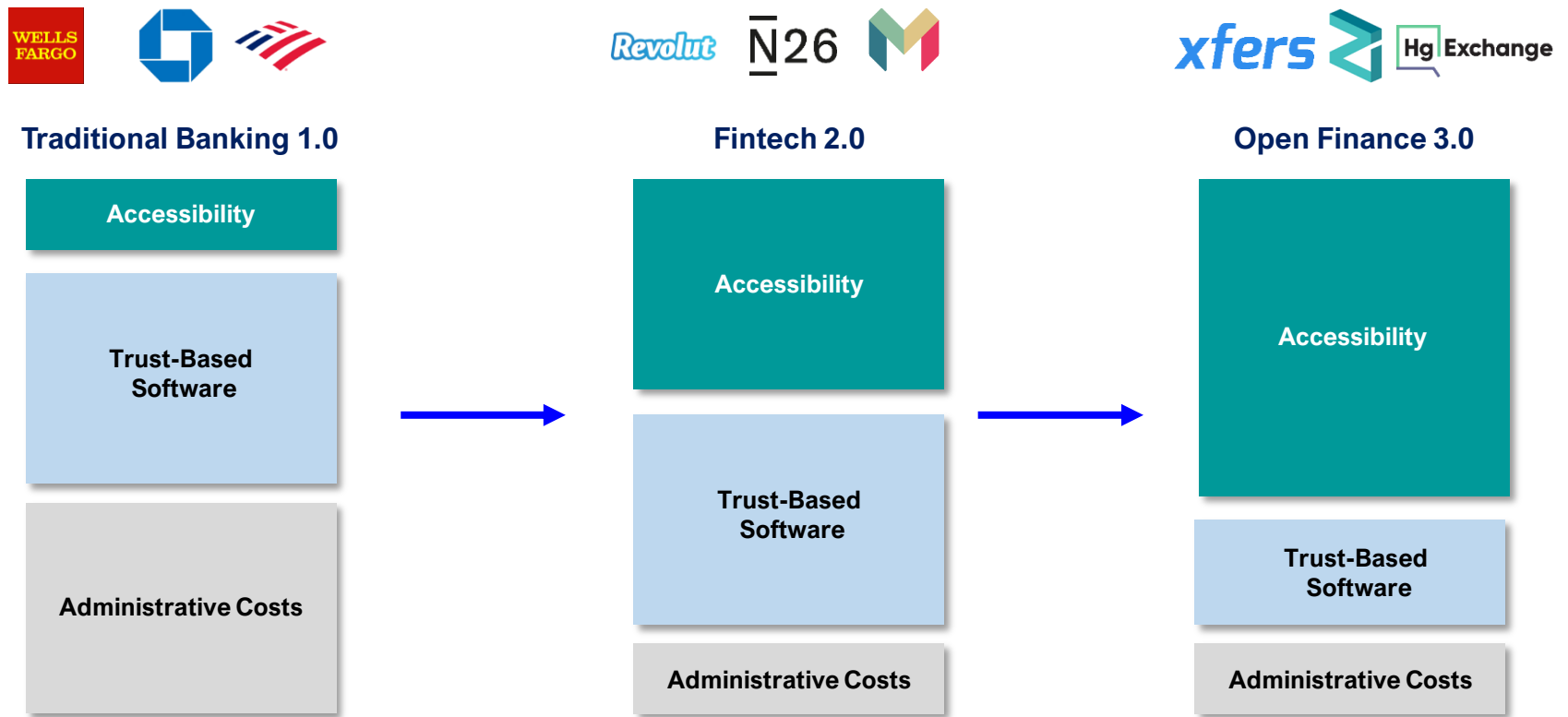


Open Finance is the next step in the evolution of banking

The move from traditional banking to fintech broadened access to more users and reduced costs by leveraging improved technology. However, fintech has yet to change the trust model underlying its services.

- **Open Finance furthers the fintech trend by employing DLT to reduce trust in intermediaries and increase accessibility.**
- **The Open Finance addressable market spans both (i) markets with low levels of financial services penetration and (ii) markets with high financial services penetration but large amounts of legacy trust-based financial infrastructure.**

Figure: Open Finance Value proposition



Source: Fundstrat

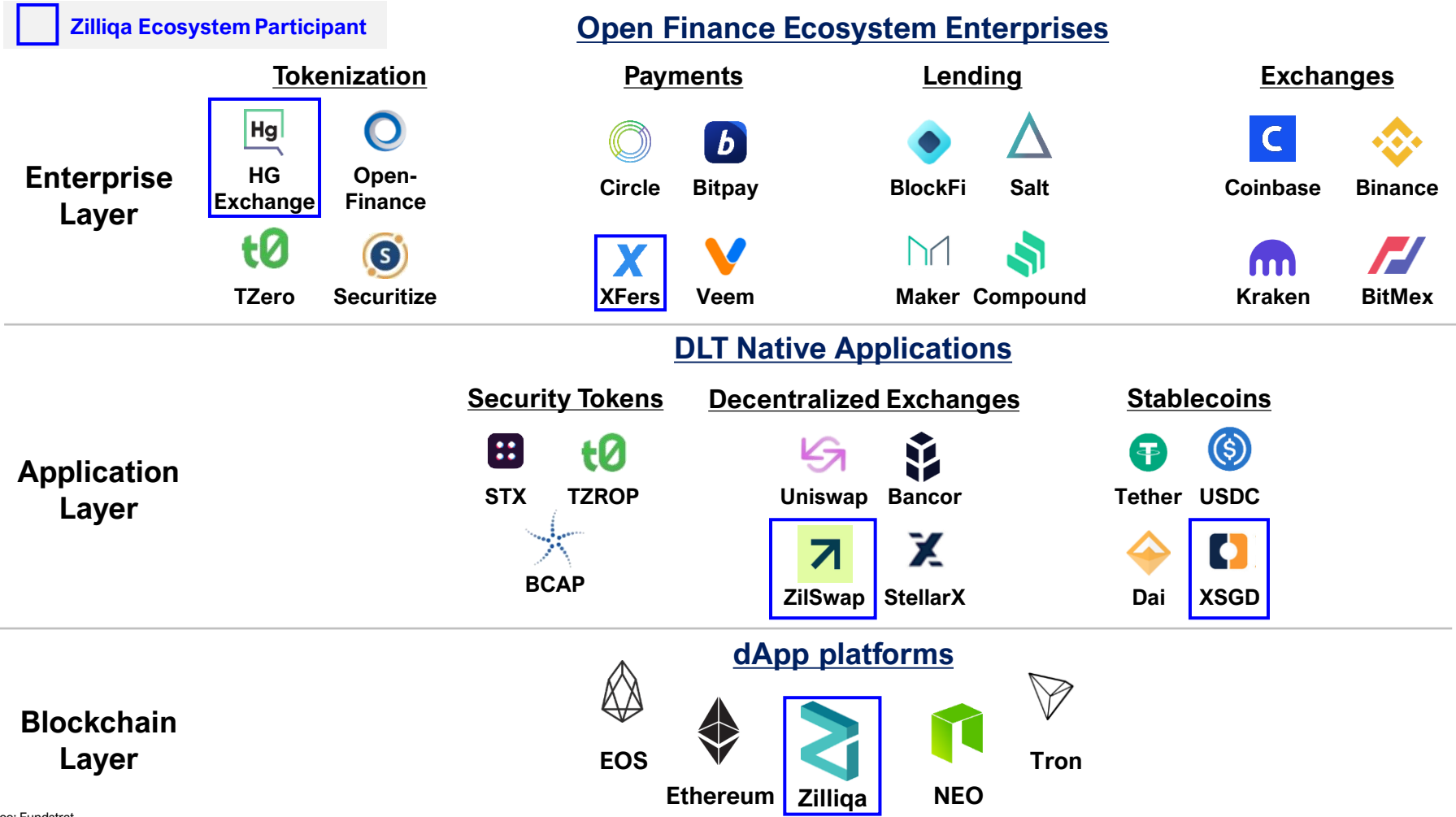


Zilliqa DLT Network is a platform technology for the Open Finance ecosystem

Platforms such as Zilliqa are being used to create innovative financial infrastructure such as stablecoins and tokenized assets.

- These assets are being employed in emerging business models that span lending/banking, asset tokenization, and payments, among other use cases.

Figure: Open Finance Landscape



Source: Fundstrat



The Open Finance market is undergoing rapid growth

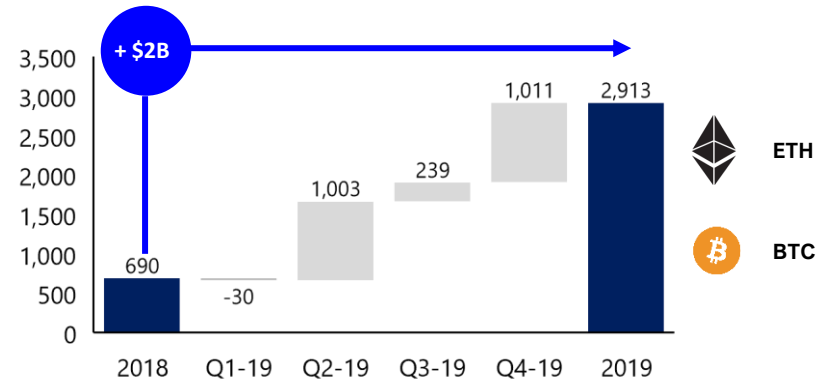
The Open Finance industry experienced rapid growth in 2019. As efficiencies afforded by DLT are realized at scale in a production environment, we expect new use cases to evolve and drive sustained secular growth in this market.

Figure: Global Open Finance Market statistics

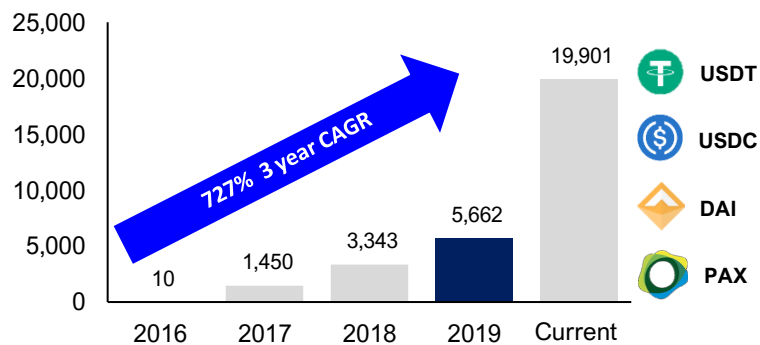
OpFi's Big Year

- **Stablecoins:** Total stablecoin market cap surpasses \$5B in 2019 and is up \$14B on YTD basis
- **Lending:** \$8B of total crypto loans originated in 2019 vs \$1B in 2018
- **Lending:** Total assets pledged as collateral for crypto asset loans nears \$3B at 2019-year end

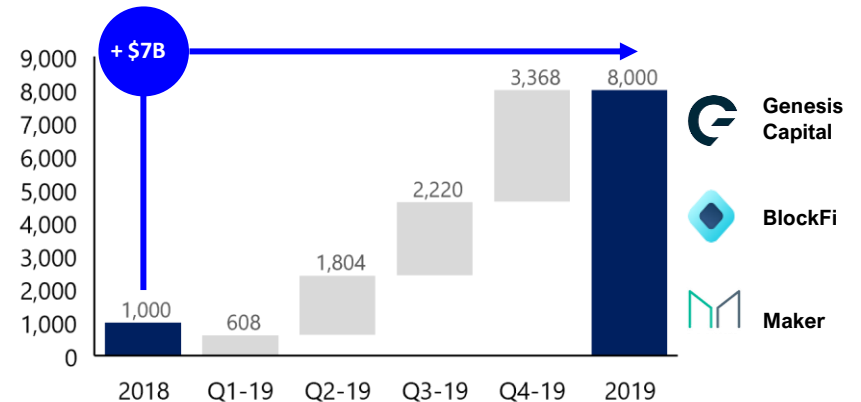
Total collateral pledged for crypto asset loans (\$M)



Stablecoin Market Cap (\$M)



Crypto asset loan originations (\$M)



Source: Fundstrat, Credmark, Coinmetrics














Zilliqa's target ASEAN market is ripe for financial services disruption

Collectively, the six major ASEAN countries listed below represent one of the world's largest and fastest growing regions with GDP expected to reach \$4.7 trillion by 2025.

- **Despite rapid economic expansion and high levels of internet penetration, the ASEAN region still suffers low levels of financial services penetration.**

Figure: ASEAN region vs other major economies

Zilliqa's Target Market

											
	<i>Indonesia</i>	<i>Malaysia</i>	<i>Phillipines</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	ASEAN	<i>US</i>	<i>EU</i>	<i>China</i>	<i>India</i>
Population (M's)	274	32	110	6	70	97	589	331	748	1,439	1,380
Population Growth (5Yr CAGR)	1.2%	1.4%	1.5%	1.0%	0.3%	1.0%	1.1%	0.6%	0.1%	0.4%	1.0%
GDP (\$B's)	1,111	365	357	363	529	261	2,988	21,439	18,292	14,140	2,935
GDP Growth (5Yr CAGR)	5.0%	5.2%	6.5%	3.5%	2.6%	6.1%	4.7%	2.4%	1.9%	6.8%	7.3%
Banked Population	49%	85%	35%	98%	82%	31%	50%	93%	95%	80%	80%
Internet Enabled Population	56%	78%	71%	84%	82%	66%	65%	87%	90%	60%	40%

Source: Fundstrat, Bain & Co., UN DESA, IMF, Global Findex Database; **Banked:** Have access to a bank account

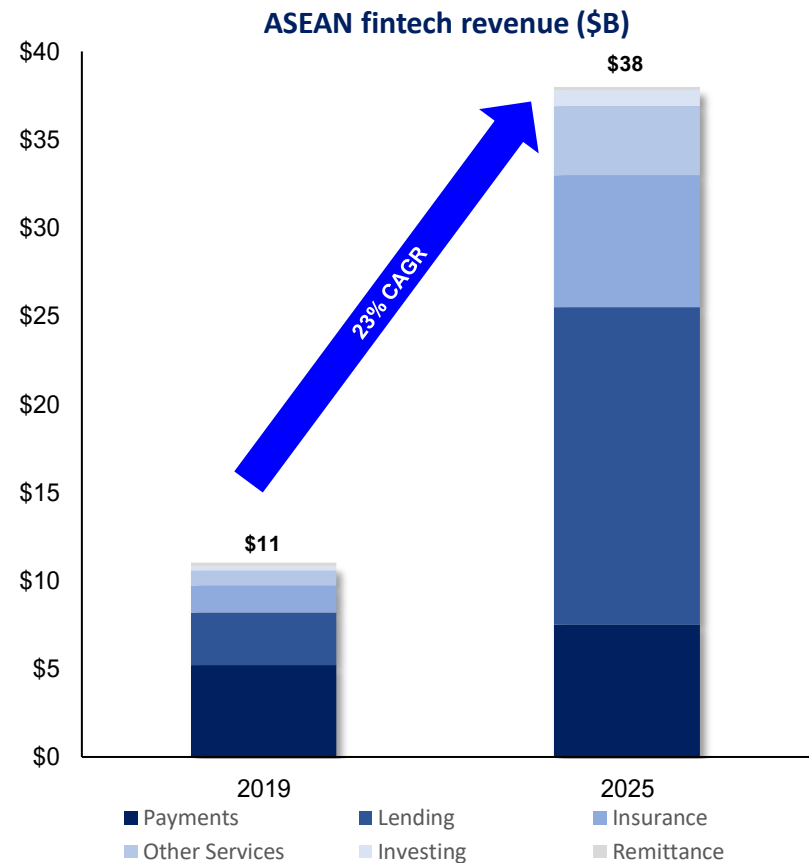
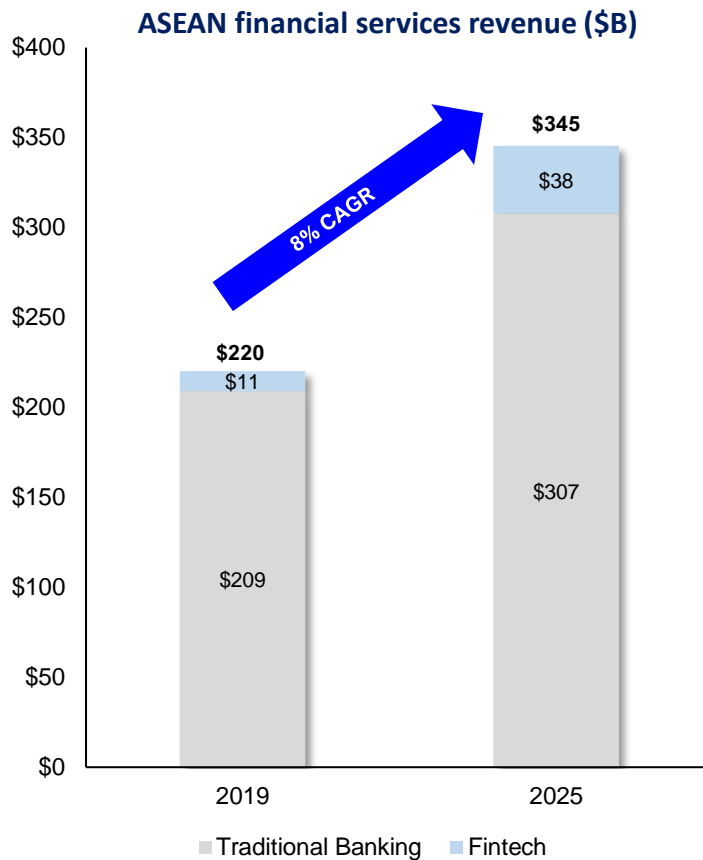


Fintech industry in ASEAN projected to reach \$38B in revenue by 2025

Technology enabled cost savings are creating opportunities for fintech and DLT companies to service large portions of the population that have historically been unprofitable to serve.

