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Oregon

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Dymension

## General Background on Protocol

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Founded in 2022 and based in Tel Aviv-Yafo, Israel, Dymension is a decentralized PoS L1 network that facilitates an ecosystem of fast, easily deployable modular blockchains called RollApps. It functions similarly to a full-stack web application, where RollApps operate as the front-end that users interact with, while Dymension is the back-end coordinator. Dymension is designed specifically to provide RollApps with security, interoperability, scalability, and liquidity. It expands on the Cosmos and inter-chain ecosystem, enabling RollApps to interact with any IBC-enabled chain through the Dymension hub. RollApps are very similar to Cosmos App-Chains, but outsource security, settlement, and consensus to the Dymension Hub which accepts state roots optimistically.

Developers have access to the Dymension RDK, which functions similarly to the Cosmos SDK but is specifically designed for building RollApps. The Dymension RDK can be used to build fully customizable applications like games, NFT projects, DeFi, and more. Dymension prioritizes security by using sequencers instead of validators and through a RollApp Virtual Machine (RVM), which simulates an execution environment within the Dymension Hub that offers deterministic outputs. The use of Dymension's AMM provides liquidity and interoperability throughout Dymension's ecosystem of RollApps. Interoperability is further utilized through Dymension Hub, which connects to the IBC protocol via a bridge, offering seamless transactions through light-client bridging. Scalability is also prioritized by utilizing data availability networks to publicize data.

## Macro Factors Impacting Protocol

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Since its launch in 2019, Cosmos has emerged as a top blockchain ecosystem, ranked in the top 10 largest blockchain ecosystems by TVL at \$18B. Cosmos' modular approach helps the ecosystem stand out as a strong community for developers, with the third highest number of active developers on any protocol behind Ethereum and Polkadot. The IBC protocol in Cosmos gives seamless access to communication and transactions between blockchains. Its permissionless and trustless communication technology fixes many bridging issues that have led to over \$1B in stolen funds through bridge hacks on other chains. The power of IBC is not only in the assets it allows to transfer across chains, but in its ability to enable cross chain composability. It is predicted to enable the creation of 5,000 blockchains by 2030, per VanEck.



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Cosmos' native token, \$ATOM, has strong token value accrual through staking incentives offering high APY and airdrop rewards from projects like Celestia, Osmosis, Juno, Evmos, Neutron, and more. Individuals staking \$ATOM, \$TIA, and \$OSMO currently have opportunities to receive Dymension airdrops. Holding stake in \$ATOM could pay further dividends if we see a highly anticipated bull run in late 2024/mid 2025. Many see potential for the Cosmos ecosystem to increase by 100x its current valuation by 2030. However, \$ATOM does have security competition, questionable tokenomics, and has experienced public disputes among key developers. Chains like Juno, EVMOS, Osmosis, and Axelar have expressed desire to compete in the interchain security market which could decrease the market share and pricing power of Cosmos Hub. \$ATOM's inflation is currently targeted at 13%, which could threaten the token's ability to appreciate long term. Additionally, \$ATOM's core contributors reside in seven different entities that possess different philosophies and ideas about the Cosmos Hub's future. Public disputes have taken place on Twitter surrounding the construction of the Cosmos Hub, resulting in a few execution delays.

Monolithic blockchain structures face performance issues and high transaction fees as user demand increases. The rise and evolution of modular blockchains provides opportunities for scalability, interoperability, layer specialization, and efficient execution that are not possible with monolithic structures. Unlike monolithic models where tasks are completed on a single layer, modular blockchains are made up of interconnected components responsible for specific functions. For example, DA is the largest bottleneck faced in improving blockchain scalability. Modular blockchains delegate DA to a separate decentralized layer to enhance the performance of DA, allowing protocols to leverage these networks so data no longer needs to be stored and verified on their own chains. Eigenlayer works to solve similar issues around decentralized trust with features like its hyperscale DA layer that enables high DA rates and low costs. However, Eigenlayer wants to be primarily Ethereum-aligned, where Celestia and Avail are chain agnostic, seeking to be compatible with many different ecosystems.

