STAR ATLAS

State of the Economy

ATMTA, Inc.
Department of Economics

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Executive Summary

Over the past three months, volatility persisted in the broader cryptocurrency markets. The total market cap of crypto fell 16%[1] ($142.2 billion), and the metaverse gaming index declined by 35.1% ($2.5 billion). The decline in private Star Atlas wealth over the period was 54.8% ($48 million).[2]

Major events helped illuminate the differences among demographic groups in the Star Atlas Universe over the period. Voters reacted to the worst events by locking up 1.46 million POLIS and transferring into POLIS, while non-voters transferred a net of 716.6 thousand POLIS for USDC. During the aftermath, voters curtailed their locking and transferring of POLIS. At the same time, non-voters showed almost no reaction to these events by continuing to transfer POLIS at similar levels.

On November 12, a citizen-led initiative was launched in the form of the Community Rescue Survey. On November 18th, in direct response to the community's feedback, a two-phase recovery plan was announced.[3]

On November 23rd, the first phase of the recovery plan commenced. The discount program targeted six ships with an outstanding supply of less than 1% and raised 534,701 USD in discounted ship sales through 12/11.

Key Highlights:[4]

- Aggregate daily ATLAS wages declined by 5.35%.
- The average wage per ship increased by 0.74%.
- The aggregate employment rate per ship decreased by 4.1%.
- The size of the labor force contracted by 2%.
- Employed residents and citizens claimed 452.3 million ATLAS.

Due to the ship repricing in July, the lack of new ships entering the market, and the decline in partial depositors, the size of the labor force was likely to contract from the previous quarter. In November, the volatility in crypto markets led to a significant and widespread increase in unemployment due to fleet withdrawals. As a result, all ship classes experienced a decline in net ATLAS earned.

This economic quarterly builds upon prior reports and expands beyond S.C.O.R.E. to report on the Star Atlas ecosystem. There are many questions to be answered, and we adopt an all-encompassing

[1] Data collected from https://www.tradingview.com/symbols/CRYPTOCAP-TOTAL/
[2] We define private wealth as the sum of privately held R4 inventory, ships, POLIS, and ATLAS.
[3] This plan, known as The Golden Era Start Sequence, covered the timeline of Star Atlas sales aimed at extending the project runway. This plan is broken out into two four-week length phases.
[4] Data reported between the period of September 1, 2022 and November 30, 2022.

view to better understand our metaverse's economic system. To fully grasp the events that took place over the quarter, we must first revisit the events that took place in the broader ecosystem.

The Contagion Spreads and The Dominos Fall

Significant macroeconomic events ensued in the past quarter. The failure of FTX further amplified the deep crypto winter. As mentioned in the previous reports, it is in bear markets that failures and scandals come to light, but this bear market has also highlighted the strength of our community which we witnessed firsthand this quarter.

It is important to note that nothing occurs in isolation or without reason. For example, from April 1st through May 6th, the metaverse gaming index lost 10.29 billion or 48.4% of its market cap. The post-bubble environment set the stage for the first domino to fall.

On May 7th, 2022, the Luna Network stable coin UST experienced a liquidation event caused by the withdrawal of over 2 billion dollars worth of the UST coins from the network's most popular high-yield staking protocol (Anchor), which resulted in the Luna Token crashing over 99%.[5] July 2nd saw the first domino of the Luna crash with the bankruptcy of Three Arrows Capital (TAC) which had significant exposure to UST, resulting in substantial losses.[6] Voyager Digital, the second domino, fell on July 6th due to its inability to repay loans due to the TAC bankruptcy, with one of these loans totaling 75 million dollars to Alameda Research.[7]

Less than a week later, on July 13th, Celsius filed for bankruptcy due to a 1.2 billion dollar hole in their balance sheet, and later noted that the Luna crash was to blame, making it the third domino in the sequence to fall.[8][9] On November 6th, the most significant domino fell in the form of FTX and Alameda Research after Binance CEO CZ announced his decision to sell the remainder of the FTT token held by Binance, causing a run on withdrawals and ultimately proving their insolvency. [10]

The run on FTX's Solana stablecoins deposits has since spilled over onto other parts of the Solana ecosystem. For example, on November 9th, Crypto.com halted Solana USDC and USDT deposits and