- Across its 6 major segments, the ASEAN fintech industry is projected to generate \$38B in revenue by 2025 with a potential to reach up to \$60B, according to research conducted by Bain & Co.

Figure: ASEAN Financial Services and Fintech Market Statistics



Source: Fundstrat, Bain & Co.



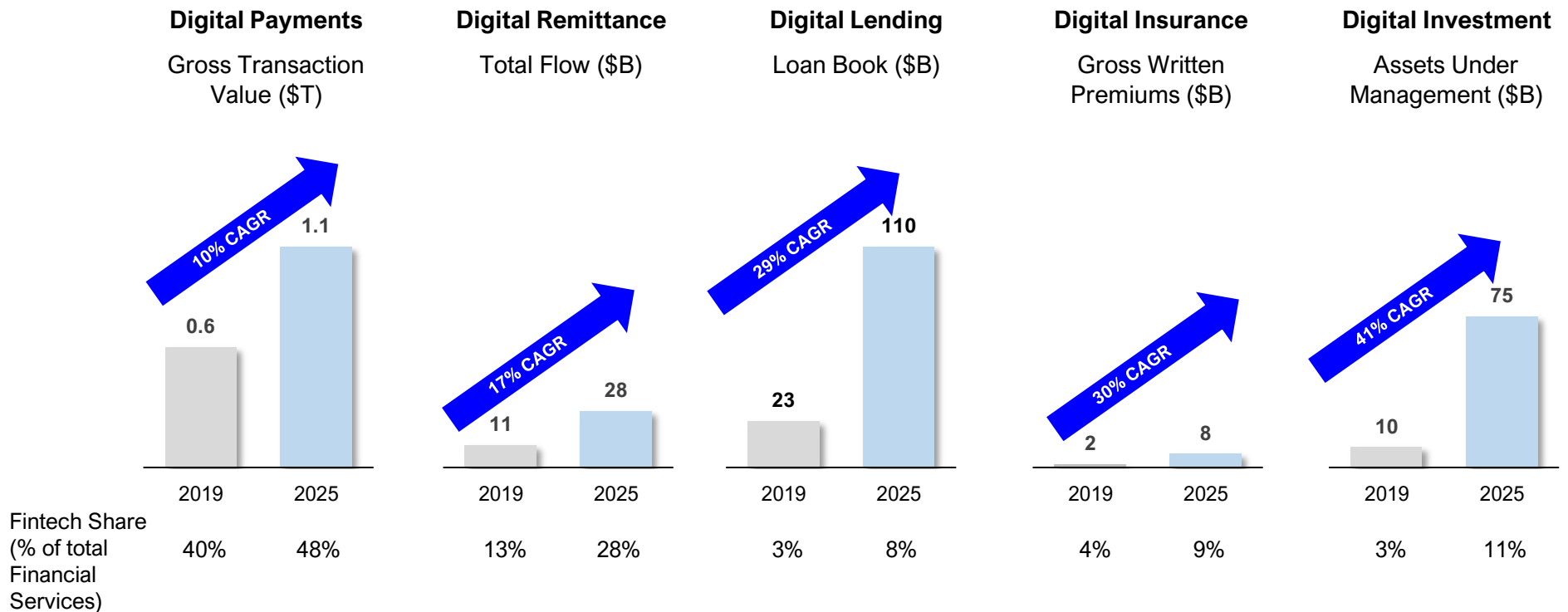
ASEAN fintech growth is expected to be broad across all segments

Across the ASEAN fintech landscape, payments and remittances represent the most digitized segments with penetration levels of 40% and 13%, respectively.

- Lending, insurance and investment are all still emerging and are expected to experience more rapid growth.

Figure: ASEAN Fintech Market Statistics

ASEAN 2025 Fintech Market Value Served



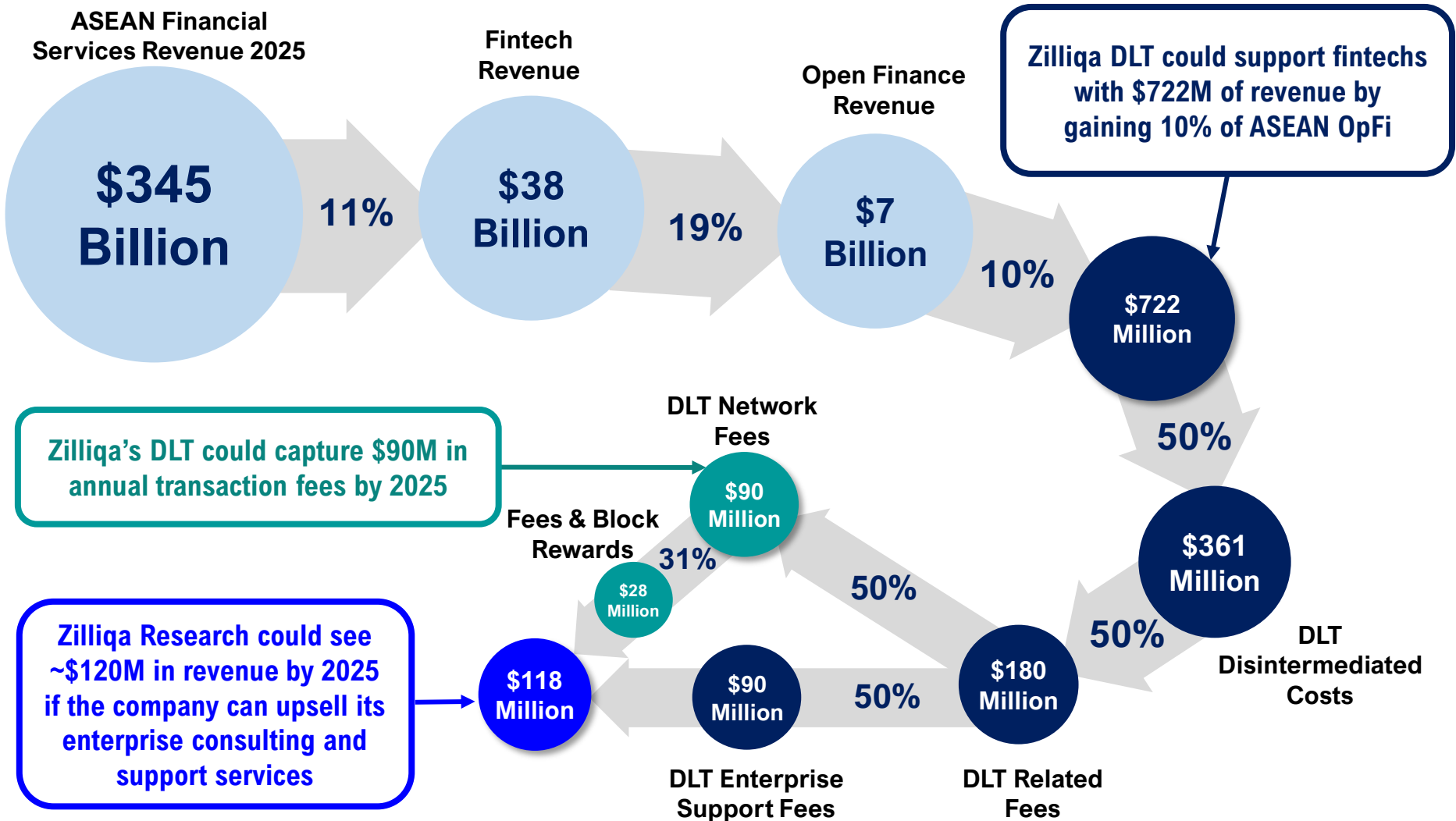
Source: Fundstrat, Bain & Co.



Valuation Potential



Zilliqa Research could capture ~\$120M in revenue by 2025

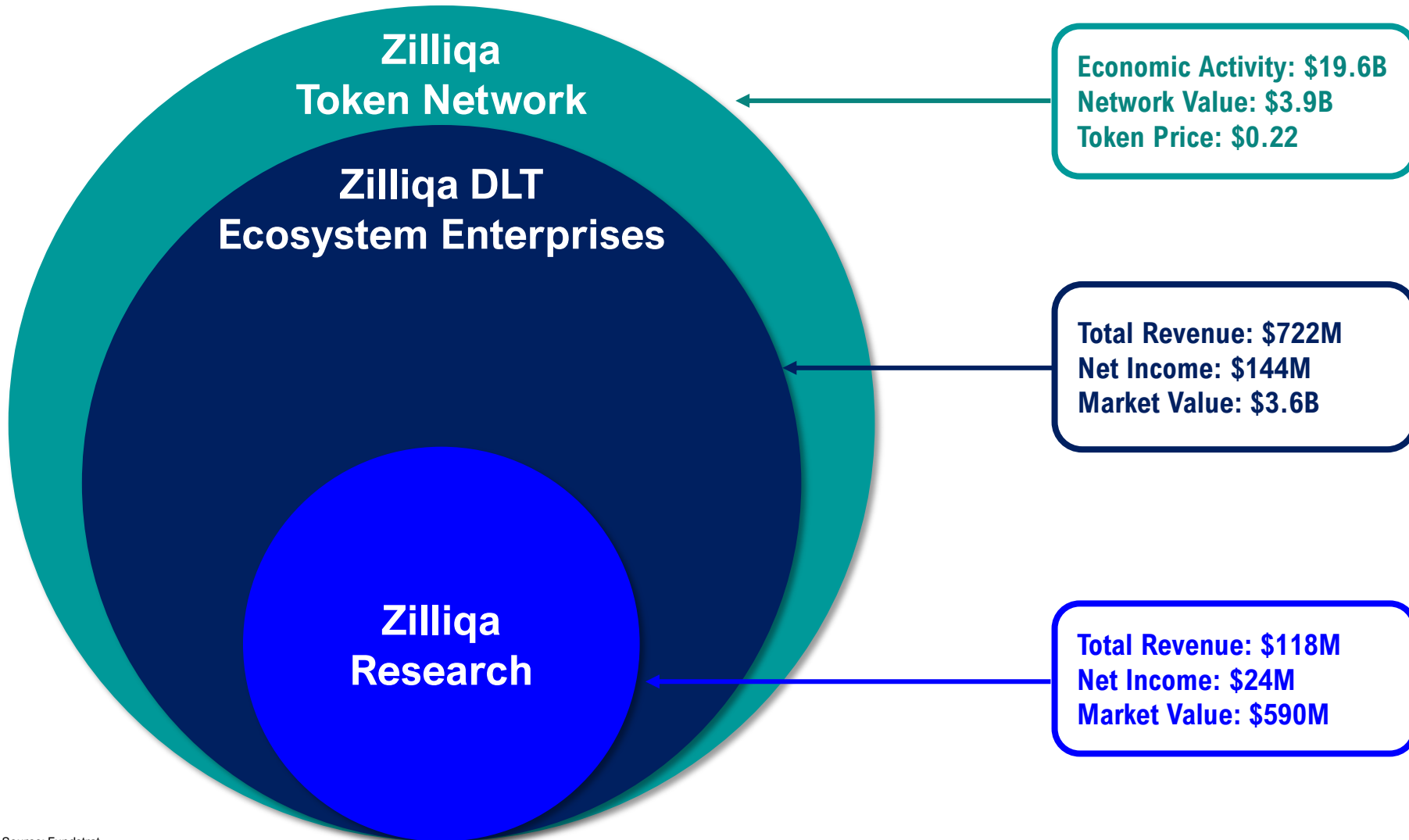


Source: Fundstrat



Zilliqa ecosystem could collectively be worth \$8.1B by 2025 based on our base case model assumptions

2025 Potential



Source: Fundstrat



ASEAN Open Finance market could reach \$7.2B revenue by 2025 -> Opportunity for Zilliqa to capture share across core verticals

We estimate that companies employing DLT in ASEAN will generate \$7.2B of revenue by 2025.

- This represents approximately 20% of the \$38B ASEAN fintech market and 2% of the traditional banking market.

Figure: ASEAN 2025 Open Finance Market TAM Forecast

\$ millions

	Payments	Remittance	Insurance	Lending	Investing	Other	Total
ASEAN Financial Services							
Market Served	\$2,291,667	\$100,000	\$72,727	\$1,375,000	\$833,333	\$0	\$4,672,727
Total Revenue	\$15,625	\$882	\$68,182	\$225,000	\$10,000	\$25,766	\$345,455
ASEAN Fintech							
<u>Share (% of Financial Services)</u>	<u>48%</u>	<u>28%</u>	<u>11%</u>	<u>8%</u>	<u>9%</u>	<u>15%</u>	<u>11%</u>
Market Served	\$1,100,000	\$28,000	\$8,000	\$110,000	\$75,000	\$0	\$1,321,000
Total Revenue	\$7,500	\$247	\$7,500	\$18,000	\$900	\$3,853	\$38,000
ASEAN Open Finance							
<u>Share (% of Fintech)</u>	<u>35%</u>	<u>70%</u>	<u>23%</u>	<u>7%</u>	<u>39%</u>	<u>28%</u>	<u>19%</u>
Market Served	\$385,000	\$19,600	\$1,840	\$7,700	\$29,250	\$0	\$443,390
Total Revenue	\$2,625	\$173	\$1,725	\$1,260	\$351	\$1,098	\$7,232
Zilliqa DLT Ecosystem							
<u>Share (% of Open Finance)</u>	<u>15%</u>	<u>15%</u>	<u>5%</u>	<u>10%</u>	<u>10%</u>	<u>5%</u>	<u>10%</u>
Market Served	\$57,750	\$2,940	\$92	\$770	\$2,925	\$0	\$64,477
Total Revenue	\$394	\$26	\$86	\$126	\$35	\$55	\$722
Zilliqa Token Network							
<u>Token Usage (% of Ecosystem)</u>	<u>32%</u>	<u>13%</u>	<u>20%</u>	<u>20%</u>	<u>20%</u>	<u>0%</u>	<u>30%</u>
Market Served	\$18,480	\$382	\$18	\$154	\$585	\$0	\$19,620

Source: Fundstrat, Bain & Co.



Companies building on Zilliqa DLT could generate \$720M+ in revenue by 2025

Our base model estimate assumes that Zilliqa's DLT will be employed to support 10% of companies in the ASEAN OpFi market. This equates to a likely range of \$540M-\$880M of total ecosystem company revenue based on our sensitivity analysis.

Figure: Zilliqa Ecosystem Value Potential Analysis
\$ millions

Zilliqa DLT Ecosystem Value Potential

		FY 2025
Open Finance Revenue	a	\$7,232
Zilliqa DLT Share% Ecosystem Revenue	b a * b = c	10% \$722
Net Profit Margin% Net Profit	d c * d = e	20% \$144
P/E Multiple	f	25x
Ecosystem Value	e * f = g	\$3,610

Zilliqa DLT Ecosystem Revenue Sensitivity

		ASEAN Open Finance Revenue								
		\$3,000	\$4,000	\$5,000	\$6,000	\$7,000	\$8,000	\$9,000	\$10,000	\$11,000
Zilliqa DLT OpFi%	6%	\$180	\$240	\$300	\$360	\$420	\$480	\$540	\$600	\$660
	7%	\$210	\$280	\$350	\$420	\$490	\$560	\$630	\$700	\$770
	8%	\$240	\$320	\$400	\$480	\$560	\$640	\$720	\$800	\$880
	9%	\$270	\$360	\$450	\$540	\$630	\$720	\$810	\$900	\$990
	10%	\$300	\$400	\$500	\$600	\$700	\$800	\$900	\$1,000	\$1,100
	11%	\$330	\$440	\$550	\$660	\$770	\$880	\$990	\$1,100	\$1,210
	12%	\$360	\$480	\$600	\$720	\$840	\$960	\$1,080	\$1,200	\$1,320
	13%	\$390	\$520	\$650	\$780	\$910	\$1,040	\$1,170	\$1,300	\$1,430
	14%	\$420	\$560	\$700	\$840	\$980	\$1,120	\$1,260	\$1,400	\$1,540

Zilliqa DLT Ecosystem Profit Sensitivity

		Zilliqa DLT Ecosystem Revenue								
		\$300	\$400	\$500	\$600	\$700	\$800	\$900	\$1,000	\$1,100
Net Profit Margin%	1%	\$3	\$4	\$5	\$6	\$7	\$8	\$9	\$10	\$11
	5%	\$15	\$20	\$25	\$30	\$35	\$40	\$45	\$50	\$55
	10%	\$30	\$40	\$50	\$60	\$70	\$80	\$90	\$100	\$110
	15%	\$45	\$60	\$75	\$90	\$105	\$120	\$135	\$150	\$165
	20%	\$60	\$80	\$100	\$120	\$140	\$160	\$180	\$200	\$220
	25%	\$75	\$100	\$125	\$150	\$175	\$200	\$225	\$250	\$275
	30%	\$90	\$120	\$150	\$180	\$210	\$240	\$270	\$300	\$330
	35%	\$105	\$140	\$175	\$210	\$245	\$280	\$315	\$350	\$385
	40%	\$120	\$160	\$200	\$240	\$280	\$320	\$360	\$400	\$440

Zilliqa DLT Ecosystem Valuation Sensitivity

		Zilliqa DLT Ecosystem Profit								
		\$100	\$110	\$120	\$130	\$140	\$150	\$160	\$170	\$180
P/E Multiple	5x	\$500	\$550	\$600	\$650	\$700	\$750	\$800	\$850	\$900
	10x	\$1,000	\$1,100	\$1,200	\$1,300	\$1,400	\$1,500	\$1,600	\$1,700	\$1,800
	15x	\$1,500	\$1,650	\$1,800	\$1,950	\$2,100	\$2,250	\$2,400	\$2,550	\$2,700
	20x	\$2,000	\$2,200	\$2,400	\$2,600	\$2,800	\$3,000	\$3,200	\$3,400	\$3,600
	25x	\$2,500	\$2,750	\$3,000	\$3,250	\$3,500	\$3,750	\$4,000	\$4,250	\$4,500
	30x	\$3,000	\$3,300	\$3,600	\$3,900	\$4,200	\$4,500	\$4,800	\$5,100	\$5,400
	35x	\$3,500	\$3,850	\$4,200	\$4,550	\$4,900	\$5,250	\$5,600	\$5,950	\$6,300
	40x	\$4,000	\$4,400	\$4,800	\$5,200	\$5,600	\$6,000	\$6,400	\$6,800	\$7,200
	45x	\$4,500	\$4,950	\$5,400	\$5,850	\$6,300	\$6,750	\$7,200	\$7,650	\$8,100