L2 Blockchains are experiencing record adoption speeds. Arbitrum, an ETH-based L2 reached one million unique addresses 303 days after its mainnet launch in August 2021. Optimism launched January 2022 and reached one million unique addresses in just 191 days. Zksync, launched in March 2023 took only 71 days to reach one million addresses, while Base, launched in August 2023 reached over a million addresses in 11 days. This wave of popularity is benefitting L2s, as they offer fast transaction speeds



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with high throughput and small costs, offering scalable transactions that don't compromise on security or decentralization. Average BSC fees are around 13 cents, while Arbitrum's fees are between 2-10 cents. zK-Sync fees are designed to be just fractions of cents but have not yet arrived. These signs indicate that companies may begin to leave L1s for L2s at an accelerated rate. Dymension is well positioned for this shift as it provides an ecosystem of fast, easily deployable modular blockchains.

## The Team

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Dymension was co-founded by CEO Yishay Harel. There is no other public information on the team.

## General Auditing Background for Protocol

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There is no public information on code audits. It is possible that Dymension has not been audited since it is a fairly new protocol.

## Specific on What Protocol Does

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Dymension's network of RollApps benefit from the protocol's modular design which distributes resource consumption by outsourcing consensus, security, and block building to the Dymension Hub. These offer benefits like increased security, reduced fees, and increased scalability. Dymension orchestrates this network of RollApps by managing requests and facilitating communication among them. A core piece of Dymension is its RDK (RollApp Development Kit). The Dymension RDK is a development kit that is pre-built into the protocol and is used to enhance the RollApp building process.

RollApps are made up of two core components, a client and a server. The client is called dymint, which is responsible for block production, distributing peer messages, and inter-layer networking. Dymint acts as a replacement for Tendermint on the Cosmos Hub through which RollApps outsource consensus to the Dymension Hub. The Dymension Hub optimistically accepts state root updates from RollApp Sequencers, but state transitions may be reverted if fraud proofs prove them invalid. State root updates allow light client bridging, which increases capital efficiency by



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not requiring relayers to stake collateral due to security coming from the underlying blockchain. State root updates also enable access to cross-chain message passing.

The second component, the server, is the application used by the RollApp developers to customize business logic in tangent to the pre-packaged modules. Cosmos SDK and IBC modules like bank, governance, upgrade, and IBC are automatically integrated into RollApps. Unlike Cosmos SDK default modules, Dymension RDK utilizes Epochs (elastic block production), time-based mint modules, Dist, and sequencers, which validate, order, and process transactions. Two additional smart contract frameworks have also been deployed, Ethermint (EVM smart contracts) and CosmWasm. Dymint and the server provide tools and infrastructure required to easily build, launch, and autonomously run RollApps. These features enable developers to focus on important business logic needs by benefiting from IRC (Inter-Rollup Communication), data availability, and shared security.

Thanks to bridging via IBC, RollApps can interact with any IBC-enabled chain through the Dymension Hub, making RollApps part of the growing IBC ecosystem. Dymension Hub opens the door for trust-minimized messages between RollApps, Cosmos zones, and the rest of the IBC-enabled ecosystems. Because sequencers use optimistic architecture when sending state roots from RollApps to the Dymension Hub, bridging out of Dymension Hub enforces Escrow IBC (a dispute period). Dymension has its own AMM designed to assist RollApps and expose them to efficient asset routing, price discovery, and shared liquidity across the ecosystem. The Dymension Hub is similar to an internet service provider, serving as a decentralized router that connects RollApps to the IBC protocol. Joint network and liquidity bootstrapping makes it possible for a blockchain to be deployed in just a few minutes, creating massive opportunities for modular blockchains.