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[5] https://www.forbes.com/sites/qai/2022/09/20/what-really-happened-to-luna-crypto/?sh=140e23e24ff1; https://www.coindesk.com/markets/2022/05/12/terras-luna-has-dropped-997-in-under-a-week-thats-good-forust/

[6] https://www.coindesk.com/business/2022/10/17/sec-cftc-probing-bankrupt-crypto-hedge-fund-three-arrowscapital-report/#:~:text=The%20Singapore%2Dbased%20Three%20Arrows,terraUSD%20algorithmic%20stablecoin%20in%20May

[7] https://techcrunch.com/2022/07/06/crypto-broker-voyager-digital-files-for-bankruptcy/

[8] https://www.coindesk.com/business/2022/07/14/celsius-files-for-chapter-11-bankrupcty/

[9] https://www.coindesk.com/markets/2022/07/15/the-fall-of-celsius-network-a-timeline-of-the-crypto-lendersdescent-into-insolvency/#:~:text=Celsius%20is%20the%20third%20major,in%20the%20industry%20to%20nosedive.

[10] https://www.coindesk.com/business/2022/11/06/binance-sells-holdings-of-ftx-token-as-alameda-ceo-defends-firms-financial-condition/

withdrawals.[11] Then on November 17th, Binance and OKX suspended support for the Solana blockchain versions of USDC and USDT.[12]

This Quarterly aims to clarify the highly complex macroeconomic landscape. Once again, we provide information and transparency. Since the last report, we have developed several tools to be able to study the SA ecosystem interactions, and these tools come in handy now. These tools allow us to answer the following critical questions about the SA ecosystem during the last quarter.

How effective was the POLIS locking facility during the period, and how did the community behavior affect the price of POLIS? Have the players run for the exits? Or are they digging in and preparing for battle? How closely did the community's willingness to pay align with the realized purchases during the ship discount program? This Quarterly goes in-depth into the SA ecosystem to provide the answers to these questions.

The Star Atlas Census

On net, 6,101 wallets have entered the Star Atlas Universe since the last SA Census on September 5th. Nonresident currency holders grew the most in number at 4,333. Nonresident ship owners

grew by 1,055 and nonresident voters increased by 714. 772 residents became citizens and 1 left residency. The increase in citizenship almost perfectly matches the decline in the number of residents. Once again, we saw more growth in nonresidential currency holders than new faction residents or citizens.

Table 1: Star Atlas Census (11-30-2022)

Class	Employed	Ship Owner	Voter	Currency	Freq	Frac	Wealth	WShare
Nonresident Currency	0	0	0	1	87807	59.0	16.03	30.27
Nonresident Ship	0	1	0	0	13256	8.9	1.09	2.06
	0	1	0	1	5613	3.8	0.54	1.02
Nonresident Locked POLIS	0	0	1	1	2116	1.4	3.43	6.49
	0	1	1	1	154	0.1	0.22	0.42
Residents	1	1	0	0	4447	3.0	1.72	3.24
	1	1	0	1	31496	21.2	15.82	29.89
Citizens	1	1	1	1	3928	2.6	14.09	26.61

Even though total ecosystem wealth fell by 54.8% over the period, this has not led to a decline in the Star Atlas ecosystem population. To better understand why and get a firmer grasp on the demographic trends, we turn to a more dynamic view of the census.

[11] https://www.coindesk.com/business/2022/11/09/cryptocom-halts-solana-usdc-and-usdt-deposits-withdrawals/