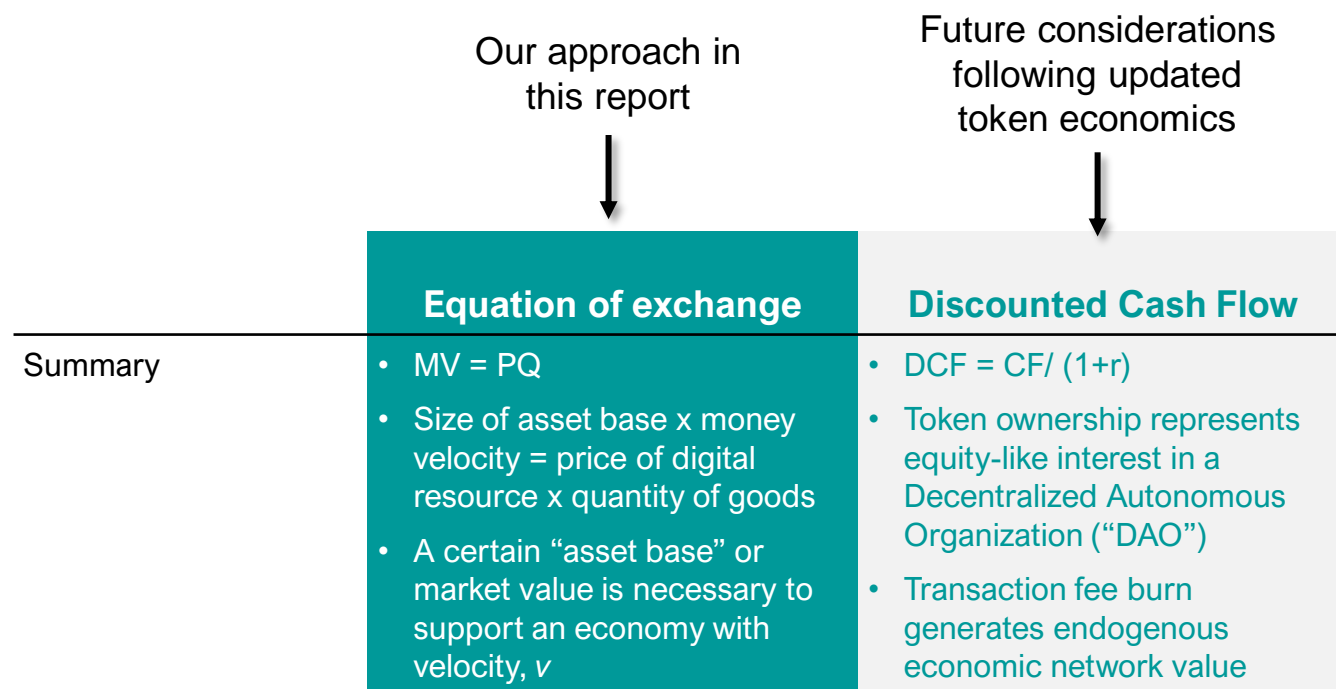
Source: Fundstrat



Zilliqa DLT Token Network: Our model assumes value accrues to the protocol layer based on the equation of exchange valuation framework

Our base model follows an equation of exchange valuation framework. Given significant changes to Zilliqa’s underlying token economics enacted in October, there are several additional valuation approaches that we will be considering going forward that could be appropriate for valuing the network.

Figure: ZIL Token Network Valuation Approach



Source: Fundstrat



Zilliqa DLT network value could reach \$4B by 2025

Assuming Zilliqa captures 10% share of the ASEAN OpFi market, we estimate that \$20B of value could flow through the ZIL token network annually by 2025. Based on our equation of exchange valuation, this implies a 2025 DLT network value of \$3.3B - \$4.9B.

Figure: Zilliqa Token Network Value Potential Analysis
\$ millions

Zilliqa Token Value Potential

		FY 2025
Zilliqa DLT Ecosystem Market Served	a	\$64,477
ZIL Token Usage%	b	30%
Network Economic Activity	a * b = c	\$19,620
Token Velocity	d	5.0x
Zilliqa Network Value	c / d = e	\$3,924
Tokens Outstanding (M)	f	18,060
ZIL Token Price	e / f = g	\$0.22

Network Economic Activity Sensitivity

	Zilliqa DLT Ecosystem Market Served									
	\$40,000	\$50,000	\$55,000	\$60,000	\$65,000	\$70,000	\$75,000	\$80,000	\$85,000	
10%	\$4,000	\$5,000	\$5,500	\$6,000	\$6,500	\$7,000	\$7,500	\$8,000	\$8,500	
15%	\$6,000	\$7,500	\$8,250	\$9,000	\$9,750	\$10,500	\$11,250	\$12,000	\$12,750	
20%	\$8,000	\$10,000	\$11,000	\$12,000	\$13,000	\$14,000	\$15,000	\$16,000	\$17,000	
25%	\$10,000	\$12,500	\$13,750	\$15,000	\$16,250	\$17,500	\$18,750	\$20,000	\$21,250	
30%	\$12,000	\$15,000	\$16,500	\$18,000	\$19,500	\$21,000	\$22,500	\$24,000	\$25,500	
35%	\$14,000	\$17,500	\$19,250	\$21,000	\$22,750	\$24,500	\$26,250	\$28,000	\$29,750	
40%	\$16,000	\$20,000	\$22,000	\$24,000	\$26,000	\$28,000	\$30,000	\$32,000	\$34,000	
45%	\$18,000	\$22,500	\$24,750	\$27,000	\$29,250	\$31,500	\$33,750	\$36,000	\$38,250	
50%	\$20,000	\$25,000	\$27,500	\$30,000	\$32,500	\$35,000	\$37,500	\$40,000	\$42,500	

Network Value Sensitivity

	Network Economic Activity								
	\$12,000	\$14,000	\$16,000	\$18,000	\$20,000	\$22,000	\$24,000	\$26,000	\$28,000
3.0x	\$4,000	\$4,667	\$5,333	\$6,000	\$6,667	\$7,333	\$8,000	\$8,667	\$9,333
3.5x	\$3,429	\$4,000	\$4,571	\$5,143	\$5,714	\$6,286	\$6,857	\$7,429	\$8,000
4.0x	\$3,000	\$3,500	\$4,000	\$4,500	\$5,000	\$5,500	\$6,000	\$6,500	\$7,000
4.5x	\$2,667	\$3,111	\$3,556	\$4,000	\$4,444	\$4,889	\$5,333	\$5,778	\$6,222
5.0x	\$2,400	\$2,800	\$3,200	\$3,600	\$4,000	\$4,400	\$4,800	\$5,200	\$5,600
5.5x	\$2,182	\$2,545	\$2,909	\$3,273	\$3,636	\$4,000	\$4,364	\$4,727	\$5,091
6.0x	\$2,000	\$2,333	\$2,667	\$3,000	\$3,333	\$3,667	\$4,000	\$4,333	\$4,667
6.5x	\$1,846	\$2,154	\$2,462	\$2,769	\$3,077	\$3,385	\$3,692	\$4,000	\$4,308
7.0x	\$1,714	\$2,000	\$2,286	\$2,571	\$2,857	\$3,143	\$3,429	\$3,714	\$4,000

Token Value Sensitivity

	Network Economic Activity								
	\$12,000	\$14,000	\$16,000	\$18,000	\$20,000	\$22,000	\$24,000	\$26,000	\$28,000
3.0x	\$0.22	\$0.26	\$0.30	\$0.33	\$0.37	\$0.41	\$0.44	\$0.48	\$0.52
3.5x	\$0.19	\$0.22	\$0.25	\$0.28	\$0.32	\$0.35	\$0.38	\$0.41	\$0.44
4.0x	\$0.17	\$0.19	\$0.22	\$0.25	\$0.28	\$0.30	\$0.33	\$0.36	\$0.39
4.5x	\$0.15	\$0.17	\$0.20	\$0.22	\$0.25	\$0.27	\$0.30	\$0.32	\$0.34
5.0x	\$0.13	\$0.16	\$0.18	\$0.20	\$0.22	\$0.24	\$0.27	\$0.29	\$0.31
5.5x	\$0.12	\$0.14	\$0.16	\$0.18	\$0.20	\$0.22	\$0.24	\$0.26	\$0.28
6.0x	\$0.11	\$0.13	\$0.15	\$0.17	\$0.18	\$0.20	\$0.22	\$0.24	\$0.26
6.5x	\$0.10	\$0.12	\$0.14	\$0.15	\$0.17	\$0.19	\$0.20	\$0.22	\$0.24
7.0x	\$0.09	\$0.11	\$0.13	\$0.14	\$0.16	\$0.17	\$0.19	\$0.21	\$0.22

Source: Fundstrat

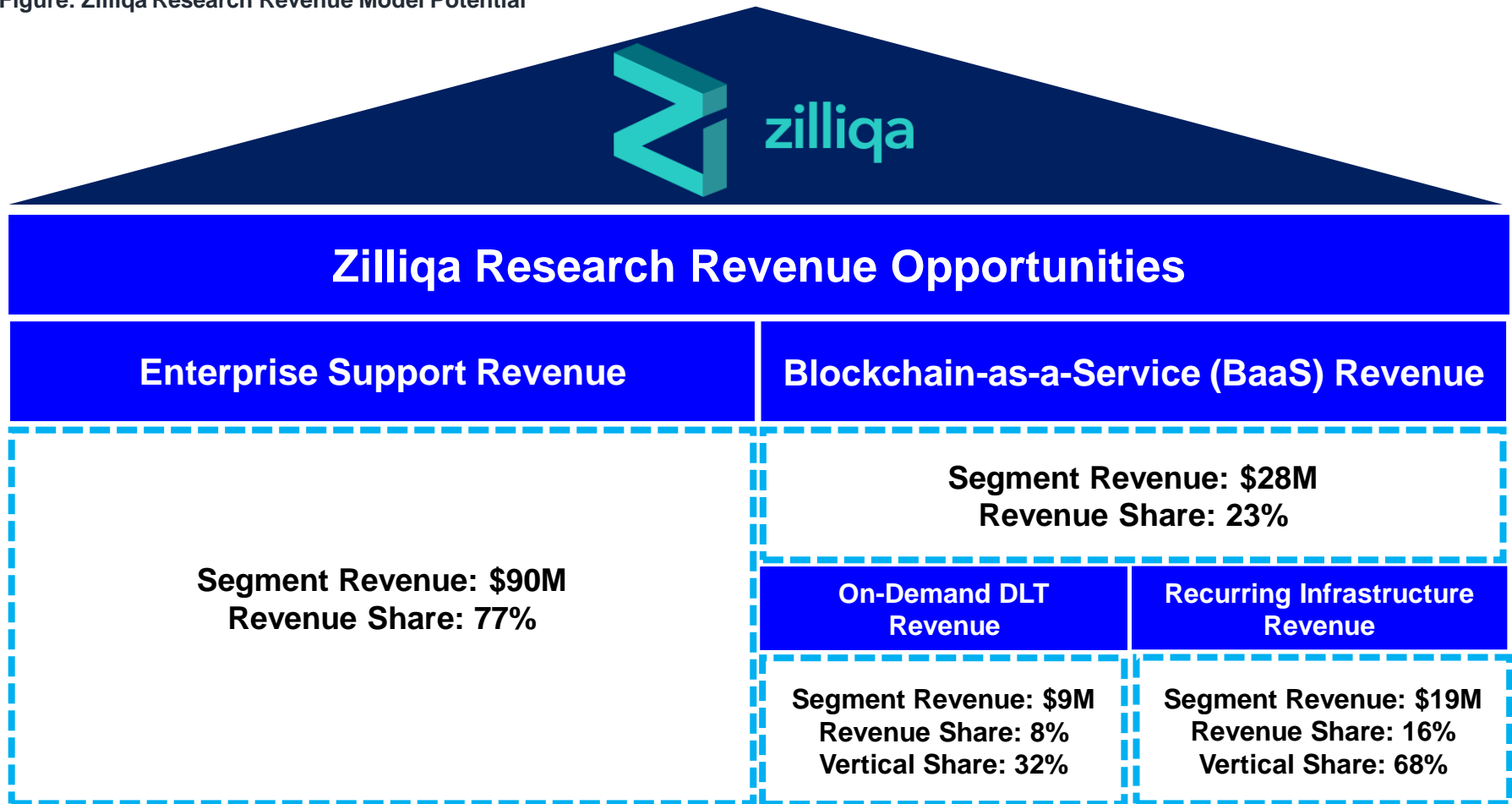


Zilliqa Research: Revenue monetization opportunities

As the development arm behind the Zilliqa’s public DLT network, Zilliqa Research is uniquely positioned to capitalize on the growth of the ZIL ecosystem.

- The Company’s future monetization levers span Enterprise Support revenue and Blockchain-as-a-Service revenue. Below are the results of our base case model assumptions for Zilliqa Research revenue potential in 2025.

Figure: Zilliqa Research Revenue Model Potential



Source: Fundstrat



Zilliqua Research could capture \$90M in revenue from support services

We estimate the total value of areas where Zilliqua's DLT could reduce back office costs to be ~\$360B. Of this \$360B, we assume that Zilliqua Research and its DLT can reduce these costs by 50%.

- If Zilliqua Research can capture 50% of these \$180M of cost savings by providing consulting and support services to companies building on its DLT, this would result in ~\$90M worth of revenue in 2025.

Figure: Zilliqua Research Enterprise Support Revenue Analysis

\$ millions

Zilliqua Research Enterprise Support Revenue Potential

		FY 2025
Zilliqua DLT Ecosystem Revenue	a	\$722
DLT Impacted Costs%	b	50%
DLT Disintermediated Costs	a * b = c	\$361
DLT Cost Savings%	d	50%
DLT Related Fees	c * d = e	\$180
DLT Support Upsell Share%	f	50%
Enterprise Support Revenue	e * f = g	\$90

DLT Disintermediated Costs Sensitivity

		Zilliqua DLT Ecosystem Revenue								
		\$300	\$400	\$500	\$600	\$700	\$800	\$900	\$1,000	\$1,100
DLT Impacted Costs%	30%	\$90	\$120	\$150	\$180	\$210	\$240	\$270	\$300	\$330
	35%	\$105	\$140	\$175	\$210	\$245	\$280	\$315	\$350	\$385
	40%	\$120	\$160	\$200	\$240	\$280	\$320	\$360	\$400	\$440
	45%	\$135	\$180	\$225	\$270	\$315	\$360	\$405	\$450	\$495
	50%	\$150	\$200	\$250	\$300	\$350	\$400	\$450	\$500	\$550
	55%	\$165	\$220	\$275	\$330	\$385	\$440	\$495	\$550	\$605
	60%	\$180	\$240	\$300	\$360	\$420	\$480	\$540	\$600	\$660
	65%	\$195	\$260	\$325	\$390	\$455	\$520	\$585	\$650	\$715
	70%	\$210	\$280	\$350	\$420	\$490	\$560	\$630	\$700	\$770

DLT Related Fees Sensitivity

		DLT Disintermediated Costs								
		\$150	\$200	\$250	\$300	\$350	\$400	\$450	\$500	\$550
DLT Cost Savings%	30%	\$45	\$60	\$75	\$90	\$105	\$120	\$135	\$150	\$165
	35%	\$53	\$70	\$88	\$105	\$123	\$140	\$158	\$175	\$193
	40%	\$60	\$80	\$100	\$120	\$140	\$160	\$180	\$200	\$220
	45%	\$68	\$90	\$113	\$135	\$158	\$180	\$203	\$225	\$248
	50%	\$75	\$100	\$125	\$150	\$175	\$200	\$225	\$250	\$275
	55%	\$83	\$110	\$138	\$165	\$193	\$220	\$248	\$275	\$303
	60%	\$90	\$120	\$150	\$180	\$210	\$240	\$270	\$300	\$330
	65%	\$98	\$130	\$163	\$195	\$228	\$260	\$293	\$325	\$358
	70%	\$105	\$140	\$175	\$210	\$245	\$280	\$315	\$350	\$385

Enterprise Support Revenue Sensitivity

		DLT Related Fees								
		\$75	\$100	\$125	\$150	\$175	\$200	\$225	\$250	\$275
DLT Support Share%	30%	\$23	\$30	\$38	\$45	\$53	\$60	\$68	\$75	\$83
	35%	\$26	\$35	\$44	\$53	\$61	\$70	\$79	\$88	\$96
	40%	\$30	\$40	\$50	\$60	\$70	\$80	\$90	\$100	\$110
	45%	\$34	\$45	\$56	\$68	\$79	\$90	\$101	\$113	\$124
	50%	\$38	\$50	\$63	\$75	\$88	\$100	\$113	\$125	\$138
	55%	\$41	\$55	\$69	\$83	\$96	\$110	\$124	\$138	\$151
	60%	\$45	\$60	\$75	\$90	\$105	\$120	\$135	\$150	\$165
	65%	\$49	\$65	\$81	\$98	\$114	\$130	\$146	\$163	\$179
	70%	\$53	\$70	\$88	\$105	\$123	\$140	\$158	\$175	\$193

Source: Fundstrat



Zilliqa Research could capture \$28M in revenue through its Blockchain-as-a-Service (BaaS) offering

The Company could generate \$28M in revenue by 2025 through its BaaS offering by operating 10% of DLT network nodes and collecting transaction fee and block reward compensation.