## Why the Protocol Offering Matters to Consumers

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Dymension offers a blend of scalability, liquidity pools, security, interoperability, and speed to its network of RollApps. These qualities provide value to users, developers, and investors alike. Users experience an intuitive interface that seamlessly interacts with the IBC protocol. Through the Dymension Hub, RollApps are enhanced by the Dymension AMM, which provides shared liquidity and shared security to all RollApps and their users. Users can stake their \$DYM tokens to earn 5-15% APY and participate in the protocol's governance. Dymension's modular infrastructure integrated with the Dymension RDK creates value for developers through ease of deployment. The



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server allows RollApp deployers to create their own app logic beside the prepackaged modules, making it quick and easy for developers to deploy RollApps. RollApps are like an appchain in that they implement custom business logic, but also benefiting from IRC and consensus outsourcing.

## Protocol Versus Competitors Chart

Protocol	Features	Security/Consensus Source	Custom Logic
Dymension	Modular architecture, dymint Dymension RDK, native to IBC	RollApps outsource to Dymension Hub	Yes
Polygon	Ethereum Sidechain, diverse scalability solutions, improves transaction speeds	In-house model	No
Boba Network	Optimistic rollup, fast transactions, reduced fees, multichain interoperability	In-house model	No
zkSync	Compliments Ethereum's main layer, scaling solutions enabled with zk-Rollups & batched transactions	In-house model	No
Cosmos	IBC, Tendermint, consensus engine, Cosmos SDK	Each appchain is in-house	Yes

## Protocol Go To Market Strategy Versus Competitors

Dymension's structure stands apart from the competition by facilitating the vertical integration of modular blockchains. RollApps are developer and user friendly through outsourcing consensus, security, and settlement to the Dymension Hub. This offers unparalleled scalability and efficiency through fast transaction times, low fees, and low overhead costs. The Dymension Hub optimistically accepts state roots from RollApp sequencers, enabling light client bridging that increases capital efficiency. Prepackaged modules from the Cosmos SDK and the unique Dymension RDK function alongside customizable logic, giving developers both structure and flexibility. These features, as well as the use of network and liquidity bootstrapping,



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prioritize the ease of deploying lightning fast, efficient RollApps that enables developers to create a diverse array of applications including gaming, DeFi, and NFT projects.

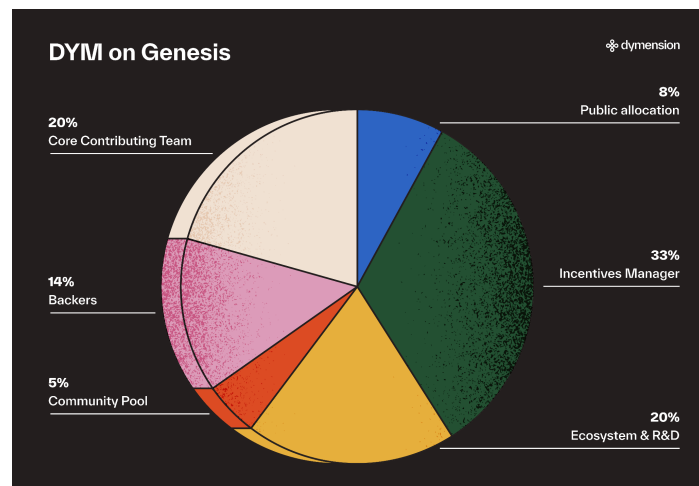
## How Token Extracts Value

\$DYM is Dymension’s native token used by RollApps and the Dymension Hub’s AMM. Growth is stimulated by utilizing an on-chain DAO that distributes \$DYM through an incentives manager. Tokens are dispensed to users engaging in specific functions within the ecosystem. Dymension initiates Rolldrop Seasons to incentivize users to engage and explore RollApps, as well as allowing users to stake \$DYM to earn rewards distributed by Dymension governance. RollApp Sequencers must stake \$DYM as a bond for proposing state updates. Sequencer bond requirements are determined on-chain by the Total Value Bridged to the RollApp.