Figure: Zilliqa Research BaaS Revenue Potential Analysis

\$ millions

Zilliqa Research BaaS Revenue Potential

		FY 2025
DLT Related Fees	a	\$180
DLT Transaction Fee%	b	50%
Zilliqa Network Revenue	a * b = c	\$90
Zilliqa Token Network Value	d	\$3,920
Token Supply Dilution%	e	4.76%
Network Equity Compensation	d * e = f	\$187
Total Node Compensation	c + f = g	\$277
Node Ownership%	h	10%
On-Demand DLT Revenue	c * h = i	\$9
Recurring Infrastructure Revenue	f * h = j	\$19
Blockchain-as-a-Service Revenue	g * h = k	\$28

Zilliqa Network Revenue Sensitivity

DLT Transaction Fee%	DLT Related Fees								
	\$75	\$100	\$125	\$150	\$175	\$200	\$225	\$250	\$275
30%	\$23	\$30	\$38	\$45	\$53	\$60	\$68	\$75	\$83
35%	\$26	\$35	\$44	\$53	\$61	\$70	\$79	\$88	\$96
40%	\$30	\$40	\$50	\$60	\$70	\$80	\$90	\$100	\$110
45%	\$34	\$45	\$56	\$68	\$79	\$90	\$101	\$113	\$124
50%	\$38	\$50	\$63	\$75	\$88	\$100	\$113	\$125	\$138
55%	\$41	\$55	\$69	\$83	\$96	\$110	\$124	\$138	\$151
60%	\$45	\$60	\$75	\$90	\$105	\$120	\$135	\$150	\$165
65%	\$49	\$65	\$81	\$98	\$114	\$130	\$146	\$163	\$179
70%	\$53	\$70	\$88	\$105	\$123	\$140	\$158	\$175	\$193

On-Demand DLT Revenue Sensitivity

Node Ownership%	Zilliqa Network Revenue								
	\$50	\$60	\$70	\$80	\$90	\$100	\$110	\$120	\$130
2%	\$1	\$1	\$1	\$2	\$2	\$2	\$2	\$2	\$3
4%	\$2	\$2	\$3	\$3	\$4	\$4	\$4	\$5	\$5
6%	\$3	\$4	\$4	\$5	\$5	\$6	\$7	\$7	\$8
8%	\$4	\$5	\$6	\$6	\$7	\$8	\$9	\$10	\$10
10%	\$5	\$6	\$7	\$8	\$9	\$10	\$11	\$12	\$13
12%	\$6	\$7	\$8	\$10	\$11	\$12	\$13	\$14	\$16
14%	\$7	\$8	\$10	\$11	\$13	\$14	\$15	\$17	\$18
16%	\$8	\$10	\$11	\$13	\$14	\$16	\$18	\$19	\$21
18%	\$9	\$11	\$13	\$14	\$16	\$18	\$20	\$22	\$23

Recurring Infrastructure Revenue Sensitivity

Node Ownership%	Zilliqa Network Value								
	\$2,000	\$2,500	\$3,000	\$3,500	\$4,000	\$5,000	\$5,500	\$6,000	\$6,500
2%	\$2	\$2	\$3	\$3	\$4	\$5	\$5	\$6	\$6
4%	\$4	\$5	\$6	\$7	\$8	\$10	\$10	\$11	\$12
6%	\$6	\$7	\$9	\$10	\$11	\$14	\$16	\$17	\$19
8%	\$8	\$10	\$11	\$13	\$15	\$19	\$21	\$23	\$25
10%	\$10	\$12	\$14	\$17	\$19	\$24	\$26	\$29	\$31
12%	\$11	\$14	\$17	\$20	\$23	\$29	\$31	\$34	\$37
14%	\$13	\$17	\$20	\$23	\$27	\$33	\$37	\$40	\$43
16%	\$15	\$19	\$23	\$27	\$30	\$38	\$42	\$46	\$50
18%	\$17	\$21	\$26	\$30	\$34	\$43	\$47	\$51	\$56

Source: Fundstrat



Zilliqa Research business valuation could reach \$590M by 2025

Zilliqa Research would generate approximately 77% of its total revenue from Enterprise Support Services and about 23% from Blockchain-as-a-Service revenue based on our model expectations.

- Assuming the Company executes on this monetization strategy, our analysis suggests a possible Company valuation range of \$400M - \$900M by 2025 based on industry standard profit margins and valuation multiples.

Figure: Zilliqa Research Valuation Potential

\$ millions

Zilliqa Research Valuation Potential

Segment Revenue		FY 2025
Enterprise Support Revenue	a	\$90
<i>Total Revenue%</i>	a / f = b	77%
Blockchain-as-a-Service Revenue	c	\$28
<i>Total Revenue%</i>	c / f = e	23%
Total Revenue	a + c = f	\$118
Net Profit Margin%	g	20%
Net Income	f * g = h	\$24
P/E Multiple	i	25x
Valuation	h * i = j	\$590

Zilliqa Research Net Profit Sensitivity

		Zilliqa Research Total Revenue								
		\$80	\$90	\$100	\$110	\$120	\$130	\$140	\$150	\$160
Net Profit Margin%	1%	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$2	\$2
	5%	\$4	\$5	\$5	\$6	\$6	\$7	\$7	\$8	\$8
	10%	\$8	\$9	\$10	\$11	\$12	\$13	\$14	\$15	\$16
	15%	\$12	\$14	\$15	\$17	\$18	\$20	\$21	\$23	\$24
	20%	\$16	\$18	\$20	\$22	\$24	\$26	\$28	\$30	\$32
	25%	\$20	\$23	\$25	\$28	\$30	\$33	\$35	\$38	\$40
	30%	\$24	\$27	\$30	\$33	\$36	\$39	\$42	\$45	\$48
	35%	\$28	\$32	\$35	\$39	\$42	\$46	\$49	\$53	\$56
	40%	\$32	\$36	\$40	\$44	\$48	\$52	\$56	\$60	\$64

Zilliqa Research Valuation Sensitivity

		Zilliqa Research Net Income								
		\$5	\$10	\$15	\$20	\$25	\$30	\$35	\$40	\$50
P/E Multiple	5x	\$25	\$50	\$75	\$100	\$125	\$150	\$175	\$200	\$250
	10x	\$50	\$100	\$150	\$200	\$250	\$300	\$350	\$400	\$500
	15x	\$75	\$150	\$225	\$300	\$375	\$450	\$525	\$600	\$750
	20x	\$100	\$200	\$300	\$400	\$500	\$600	\$700	\$800	\$1,000
	25x	\$125	\$250	\$375	\$500	\$625	\$750	\$875	\$1,000	\$1,250
	30x	\$150	\$300	\$450	\$600	\$750	\$900	\$1,050	\$1,200	\$1,500
	35x	\$175	\$350	\$525	\$700	\$875	\$1,050	\$1,225	\$1,400	\$1,750
	40x	\$200	\$400	\$600	\$800	\$1,000	\$1,200	\$1,400	\$1,600	\$2,000
	45x	\$225	\$450	\$675	\$900	\$1,125	\$1,350	\$1,575	\$1,800	\$2,250

Source: Fundstrat



Zilliqa Valuation Key Base Case Assumptions

Variable	Assumption	Basis	Comments
ASEAN Open Finance Market Served & Total Revenue	19%	Share (% of Fintech)	Assumed Bain & Co. ASEAN 2025 digital banking forecast (Slide 29) as Fintech market size and assumed Cambridge ASEAN Fintech DLT usage study (Slide 65) represents an approximate basis for estimating the Open Finance market share capture.
Zilliqa DLT Ecosystem Market Served & Total Revenue	10%	Share (% of OpFi)	Assumed 15% for flow-based payments, 10% for stock-based tokenized asset verticals where Zilliqa has existing partnerships (Slide 57) and 5% for other core segments.
Zilliqa Token Network Market Served	30%	Share (% of Ecosystem)	Assumed ZIL token usage as a portion of the value served by the Zilliqa DLT Ecosystem based on data from OECD study on Crypto asset usage in ASEAN (Slide 66).
Zilliqa Ecosystem & Zilliqa Research Net Income	20%	(Total Revenue * Net Profit Margin%)	Assumed a 20% net profit margin as the normalized industry expectation based on the Bloomberg S&P 500 Financials Index reported profit margin 19.23% as of 12/31/2019.
Zilliqa Ecosystem & Zilliqa Research Market Value	25x	P/E Multiple of Net Income	Assumed a 25x P/E multiple for calculating the market value of all Zilliqa ecosystem companies and Zilliqa Research based on Oliver Wyman financial industry data (Slide 68).
Zilliqa Network Value	5x	Velocity Multiple of Economic Activity	Assumed a 5x velocity multiple for the economic activity using the token based on the equation of exchange model (Slide 36) and assumed all network transaction fees have an immediate velocity that adds no value to the network.
DLT Disintermediated Costs	50%	% of Total Revenue	Assumed 50% of ecosystem costs are applicable to DLT based on Accenture study data (Slide 67) and overall financial services industry net profit margins.
DLT Related Fees	50%	% of DLT Disintermediated Costs	Assumed 50% of the DLT disintermediated costs can be captured for DLT related fees by taking the midpoint of the Accenture study average (30%) and max (70%) banking potential cost reduction (Slide 67).
Zilliqa Research Enterprise Support Revenue	50%	Share (% of DLT Related Fees)	Assumed 50% of DLT related fees can go to Zilliqa Research for consulting, support & training services to help enterprise customers better save costs using its network.
Zilliqa Network Revenue	50%	Share (% of DLT Related Fees)	Assumed 50% of DLT related fees go to the Zilliqa Network as transaction fees.
Blockchain-as-a-Service Revenue	10%	Node Ownership% * Node Compensation	Assumed Zilliqa Research operates 10% of nodes and receives a proportional share of fees and new block rewards based on plans indicated to us by the team (Slide 51).

Source: Fundstrat



Downside risks to our thesis

- It is early to estimate the size of the addressable market, and our valuation approach may prove to be inaccurate should some predicted markets fail to materialize or other assumptions not hold.
- Zilliqa Research could be slow to or ultimately fail to execute on monetizing its consulting, support, and training services offering.
- Competition for strategic partnerships from other DLT companies could result in lower than expected market share or reduced pricing power.
- Technical malfunctions and potential attacks on the network could stifle adoption of Zilliqa's DLT technology.
- Emergence of Central Bank Digital Currencies (CBDCs) could slow adoption of public DLT technology and result in fewer revenue generating opportunities for platforms such as Zilliqa.
- Regulators in certain jurisdictions may choose to view ZIL as a security, possibly leading some network participants to exit the marketplace for compliance concerns.
- The opinions expressed in this report are the beliefs of the author at the time of publication. Fundstrat does not commit to update this report and is not responsible for any independent investment decisions made by a reader, based on this and / or any other sources of information.

Source: Fundstrat



Upside potential to our thesis

- Zilliqa's DLT could achieve a larger share of the ASEAN Open Finance market than our 10% base case assumption.
- Successful launch of the Zilliqa Capital ([Slide 55](#)) ecosystem fund could accelerate ecosystem growth and provide upside that is not included in our current forecasts.
- Zilliqa Research could achieve dominant positioning in the ASEAN market and expansion into other major markets such as India could follow sooner than expected.
- Penetration into other end markets such as digital advertising, supply chain management, and gaming could spur increased adoption and value capture that is not included in our current forecast.
- Forward looking regulatory policies in key jurisdictions could prove to be a key differentiator and accelerate strategic partnership formation and market share capture.
- The platform could achieve a higher level of decentralization sooner than expected thus reducing the likelihood of network downtime or technical malfunctions.



Technical Overview

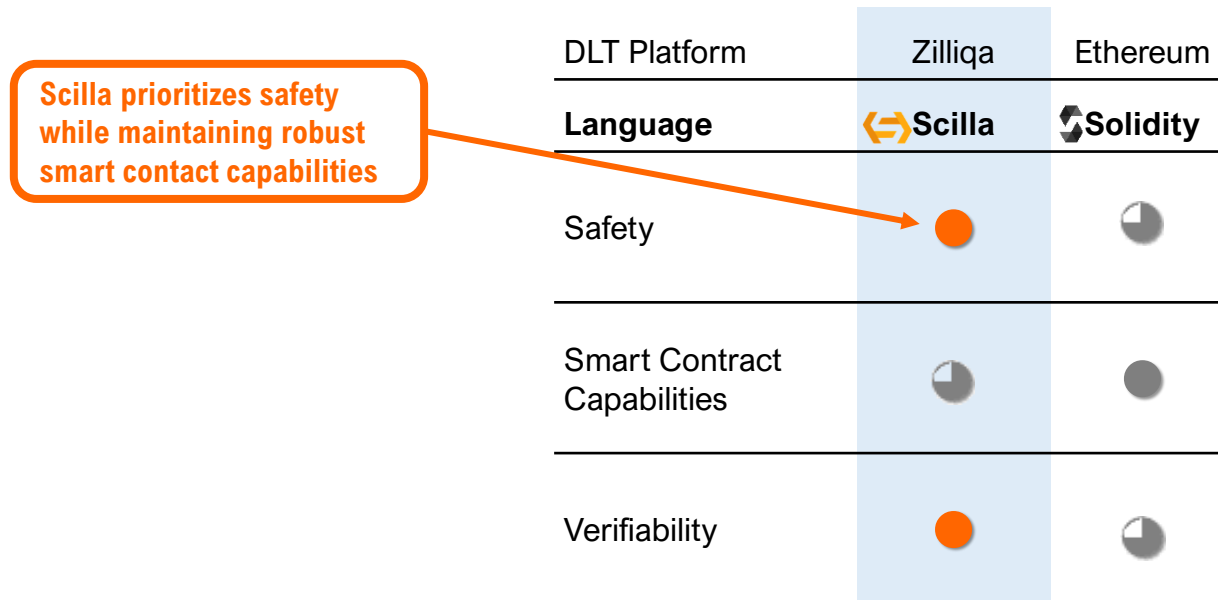


Scilla -> Removing known vulnerabilities at the language level

To address the shortcomings of smart contract programming languages, Zilliqa Research is developing a new language, Scilla (Smart Contract Intermediate Level Language). The language aims to enhance smart contract safety by:

- **Eliminating key vulnerabilities:** Scilla requires that certain functions be written in a pre-determined format. While these restrictions slightly reduce the range of smart contract functionalities, they enhance security.
- **Facilitating formal verification:** Contracts written in Scilla can mathematically be proven to behave in a certain way before being deployed to the blockchain. As contracts are immutable and deployed in an environment with malicious actors, verification is key to enhancing safety.

Figure: Comparison of Scilla vs Solidity smart contract programming language



Source: Fundstrat, Zilliqa

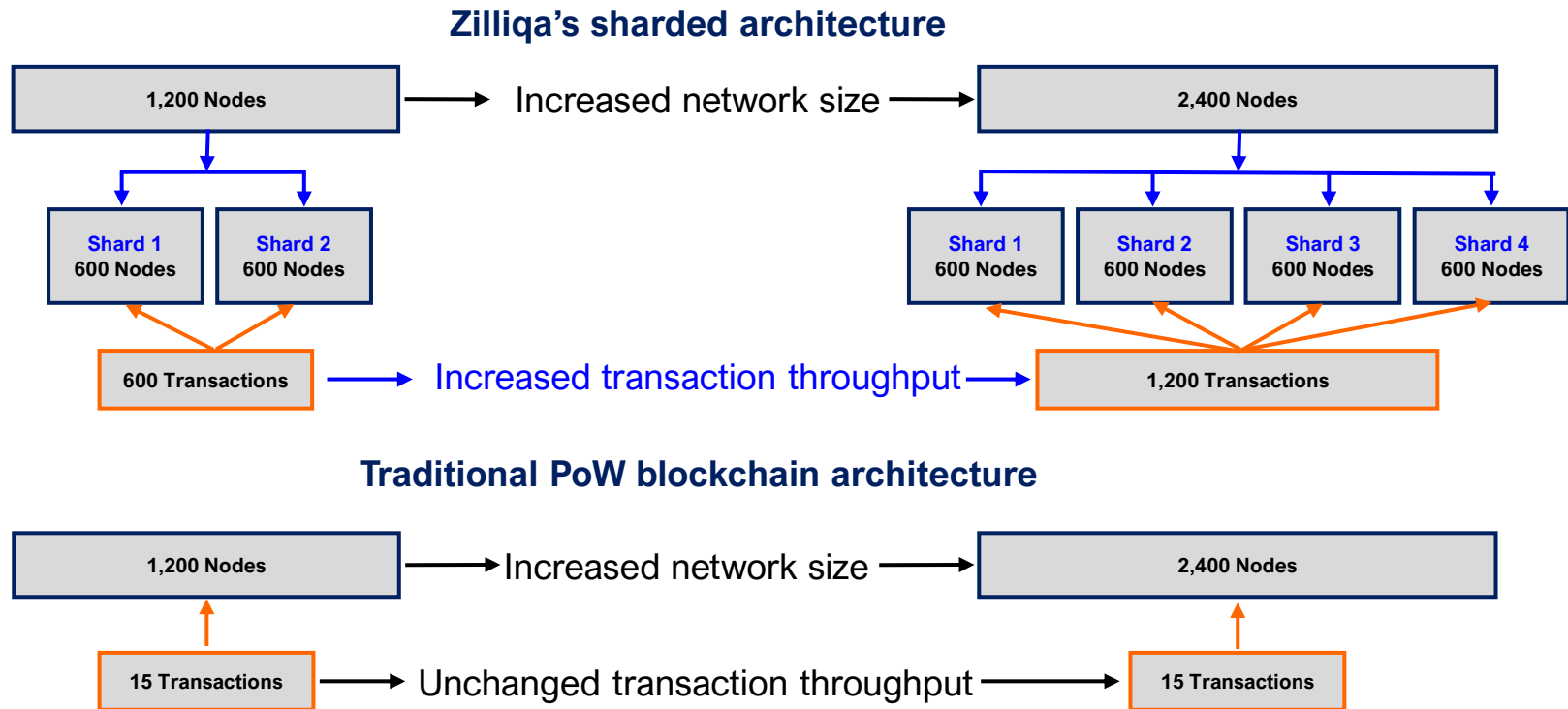


Network and transaction sharding = divide and conquer -> scalability

The Zilliqa protocol employs network and transaction sharding⁽¹⁾ to increase scalability. Sharding divides the overall node base into smaller groups (shards) and divides the flow of transactions amongst these groups to enable transaction processing in parallel.

- **Given this sharded architecture, Zilliqa's DLT has achieved 2,800+ transactions per second in a testnet environment; a sufficiently high level of throughput to support a variety of end use cases.**
- Nevertheless, we note that throughput is not the be-all and end-all for any DLT platform. While most traditional PoW blockchains do not currently experience increased throughput as their node networks expand, they benefit from enhanced security.

Figure: Illustrative example of Zilliqa's sharding architecture



Source: Fundstrat; ⁽¹⁾ Refer to [Slide 70](#) for a full explanation of network sharding and state sharding



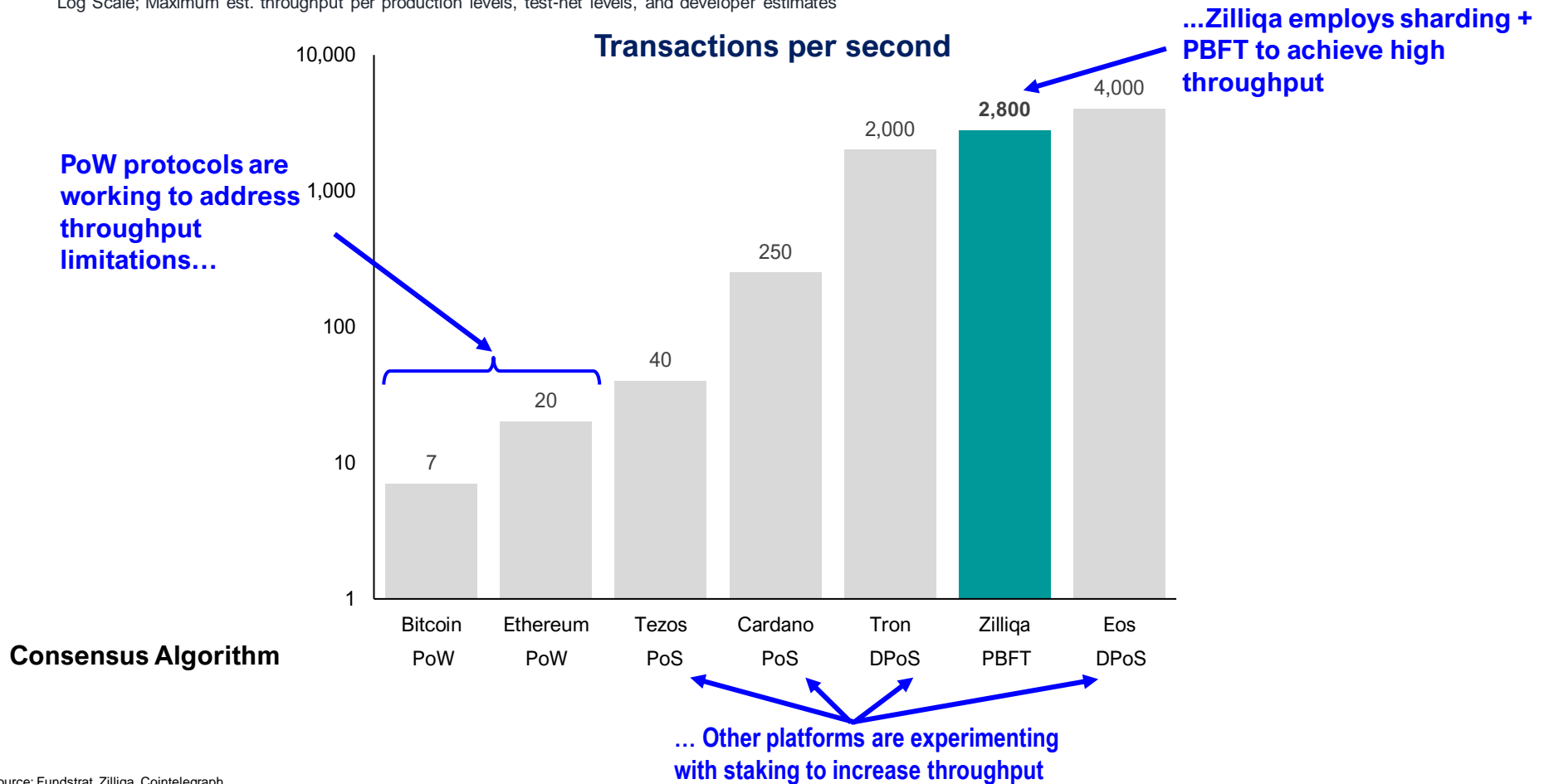
Zilliqa's sharded architecture + PBFT consensus -> High throughput

Given its sharded network and PBFT consensus algorithm, Zilliqa is capable of handling high transaction throughput compared to other major competing platforms.

- **As blockchains become more widely used, scalability will become a necessary rather than a desirable feature. Zilliqa's sharded architecture positions the platform for adoption across a number of high-throughput use cases.**

Figure: Comparison of transaction throughput for various DLT platforms

Log Scale; Maximum est. throughput per production levels, test-net levels, and developer estimates



Source: Fundstrat, Zilliqa, Cointelegraph

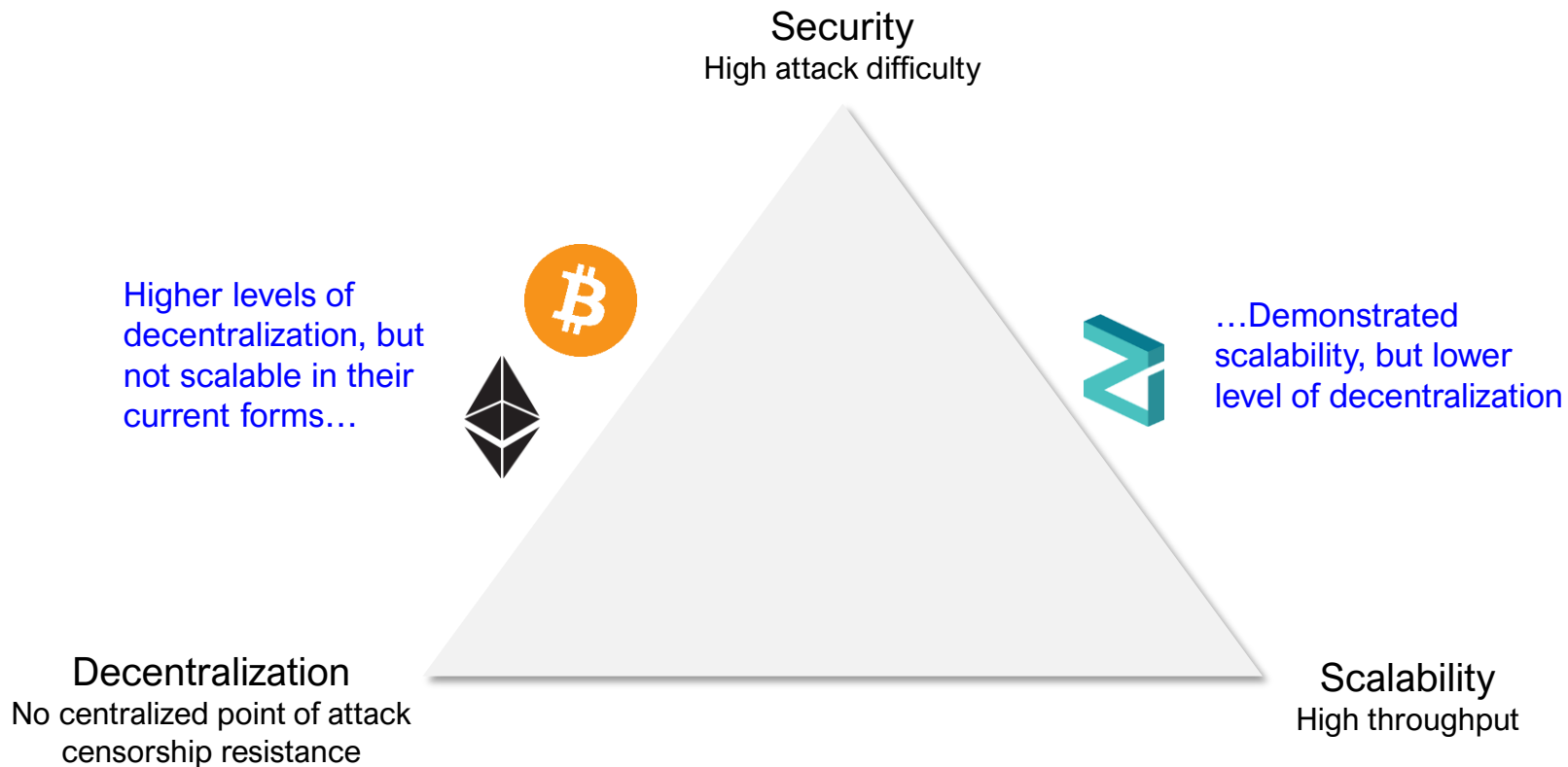


Zilliqa's sharding offers a potential solution to the blockchain trilemma

One of the major challenges facing public blockchains is the so-called “blockchain trilemma” – or the difficulty of creating a platform that is **secure, scalable, and decentralized** all at the same time. High levels of decentralization typically require high levels of communication between nodes which limits a network's throughput/scalability.

- **Zilliqa's sharded architecture aims to reduce communication between nodes (i.e. increase scalability) and facilitate permission-less consensus (i.e. achieve decentralization). While this design positions the platform to better capture all the attributes of the trilemma, Zilliqa currently has a lower level of decentralization compared to other major blockchains such as Bitcoin and Ethereum.**

Figure: Illustrative example of the blockchain trilemma



Source: Fundstrat



Zilliqa employs a dual blockchain structure to reach consensus

Zilliqa employs a dual-blockchain structure that uses (i) PoW algorithms to establish network identities and (ii) PBFT consensus algorithms to validate transactions.

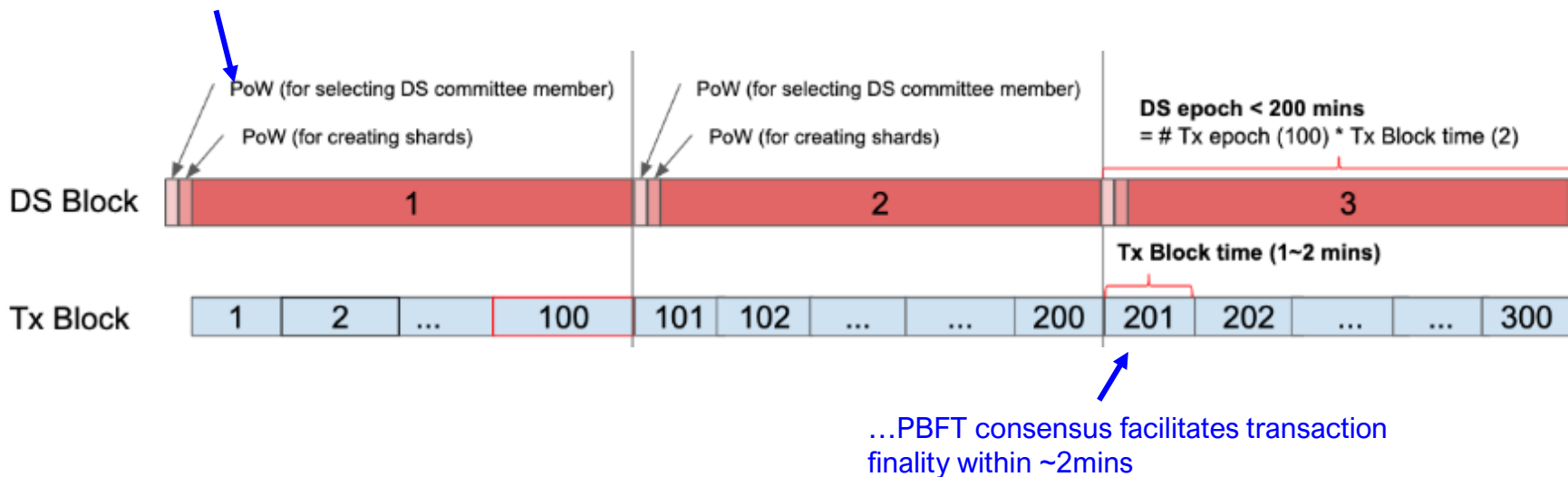
- The **Directory Service (DS) Blockchain** stores node identities and the sharding logic for transactions. PoW is performed at the beginning of every DS epoch (block life) to prevent sybil attacks and facilitate network sharding.
- The **Transaction Blockchain** stores all of the transactions processed by the network. Transactions are validated using a leader-based PBFT consensus algorithm that reaches finality within 2 minutes.

There are two major classes of nodes employed to facilitate transaction processing: **DS nodes** and **Shard nodes**:

- **DS nodes** oversee the assignment of shard nodes into their respective shards, process complex smart contracting transactions, and typically have higher hash power.
- **Shard nodes** process less complex smart contract transactions, perform all other simple network transactions, and typically have lower hash power compared to DS nodes.

Figure: Zilliqa's Dual Blockchain Structure

POW performed once every 1-2 hours to prevent sybil attacks...



Source: Fundstrat, Zilliqa

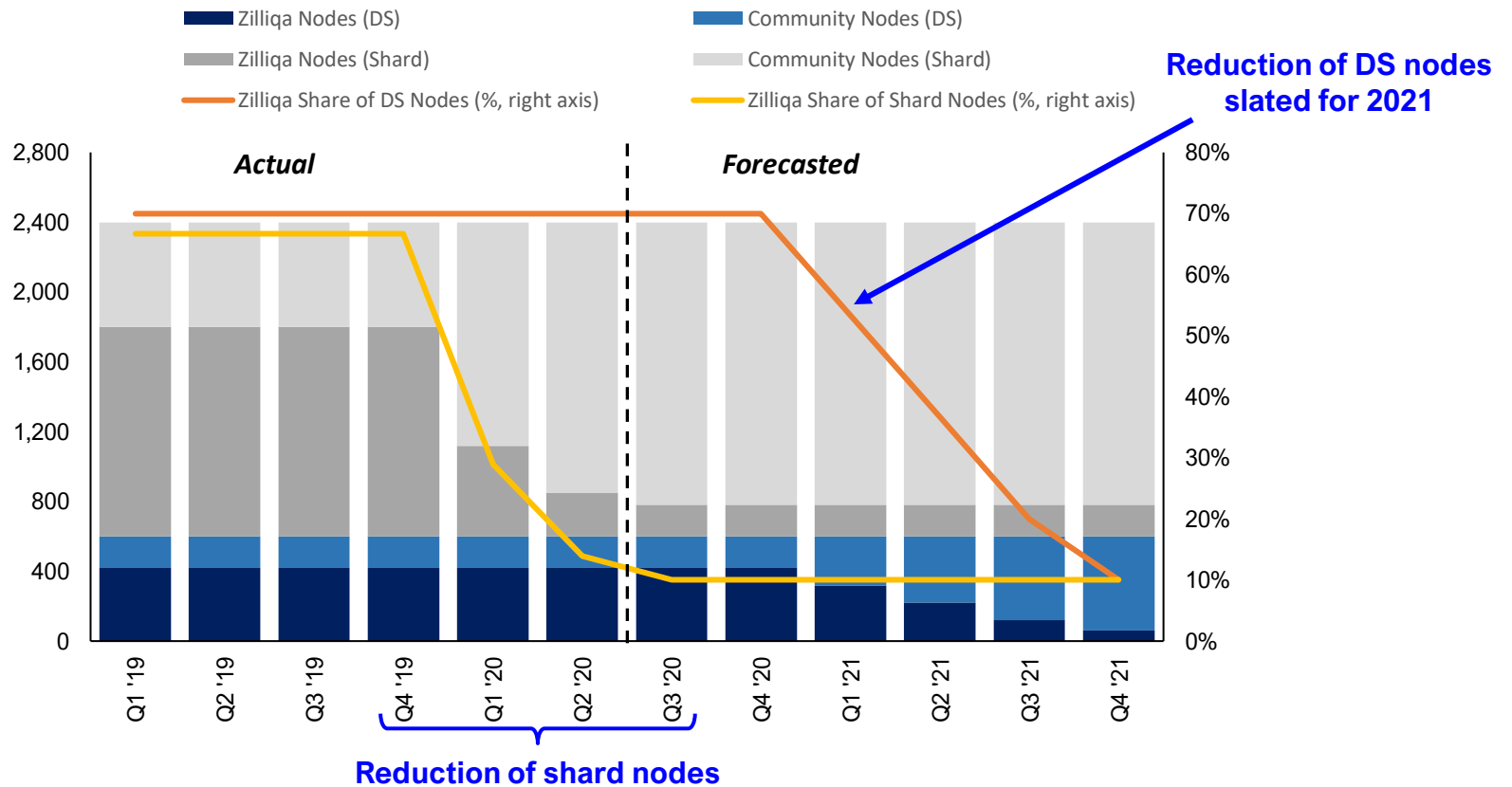


Zilliqa’s path to greater decentralization -> reducing network participation

As is the case with most early stage and permissionless networks, Zilliqa Research is participating in network consensus to (i) “guarantee” that the initial set of nodes are non-malicious and (ii) to easily make technical upgrades. Currently, Zilliqa Research is operating about 250 of the total 1,800 shard nodes on the network and 420 of the 600 total DS nodes on the network.