Sequencers and stakers within Dymension’s RollApp ecosystem earn transaction fees generated from blockspace demand. Bridge validators also earn fees that are subject to adjustable parameters through on-chain governance. These fees are converted to \$DYM and subsequently burned. Protocol swap fees also sanction rewards to validators. These fees are set at .1% for all liquidity pools, then converted into \$DYM and burned just like Validating bridge fees, reducing the supply of DYM to decrease inflation. LP swap fees give liquidity providers (LPs) a source of revenue, and are set at .2% for all liquidity pools.

## Tokenomics/Vesting Schedule

Dymension’s token, \$DYM, is used for staking, governance, and processing transaction fees. \$DYM also facilitates cross-chain value transfers which allow uninterrupted interaction across IBC. This is done through light client bridging via the Dymension Hub. The initial total supply is one billion \$DYM with 8% allocated to the public. Community pools and



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publicly allocated tokens are fully unlocked at genesis. Tokens allocated to the incentives manager and the ecosystem/R&D experience some sort of linear vesting, while tokens allocated to the core contributing team and backers are locked up for 12 months post genesis, followed by linear vesting.

If less than 67% of \$DYM is staked, the rate of issuance will incrementally increase to a maximum of 10%. If more than 67% of \$DYM is staked, the rate of issuance will incrementally decrease to a minimum of 1%. To achieve a long-term sustainable equilibrium, \$DYM will be distributed to validators and stakers through transaction fees and will be systematically burned as a function of validating bridging fees and protocol swap fees. \$DYM will also be locked up in RollApp bonds to reduce the circulating supply of \$DYM.

## Modeling/Ratio Analysis

Protocols	Market Cap	FDV	TVL	FDV/TVL
Dymension	1.08B	7.35B	N/A	N/A
Polygon	9.29B	9.28B	9.4B	.987
Boba Network	99.8M	129.4M	4.69M	27.6
zkSync	2.2M	3.3M	146.4M	.023
Cosmos Hub	3.9B	3.9B	N/A	N/A

Dymension's mainnet launched only two weeks ago, so the most useful metrics available are Market Cap and FDV. TVL on Dymension will be important as RollApps begin to launch, as the TVL of each RollApp will directly contribute to the overall TVL of Dymension. This is different from the Cosmos Hub, as Cosmos will not accrue TVL from its various appchains. Each appchain on Cosmos uses its own token and does not outsource consensus, settlement, or security to the Cosmos Hub. Because each RollApp in Dymension uses the native Dymension token and outsources things like consensus to the Dymension Hub, there is reason to believe that \$DYM could accrue value more effectively than \$ATOM. It is currently unclear how much value each



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RollApp will contribute to the \$DYM token because zero RollApps have been launched.

## Road Map

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The most recent roadmap was released in September 2022. Dymension's first milestone was the release of the Dymension GitHub in 2022, where it provided documentation and tutorials essential for running nodes, building RollApps, and more. The second major milestone was the release of its testnet in February 2023, which coincided with Dymension's seed funding that raised \$6.7M from four key investors. Finally, Dymension's mainnet went live on February 6, 2024.

## Investment Thesis

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While Dymension lacks information regarding a future roadmap, auditing records, and the team building the protocol, the infrastructure behind the protocol is incredibly sound. Its IBC interoperability, easily deployable RollApps, security, and liquidity options through the Dymension Hub's AMM make Dymension very attractive to users, developers and investors. By outsourcing consensus, settlement and security to the Dymension hub, as well as utilizing Dymension's Data availability network, developers and users benefit from increased security, reduced fees, and increased scale. Dymension's RDK enhances these features, working alongside customizable app logic to make deployment of rollapps quick and easy. The protocol's solid tokenomics model implements a mixture of inflationary and deflationary measures to incentivize staking and keep supply and demand forces close to equilibrium. This suggests potential for sustained growth in a blossoming Cosmos ecosystem.

## Fund Recommendation

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\$DYM is rated as a buy, although Oregon Blockchain Group's multi-sig wallet does not support IBC tokens so we will not be adding this to the fund.



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## Appendix

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