- **Since Jan '19, Zilliqa has significantly reduced the share of shard nodes that it runs from about 70% to 13% and has further plans to reduce its share of the DS node base in 2021. Should Zilliqa execute on these reductions, we view this as a positive development for the overall health of the network.**

Figure: Forecasted Distribution of Network Nodes



Source: Fundstrat, Zilliqa



Zilliqa's employs PoW and leader based PBFT to reach consensus

POW + PBFT

- Zilliqa employs PoW to establish network node identities and a leader-based PBFT consensus algorithm to validate transactions.
- The PoW process is employed to enhance network security and prevent sybil attacks⁽¹⁾ while leader-based PBFT consensus facilitates transaction processing.
- Node leaders aggregate transactions into blocks which are broadcast to the network and validated by secondary nodes. The leader changes in a round-robin (circular) order thus facilitating distribution of block rewards across all network nodes.
- **This combined approach allows for secure and scalable transaction processing that is resource efficient.**

Proof of Work (PoW)

- Traditional Proof of Work systems such as Bitcoin and (currently) Ethereum require “miners” to solve complex cryptographic puzzles with a brute force approach.
- The first miner to solve the puzzle receives the entire reward, and all miners then start over on the next, sequential block and the next puzzle, discarding any efforts spent on the current block.
- Miners have an incentive to increase their share of computing power to increase their likelihood of winning the next reward, resulting in an escalating scale of the network.
- **Thus proof of work tends to be relatively slow and resource-intensive, and has difficulty scaling, but is secure.**

Proof of Stake (PoS)

- A Proof of Stake system requires transaction validators to “stake” their token holdings, and vote on the validity of transactions, with the weight of their vote usually proportional to their holdings.
- Nodes share in the fees paid by customers for network usage, proportional to their stake. PoS systems tend to be faster than PoW.
- Every active node receives a share of network cash flow, and the incentive is to hold tokens and receive a regular payout based on network activity.
- **POS is resource efficient as capital is held as a liquid asset rather than deployed as depreciating mining equipment.**

Source: Fundstrat; ⁽¹⁾Sybil Attack: Attack seen in peer-to-peer networks in which a node in the network operates under multiple identities actively at the same time



ZIL token supply

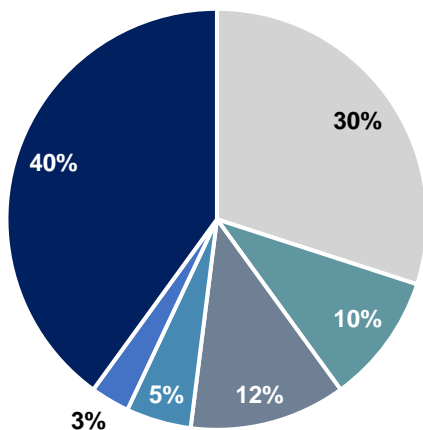
There are currently approximately 13.5B ZIL tokens in circulation which represents 65% of total 21B ZIL supply. Of the total supply, (i) 33% were distributed at the Token Generation Event (TGE), (ii) 27% vest over a 3-year period (ending in Jun '20), and (iii) 40% were reserved for block rewards.

- In conjunction with changes made to the platform’s tokenomics in October, Zilliqa increased the block reward issuance by 40% and began “burning” (i.e. reducing supply by retiring tokens like treasury stock) ZIL transaction fees (previously paid to miners) to offset said block issuance increases.
- Accordingly, ZIL’s inflation rate will be impacted by the level of transaction fees on the network and could be materially lower, or potentially deflationary should a robust fee market develop. Nevertheless, total supply remains capped at 21B.

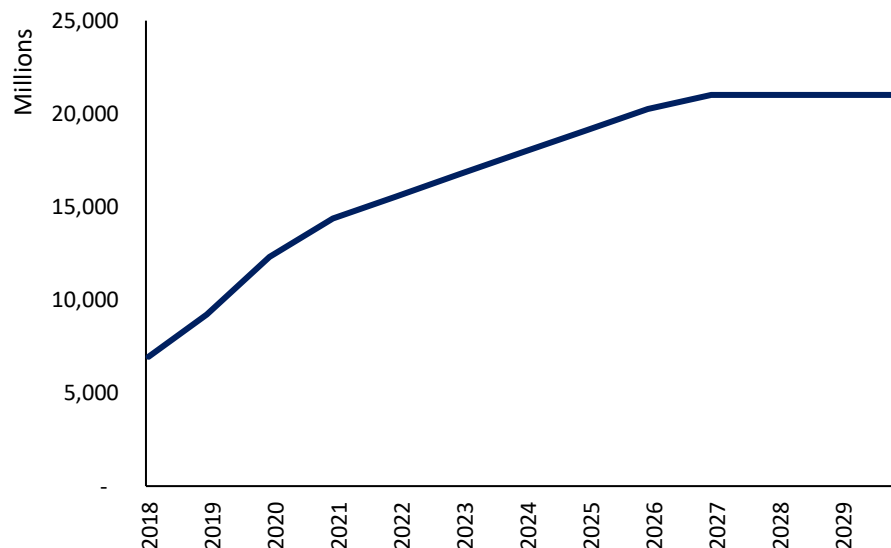
Figure: Forecasted ZILToken Release Schedule⁽¹⁾; M's of ZIL

ZIL Initial Token Distribution

- Early Community
- Anquan Capital
- Zilliqa Research
- Zilliqa Team
- Strategic Advisor
- Block Rewards



ZIL Supply Emission Schedule⁽¹⁾



Source: Fundstrat, Zilliqa; Refer to [Slide 71](#) for further detail on supply schedule. (1) Supply schedule assumes that zero transaction fees are recycled into the network. Should the network grow to generate material transaction fees, increases in token supply would be less pronounced as fees that are “burned” offset new issuance.



Ecosystem Overview



Zilliqa Ecosystem Funds: Driving blockchain ecosystem growth



Zilliqa Capital is a newly launched investment vehicle focused on making investments across Zilliqa’s DLT ecosystem with a concentration on OpFi applications in APAC.

- Led by a team of investment and tech professionals, the vehicle provides a unique opportunity to invest across Zilliqa’s ecosystem and own a portion of Zilliqa Research; effectively the TCP/IP layer of the OpFi opportunity.
- The vehicle is expected to launch via a \$50M-\$200M Security Token Offering.

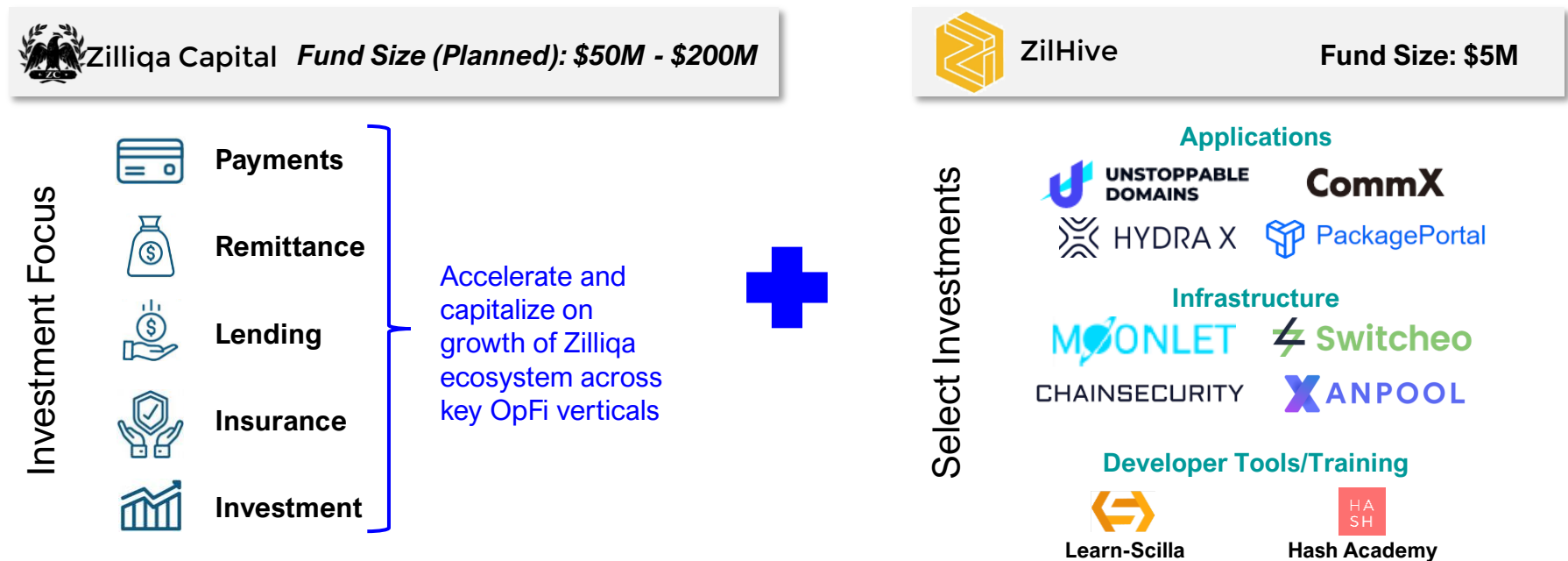
Successful execution on the Zilliqa Capital fundraising would likely accelerate ecosystem growth and could strengthen the platform’s position as a leading regional OpFi player.



ZilHive, Zilliqa’s \$5M accelerator fund, has been a key component in driving early ecosystem growth, and DLT adoption.

- The program has deployed ~\$2M to date to support application development, blockchain infrastructure (SDKs, wallets, security), and developer tools/training and is now prioritizing investment in OpFi infrastructure.

Figure: Zilliqa Capital Investment Focus; Select ZilHive Investments



Source: Fundstrat, Zilliqa



ZilHive wins have driven Company profitability and delivered measurable community growth results

Figure: Select ZilHive partnerships



- **Company:** San Francisco based, domain registry platform enabling developers to build uncensorable websites. Also enables customizable domains for crypto addresses to facilitate easier transfers
- **Outcome:** Unstoppable Domains sold ~150k ZIL domains. Total Revenue generation of ~ \$3M-\$4M. Investment agreement yields 1,150% gains



- **Company:** Singapore based, non-custodial decentralized exchange, facilitating peer-to-peer transfers of digital assets
- **Outcome:** Investment agreement yields 470% capital gains as of 9/21/20. Switchero is now building a DEX on Zilliqa called Zilswap.io



- **Company:** Singapore based, fiat to crypto on-ramp company
- **Outcome:** Investment agreement yields 67% capital gains. ZIL Token listed on Xanpool platform



- **Program:** Social media campaign distributing ZIL rewards to users for tweets with #Zilliqa hashtag on Twitter and donations to Singapore Red Cross for tweets with #ZiLCovidHeroes
- **Outcome:** Total social media engagement of ~45M, 7,500+ registrations, 1K+ Twitter likes, 2000+ new Twitter followers in the month of May

Source: Fundstrat, Zilliqa



Case Studies: Xfers and HG Exchange partnerships showcase Zilliqa's OpFi value proposition

Figure: Xfers and HG Exchange Partnerships

- Xfers is a leading Southeast Asian payment solutions provider, founded in 2015.
- **Plans to utilize Zilliqa's smart contracts to make payments more efficient and transparent for its users.**
- **XSGD stablecoin pegged 1:1 to the value of the Singapore dollar (SGD) launched on Zilliqa blockchain.**
- First digital wallet approved by Monetary Authority of Singapore (MAS) as a holder of a Widely Accepted Stored Value Facility (WASVF).
- Xfers Wallet can hold more than \$20 million of users' and merchants' stored value, which it is fully liable for.
- Over ~10 million active monthly users and ~\$150 million monthly transaction volume.
- Backed by 500 Startups, Golden Gate Ventures and Facebook Co-Founder Eduardo Saverin, Lazena Investment, GMO Venture Partners, Partech Ventures, BWB Ventures, Convergence Ventures.

- Hg Exchange is [Southeast Asia's first member-driven exchange platform](#) which supports the issuance and trading of private equities, including security tokens.
- **Powered by Zilliqa, the sole technology partner who designed Athena, the custodian service software, and Occam, the tokenization platform for Hg Exchange.**
- Presents accredited investors with unparalleled access to investment in high-growth companies such as Grab, SpaceX and Go-Jek.
- Solves the perennial problem many shareholders of private companies face, by presenting a single destination to help monetize their stake.
- Backed by established capital markets intermediaries and emerging innovators from the FinTech sector: Phillip Securities, PrimePartners, RHT Capital, and Fundnel.

Source: Fundstrat, Zilliqa



Partnerships have primed the DLT network for deployment and trials have showcased its ability to deliver cost savings

Figure: Select Zilliqa Partnerships



- Zilliqa partnered with ChainSecurity (taken over by PwC in Jan '20) in Sep '19 to develop a host of security tools for the Zilliqa ecosystem.
- **Result:** Chainsecurity will develop a security scanner to enable developers to identify security vulnerabilities and issues arising from poor coding practices.



- Zilliqa partnered with crypto risk management firm Elliptic in Nov '19. Elliptic's AML compliance tools will be used to mitigate exposure to fraudulent activities across the platform and tokens built on top of it.
- **Result:** Zilliqa enhances its ability to support enterprise-grade, regulated financial infrastructure.



- **Company:** Pepsico's project partner and media agency, Mindshare conducted a trial on the Zilliqa blockchain platform to enhance Pepsi's supply chain reconciliation.
- **Result:** Blockchain trial generated an estimated 28% boost in supply chain efficiency, demonstrating cost savings achieved by using Zilliqa blockchain.

Source: Fundstrat, Zilliqa



Recent strategic initiatives could be catalysts for ecosystem

Zilliqa enacted several strategic initiatives in October 2020 aimed at enhancing the long-term value of the network and solidifying the platform’s position as a leading OpFi player.

- Specific changes enacted include adding support for ZIL staking, re-organizing the distribution and level of block rewards, issuing a new governance token gZIL, and releasing the first decentralized exchange on Zilliqa.
- While it is early to determine the ultimate effect of these changes, they may create an opportunity for increased demand/usage of ZIL (i.e. demand for ZIL to stake and earn block rewards and the gZIL token, demand for ZIL to pay transaction fees on the ZilSwap DEX) and could be a net positive for the network.

Figure: Select Zilliqa Developments

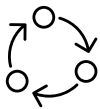


1) Seed Node Staking and Governance Token Launch

- Zilliqa introduced non-custodial staking in October 2020 for its seed nodes. By delegating (“locking up”) ZIL tokens to staked seed nodes, token holders can earn a portion of block.
- In conjunction with the introduction of staking, Zilliqa introduced a governance token, gZIL which is earned as a reward for staking and aims to grant long-term token holders the ability to become decision makers in the ecosystem.
- More information on staking and the gZIL governance token can be found [here](#).

Seed nodes: Special nodes that do not participate in validating transactions (consensus) but instead archive historical transaction data. Nevertheless they serve as direct access points (for end users and clients) to the core Zilliqa network and are important in providing services like block explorers.

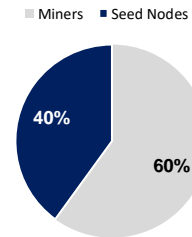
Seed Node Staking; The idea of staking is to pre-qualify seed hosts by requiring them to stake a certain minimum amount of ZILs for the duration of the service provided. Within this duration, the host presents regular proofs of its ability to provide the service and in return, is rewarded a proportional amount of ZILs. This approach aims to both promote widespread participation and ensure an acceptable level of performance from participants.



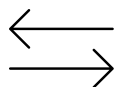
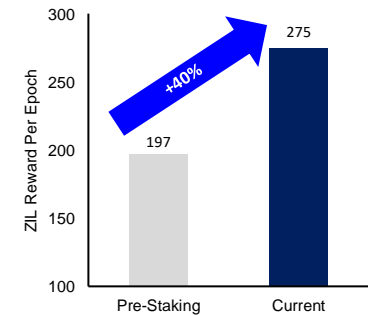
2) Changes to Network Economics:

- In conjunction with the introduction of seed node staking, seed node operators’ share of block rewards was increased from 5% to 40%. Additionally, the global block reward was increased by 40% and miners share of the reward was reduced from 95% to 60% (resulting in a net decrease in actual mining rewards per epoch of ~12% for miners).
- Additionally, transaction (“gas”) fees which were previously remitted directly to miners, will now be recycled into the pool of block rewards and paid out on a 60/40 basis to miners and seed nodes, respectively to offset increased issuance under the new block reward schedule.

Block Reward Distribution



Block Reward



3) Launch of Decentralized Exchange, ZilSwap:

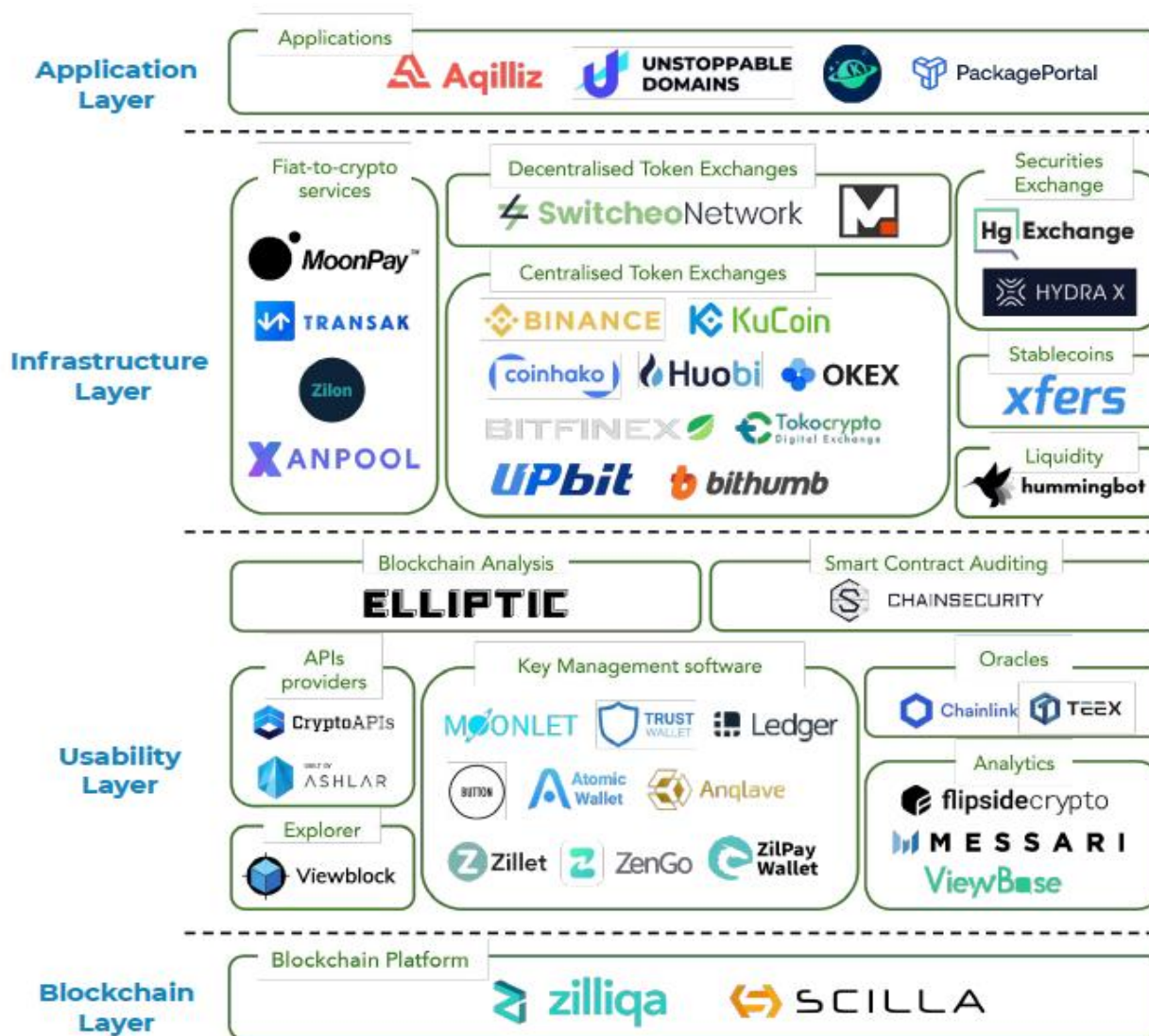
- Zilliqa launched its first decentralized exchange “DEX”, ZilSwap, in October 2020.
- ZilSwap allows users to trade ZIL or ZRC tokens directly on the Zilliqa blockchain from their wallets and employs an automated market maker on top of a permission-less liquidity protocol.
- Token holders now have the opportunity to earn ZIL by adding tokens to liquidity pools on ZilSwap and earning as market makers.



Source: Fundstrat, Zilliqa



Overview of Zilliqa Ecosystem



Source: Zilliqa



Appendix



2023 Valuation: Zilliqa's DLT Network value could reach \$2.2B by 2023

Applying our same 2025 assumptions but assuming that Zilliqa's DLT is employed to support 7% of companies in the ASEAN OpFi market by 2023, companies building on Zilliqa's DLT could collectively be worth \$2B by 2023.

- This 7% penetration rate translates to a forecasted ~\$11B of economic activity flowing through Zilliqa's DLT network by 2023 and an estimated ~\$2.2B token network value based on our equation of exchange valuation.

Figure: Zilliqa Ecosystem Value Potential Analysis (2023)

\$ millions

Zilliqa DLT Ecosystem Value Potential (2023)

		FY 2023
Open Finance Revenue	A	\$5,690
Zilliqa DLT Share%	b	7%
Ecosystem Revenue	a * b = c	\$397
Net Profit Margin%	d	20%
Net Profit	c * d = e	\$79
P/E Multiple	f	25x
Ecosystem Value	e * f = g	\$1,984

Zilliqa Token Value Potential (2023)

		FY 2023
Zilliqa DLT Ecosystem Market Served	a	\$36,041
ZIL Token Usage%	b	30%
Network Economic Activity	a * b = c	\$11,019
Token Velocity	d	5.0x
Zilliqa Network Value	c / d = e	\$2,204
Tokens Outstanding (M)	f	16,380
ZIL Token Price	e / f = g	\$0.13

Zilliqa DLT Ecosystem Valuation Sensitivity (2023)

		Zilliqa DLT Ecosystem Profit								
		\$40	\$50	\$60	\$70	\$80	\$90	\$100	\$110	\$120
P/E Multiple	5x	\$200	\$250	\$300	\$350	\$400	\$450	\$500	\$550	\$600
	10x	\$400	\$500	\$600	\$700	\$800	\$900	\$1,000	\$1,100	\$1,200
	15x	\$600	\$750	\$900	\$1,050	\$1,200	\$1,350	\$1,500	\$1,650	\$1,800
	20x	\$800	\$1,000	\$1,200	\$1,400	\$1,600	\$1,800	\$2,000	\$2,200	\$2,400
	25x	\$1,000	\$1,250	\$1,500	\$1,750	\$2,000	\$2,250	\$2,500	\$2,750	\$3,000
	30x	\$1,200	\$1,500	\$1,800	\$2,100	\$2,400	\$2,700	\$3,000	\$3,300	\$3,600
	35x	\$1,400	\$1,750	\$2,100	\$2,450	\$2,800	\$3,150	\$3,500	\$3,850	\$4,200
	40x	\$1,600	\$2,000	\$2,400	\$2,800	\$3,200	\$3,600	\$4,000	\$4,400	\$4,800
	45x	\$1,800	\$2,250	\$2,700	\$3,150	\$3,600	\$4,050	\$4,500	\$4,950	\$5,400

Token Network Value Sensitivity (2023)

		Network Economic Activity								
		\$4,000	\$6,000	\$8,000	\$10,000	\$12,000	\$14,000	\$16,000	\$18,000	\$20,000
Velocity	3.0x	\$1,333	\$2,000	\$2,667	\$3,333	\$4,000	\$4,667	\$5,333	\$6,000	\$6,667
	3.5x	\$1,143	\$1,714	\$2,286	\$2,857	\$3,429	\$4,000	\$4,571	\$5,143	\$5,714
	4.0x	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$3,500	\$4,000	\$4,500	\$5,000
	4.5x	\$889	\$1,333	\$1,778	\$2,222	\$2,667	\$3,111	\$3,556	\$4,000	\$4,444
	5.0x	\$800	\$1,200	\$1,600	\$2,000	\$2,400	\$2,800	\$3,200	\$3,600	\$4,000
	5.5x	\$727	\$1,091	\$1,455	\$1,818	\$2,182	\$2,545	\$2,909	\$3,273	\$3,636
	6.0x	\$667	\$1,000	\$1,333	\$1,667	\$2,000	\$2,333	\$2,667	\$3,000	\$3,333
	6.5x	\$615	\$923	\$1,231	\$1,538	\$1,846	\$2,154	\$2,462	\$2,769	\$3,077
	7.0x	\$571	\$857	\$1,143	\$1,429	\$1,714	\$2,000	\$2,286	\$2,571	\$2,857

Source: Fundstrat



2023 Valuation: Zilliqa Research could be worth ~\$330M by 2023

Based on our 2023 assumptions, Zilliqa Research could generate ~\$66M in revenue in 2023 comprised of \$50M in Enterprise Support Revenue and \$17M in BaaS revenue.

- Assuming a 20% net profit margin and a 25x P/E, Zilliqa Research's operating business could be worth ~\$330M by 2023 based on our analysis.

Figure: Zilliqa Research Valuation Potential (2023)

\$ millions

Zilliqa Research BaaS Revenue Potential (2023)

		FY 2023
DLT Related Fees	a	\$99
DLT Transaction Fee%	b	50%
Zilliqa Network Revenue	a * b = c	\$50
Zilliqa Token Network Value	d	\$2,204
Token Supply Dilution%	e	5.26%
Network Equity Compensation	d * e = f	\$166
Total Node Compensation	c + f = g	\$50
Node Ownership%	h	10%
On-Demand DLT Revenue	c * h = i	\$5
Recurring Infrastructure Revenue	f * h = j	\$12
Blockchain-as-a-Service Revenue	g * h = k	\$17

Zilliqa Research Enterprise Support Revenue (2023)

		FY 2023
Zilliqa DLT Ecosystem Revenue	a	\$397
DLT Impacted Costs%	b	50%
DLT Disintermediated Costs	a * b = c	\$189
DLT Cost Savings%	d	50%
DLT Related Fees	c * d = e	\$99
DLT Support Upsell Share%	f	50%
Enterprise Support Revenue	e * f = g	\$50

Zilliqa Research Valuation Potential (2023)

		FY 2023
Segment Revenue		
Enterprise Support Revenue	a	\$50
<i>Total Revenue%</i>	<i>a / f = b</i>	76%
Blockchain-as-a-Service Revenue	c	\$17
<i>Total Revenue%</i>	<i>c / f = e</i>	24%
Total Revenue	a + c = f	\$66
Net Profit Margin%	g	20%
Net Income	f * g = h	\$13
P/E Multiple	i	25x
Valuation	h * i = j	\$331

Zilliqa Research Valuation Sensitivity (2023)

		Zilliqa Research Net Income								
		\$6	\$8	\$10	\$12	\$14	\$16	\$18	\$20	\$22
Net Profit Margin%	1%	\$30	\$40	\$50	\$60	\$70	\$80	\$90	\$100	\$110
	5%	\$60	\$80	\$100	\$120	\$140	\$160	\$180	\$200	\$220
	10%	\$90	\$120	\$150	\$180	\$210	\$240	\$270	\$300	\$330
	15%	\$120	\$160	\$200	\$240	\$280	\$320	\$360	\$400	\$440
	20%	\$150	\$200	\$250	\$300	\$350	\$400	\$450	\$500	\$550
	25%	\$180	\$240	\$300	\$360	\$420	\$480	\$540	\$600	\$660
	30%	\$210	\$280	\$350	\$420	\$490	\$560	\$630	\$700	\$770
	35%	\$240	\$320	\$400	\$480	\$560	\$640	\$720	\$800	\$880
	40%	\$270	\$360	\$450	\$540	\$630	\$720	\$810	\$900	\$990

Source: Fundstrat



Zilliqa Valuation Key 2023 Valuation Assumptions

Updated assumptions from base model inputs

Variable	Assumption	Basis	Comments
ASEAN Open Finance Market Served & Total Revenue	19%	Share (% of Fintech)	Assumed Bain & Co. ASEAN 2025 digital banking forecast (Slide 29) as Fintech market size and assumed Cambridge ASEAN Fintech DLT usage study (Slide 65) represents an approximate basis for estimating the Open Finance market share capture. 2023 market size forecasts are interpolated from 2025 forecast.
Zilliqa DLT Ecosystem Market Served & Total Revenue	10%	Share (% of OpFi)	Assumed 10% for flow-based payments, 7% for stock-based tokenized asset verticals where Zilliqa has existing partnerships (Slide 57) and 3% for other core segments. Total share of ASEAN OpFi estimated at 7% in 2023 vs 10% in 2025 base case.
Zilliqa Token Network Market Served	30%	Share (% of Ecosystem)	Assumed ZIL token usage as a portion of the value served by the Zilliqa DLT Ecosystem based on data from OECD study on Crypto asset usage in ASEAN (Slide 66).
Zilliqa Ecosystem & Zilliqa Research Net Income	20%	(Total Revenue * Net Profit Margin%)	Assumed a 20% net profit margin as the normalized industry expectation based on the Bloomberg S&P 500 Financials Index reported profit margin 19.23% as of 12/31/2019.
Zilliqa Ecosystem & Zilliqa Research Market Value	25x	P/E Multiple of Net Income	Assumed a 25x P/E multiple for calculating the market value of all Zilliqa ecosystem companies and Zilliqa Research based on Oliver Wyman financial industry data (Slide 68).
Zilliqa Network Value	5x	Velocity Multiple of Economic Activity	Assumed a 5x velocity multiple for the economic activity using the token based on the equation of exchange model (Slide 36) and assumed all network transaction fees have an immediate velocity that adds no value to the network.
DLT Disintermediated Costs	50%	% of Total Revenue	Assumed 50% of ecosystem costs are applicable to DLT based on Accenture study data (Slide 67) and overall financial services industry net profit margins.
DLT Related Fees	50%	% of DLT Disintermediated Costs	Assumed 50% of the DLT disintermediated costs can be captured for DLT related fees by taking the midpoint of the Accenture study average (30%) and max (70%) banking potential cost reduction (Slide 67).
Zilliqa Research Enterprise Support Revenue	50%	Share (% of DLT Related Fees)	Assumed 50% of DLT related fees can go to Zilliqa Research for consulting, support & training services to help enterprise customers better save costs using its network.
Zilliqa Network Revenue	50%	Share (% of DLT Related Fees)	Assumed 50% of DLT related fees go to the Zilliqa Network as transaction fees.
Blockchain-as-a-Service Revenue	10%	Node Ownership% * Node Compensation	Assumed Zilliqa Research operates 10% of nodes and receives a proportional share of fees and new block rewards based on plans indicated to us by the team (Slide 51).

Source: Fundstrat



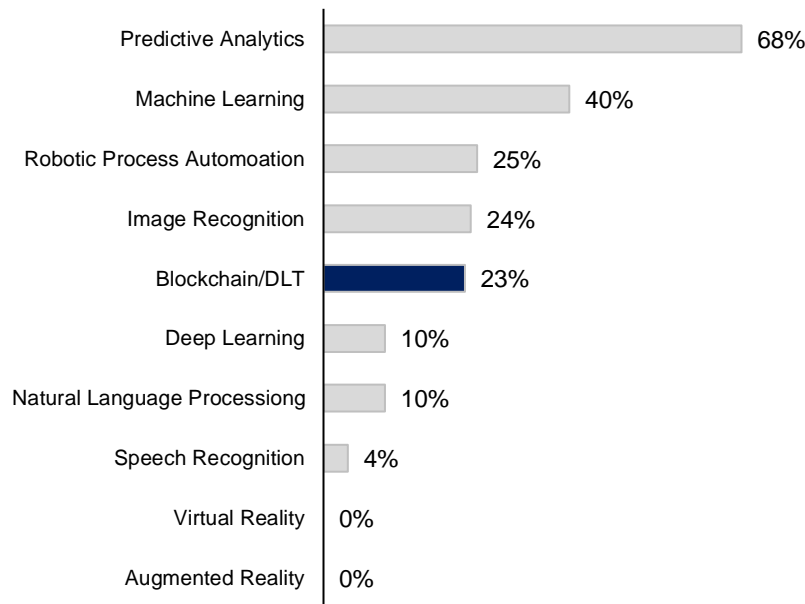
Approximately 23% of ASEAN fintechs already employ blockchain/DLT

Blockchain and DLT are already playing a large role in the ASEAN fintech industry. About one in every four Fintech firms in ASEAN is employing Blockchain/DLT to help deliver financial services to customers at anytime, anywhere, and on any device.

- **Capital raising, digital payments and enterprise technology have emerged as early leading segments for DLT adoption.**

Figure: Cambridge University ASEAN Fintech Ecosystem Benchmarking Study

Technology Used by ASEAN FinTech Firms



Technology Used by Product Category

Technology	AI/ML/ Big Data	Capital Raising	Digital Lending	Digital Payments	Enterprise Technology
Predictive Analytics	91%	61%	76%	58%	70%
Machine Learning	65%	22%	41%	23%	48%
Robotic Process Automation	26%	22%	41%	16%	23%
Image Recognition	35%	6%	20%	16%	30%
Blockchain/DLT	13%	39%	7%	35%	44%
Deep Learning	39%	11%	12%	5%	56%
Natural Language Processing	30%	6%	12%	9%	19%
Speech Recognition	13%	0%	5%	2%	11%
Virtual Reality	4%	0%	2%	0%	4%
Augmented Reality	4%	0%	2%	2%	0%

Source: Fundstrat, Cambridge University

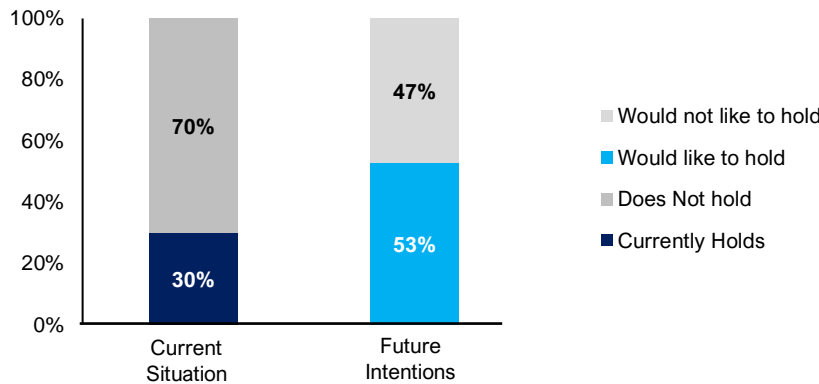


ASEAN has favorable consumer crypto adoption trends

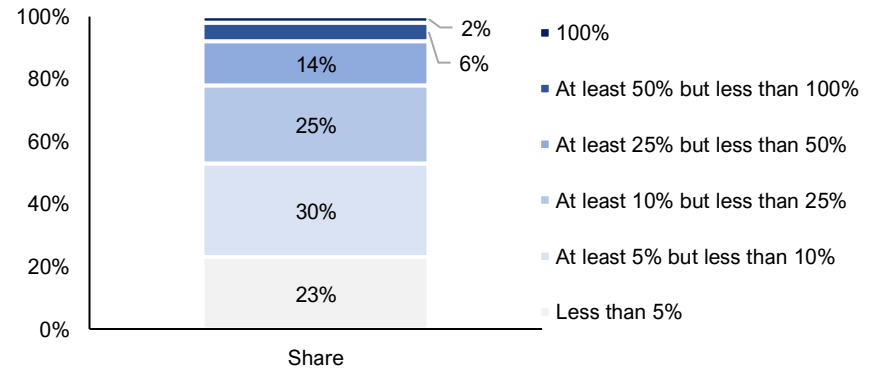
According to the OECD, a large percentage (estimated ~30%) of the ASEAN population already owns cryptocurrency, with crypto representing a material portion of many holders' investment portfolios. Many reportedly hold crypto for non-speculative reasons. Most investors are in the prime income and spending age demographic, employed, and have high levels of education.

Figure: Crypto assets in Asia (OECD) - Consumer attitudes, behaviors, and experiences in Asia

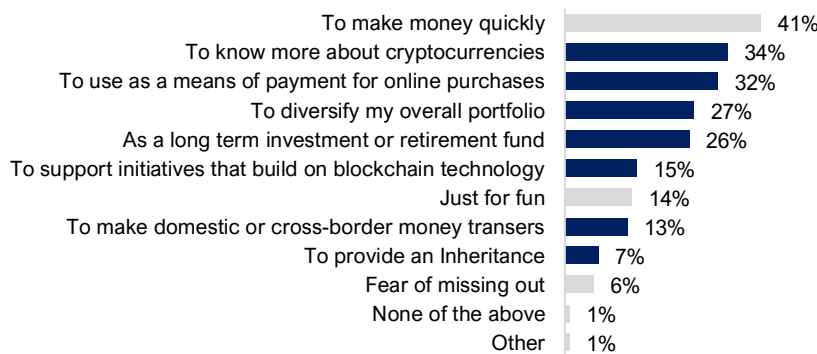
Ownership of cryptoassets and future intentions (n=3,006)



Portfolio investment in cryptocurrencies (n=1,267)



Reasons for becoming a cryptocurrency holder (n=1,770)



Demographics of cryptocurrency holders (N=3,006)

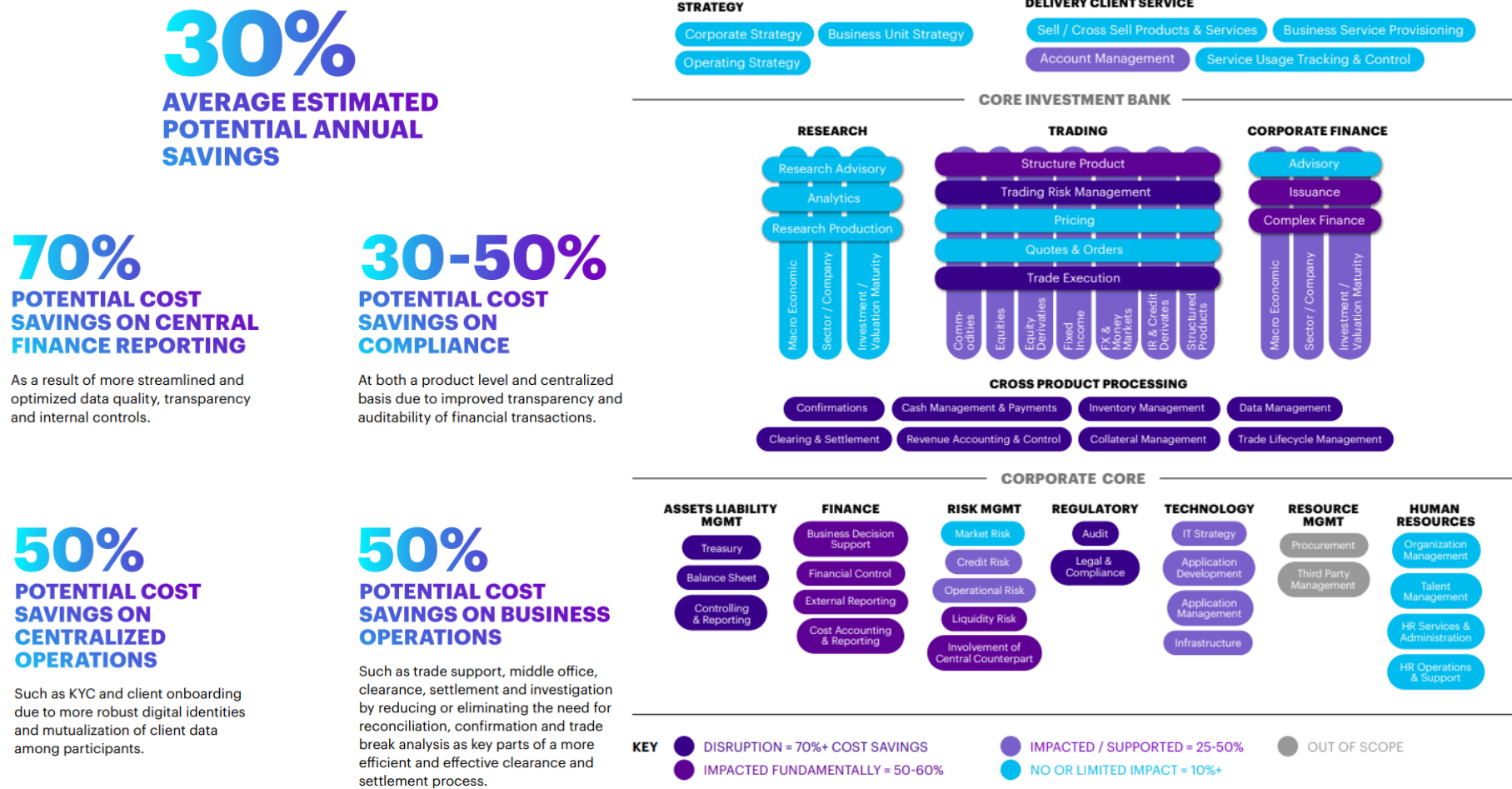
Demographic	Category	Total	Malaysia	Philippines	Vietnam
Age	18-24 years	19%	14%	19%	23%
	25-34 years	34%	30%	30%	41%
	35-44 years	33%	26%	33%	40%
	45-54 years	33%	19%	51%	32%
	55+ years	16%	13%	17%	20%
Gender	Women	29%	20%	30%	38%
	Men	31%	26%	34%	32%
Employment	Employed	36%	28%	39%	40%
	Self-employed	26%	21%	34%	21%
	Not employed	13%	6%	18%	15%
Education Level	PhD or Master's	47%	30%	53%	54%
	Bachelor's	35%	27%	35%	40%
	Secondary school	16%	16%	20%	11%

Source: Fundstrat, OECD: Cryptoassets in Asia



Banks can save up to 70% of costs using DLT with 30% being the average

Figure: Blockchain Impact – Accenture High Performance Investment Bank Model



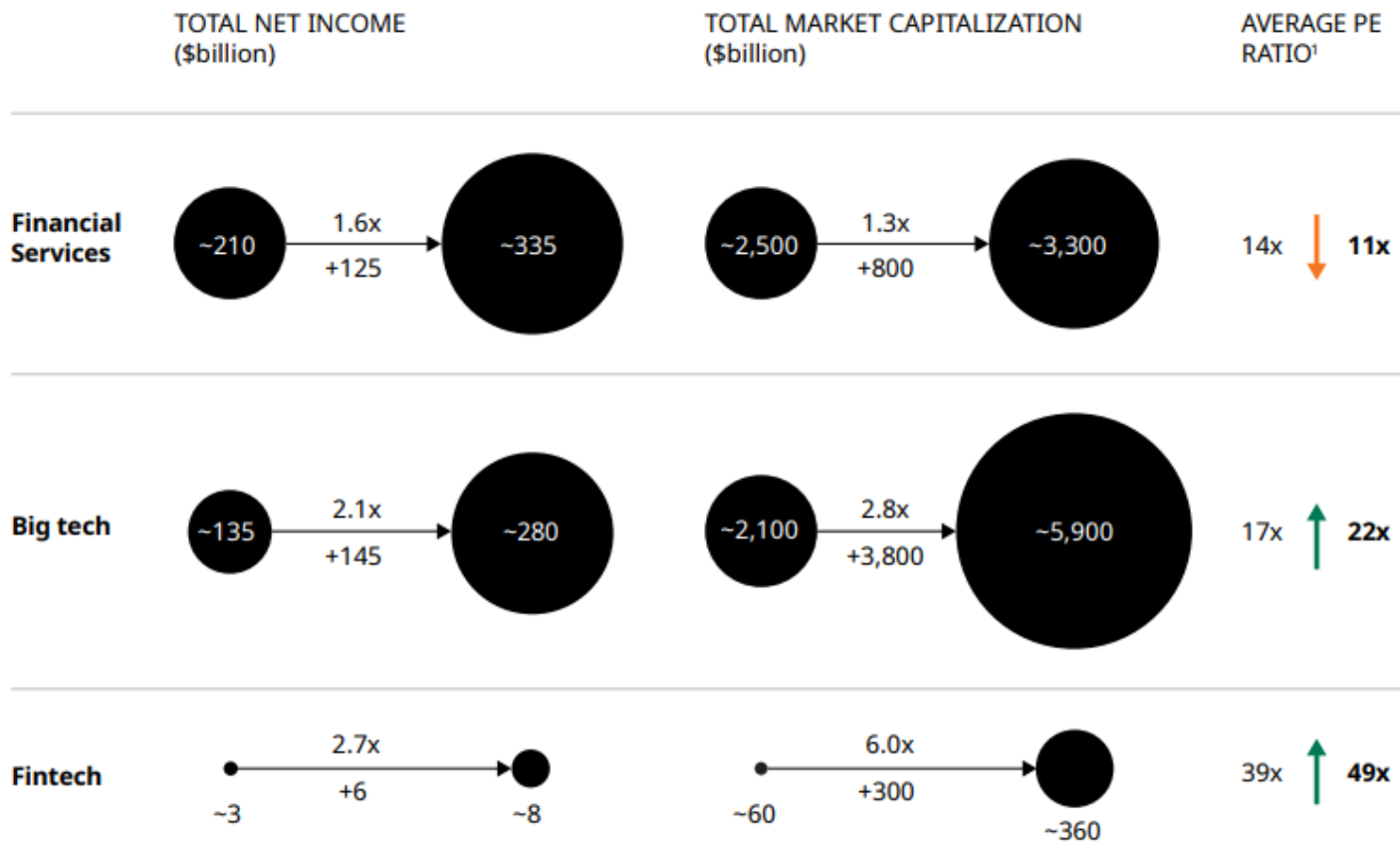
Source: Fundstrat, Accenture



Tech related financial services valuations have been on the rise

Figure: Financial services valuation growth eclipsed (top 20 firms)

Date: 2010 vs. 2018



Source: Fundstrat, Oliver Wyman analysis; ⁽¹⁾ Median price-earnings-ratio



Overview: Blockchain Ecosystem Funds

- Blockchain ecosystem funds provide capital to fuel ecosystem growth and hold the potential to drive value creation at both the DLT Platform and Company level.

Figure: Select DTL Platform, Company, and Ecosystem Fund/Grant programs

Market Cap Data as of 10/21/20

DLT Platform (Token)	Token Market Cap (\$M USD)	Associated Company / Foundation	Ecosystem Fund / Grant Program	Capital Raised (\$M USD)	Date Announced
Zilliqa (ZIL)	\$198M	Zilliqa Research	Zilliqa Capital	\$50-\$200 ⁽¹⁾	Jul-20
			ZilHive	\$5	Aug-18
Algorand (ALGO)	\$339M	Algorand	Algo VC Fund	\$200	Aug-19
Eos (EOS)	\$2,458M	Block.one	EOS VC Funds (multiple)	\$725	Jun-18 - Jan-18
Maker (MKR)	\$563M	MakerDAO	The Stable Fund	\$45	Feb-18
Neo (NEO)	\$1,295M	Onchain	NEO Global Capital	\$400	Dec-17
Ethereum (ETH)	\$43,936M	Consensys	Consensys Ventures	\$50	Sep-17
Blockstack (STX)	\$109M	BlockStack	The Signature Fund	\$25	Aug-17

Source: Fundstrat, Coinmarketcap, Wave Financial; (1) Zilliqa Capital capital raised represents target raise.



A general introduction to Blockchain

- **Blockchain** is a distributed database existing on multiple computers at the same time. It is constantly growing as new sets of recordings, or 'blocks', are added to it. Each block contains a series of transactions or other information, a timestamp and a link to the previous block, and a cryptographic hash or signature. Any change to a block changes the signature, which affects the header field for the next and subsequent blocks. Thus, any altered block is immediately identifiable, making the blockchain immutable.
- **Byzantine Fault Tolerance (BFT)** is the feature of a distributed network to reach consensus even when some of the nodes in the network fail to respond or respond with incorrect information (i.e. malicious).
- **Consensus** is the process by which all of the computers reconcile their version of the database and come to an agreement as to which entries to add into their database in the latest block, and to discard their block and replace it with the one a minimum percentage of other computers (typically 51%-67%) all agree is the valid block.
- **Distributed Ledger** is a more general version of a blockchain, and encompasses other constructs, as long as the ledger is independently replicated across multiple computers with no single computer acting as the source of data in the ledger.
- **Network/Transaction Sharding:** Transactions are processed in parallel in separate shards, without sharding a global state. This means that every node stores a local copy of the full blockchain, even though transactions are parallelized and consensus is still run on each shard.
- **Open Finance (OpFi)** is a movement promoting the use decentralized networks and open source software to enable increased accessibility of financial services. The scope of Open Finance includes crypto native approaches to creating new business models as well as integrating DLT within existing business models to increase efficiency and reach.
- **Practical Byzantine Fault Tolerance (PBFT)** is an implementation of BFT whereby nodes are ordered with one node being the primary(leader node) and others referred to as secondary(backup nodes). A PBFT network functions on the condition that the maximum number of malicious nodes be less than or equal to one-third of all the nodes in the system.
- **Proof of Stake** is a validation process by which owners of the token “stake” their holdings on a node to vote on the validity of a given block and have voting rights and potentially receive rewards proportional to their staked holdings.
- **Proof of Work** is the process by which Bitcoin or other token “Miners” process and validate transactions, with the first miner to solve a cryptographic puzzle validating the block and receiving a reward (currently 12.5 bitcoin each); other miners have to then replicate the result to confirm and move on to the next block.
- **Seed Nodes:** Seed Nodes on Zilliqa consolidate transaction requests and forward the for distribution to shards in the network. They also function as "archival nodes" that maintain the entire transaction history and the global state of the blockchain which is needed to provide services such as block explorers. While seed nodes do not validate transactions themselves, they play a supporting yet critical role in the overall Zilliqa network architecture.
- **State Sharding:** The entire state of the blockchain is split across the node operators and across shards, which allows nodes to communicate with each other without verification conflicts in previous blocks. This means that every node will hold the state of the shard it's currently in and not be required to store a local copy of the full blockchain.

Source: Fundstrat



ZIL Token Supply Schedule

- **Block Rewards** - 40% of ZIL supply will be released via block rewards. Rewards commenced with the mainnet launch in Jan '19 and will be evenly spread over 10 years.
- **Zilliqa Research** - 12% of ZIL supply was allocated to Zilliqa Research for protocol research, development and marketing. Tokens vest on a quarterly basis that ends in Jun '20.
- **Anquan Capital** - 10% of ZIL supply was allocated to Anquan Capital, the company from which Zilliqa Research was spun out of. Tokens vest on a quarterly basis that ends in Jun '20.
- **Zilliqa Team Members** - 5% of ZIL supply was allocated to team members, including founding members. Tokens vest on a quarterly basis that ends in Jun '20.
- **Strategic Advisor** - 3% of ZIL supply was distributed to agencies and advisors at the Token Generation Event (TGE).
- **Early Community Contributors** - 30% of ZIL supply was distributed to early and community contributors at the TGE.



A Distributed Ledger disintermediates trust providers – for a reduced fee

Traditional Trust Providers

- Trust providers enable transactions as intermediaries vouching for each party and protecting each party from accidental or intentional breach of terms by the other.
- They do this by knowing the transacting party or the trust provider representing a transacting party– Know Your Customer (KYC) and Anti Money Laundering (AML) regulations.
- Their fees include the cost of creating the knowledge about the transacting parties, operating costs, as well as “insurance” against a particular transaction being invalidated, for example in credit card fraud or in the case of title insurance.
- The “insurance” component also covers the expected loss from theft or fraud by insiders.

Distributed Ledger

- A distributed ledger maintains immutable records of each party in the transaction.
- Each set of transactions is “signed” through a cryptographic hash process.
- If a previously validated transaction is changed, the hash signature would be invalid not only on the transaction set that was modified, but also each subsequent transaction set, unless a new hash signature was created for all affected transaction sets.
- Since the identical ledger exists in multiple, unrelated entities, any changes to the ledger and the resulting hashes needs to be reflected in a large number of copies (between 51% and 67% depending on the security protocol being used) before it is accepted as true and replicated in the remaining copies of the ledger.
- This creates trust that the network agrees on all transactions being processed, and the ability of the party to conduct the transaction (e.g. that it actually has the funds it is attempting to spend and hasn't spent them elsewhere).
- The primary cost of the distributed ledger system is the basic KYC / AML provision and the operating cost of the network.
- A distributed ledger can be slower than centralized processing owing to the time taken for the transactions to propagate throughout the network.

• Protection against fraudulent transactions is built into the system and does not require “insurance premiums” to be charged, reducing the cost of providing trust.



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