[12] https://www.binance.com/en/news/top/7285559

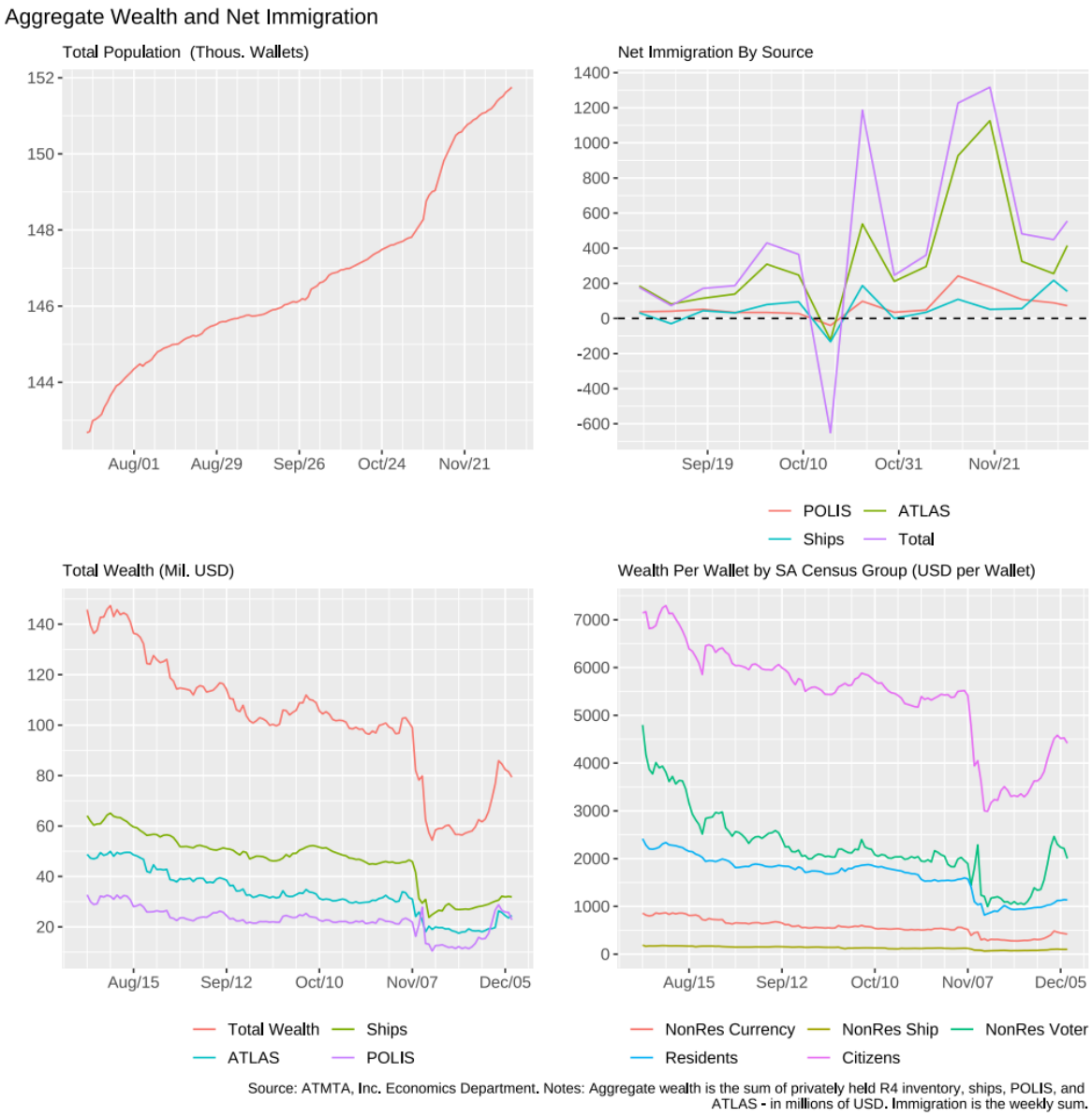
The Dynamic SA Census

The dynamic SA Census looks at trends in population growth and wealth.[13]

The timing of events complicates the interpretation of the growth in new wallets entering the ecosystem. In the same week that FTX collapsed, we witnessed an increase in immigration, and although there is no way of knowing, this immigration could easily reflect growth in new wallets rather than growth in new players. The collapse easily explains the destruction of wealth across the Solana ecosystem. It could also explain the growth in new wallets with POLIS and ATLAS holdings. It is not inconceivable that some nonresident POLIS and ATLAS token holders transferred their tokens from their consumer accounts onto private wallets.

A competing hypothesis is that November 7th, 2022 was day four of the Solana Breakpoint event. This event allowed Star Atlas to receive broader media coverage and a wider audience. One possible supporting fact is that many of the new wallets entering the ecosystem came through the purchase of ships. From September 1st through November 30th, 808 wallets have entered through POLIS, 3,281 came in through ATLAS, and 2,583 wallets came in through ship purchases.

[13] The information presented below is slightly different from the static census. Token holders include wallets that transfer into or out of POLIS and ATLAS on the day. There will be a discrepancy since the static snapshot only considers the holdings of the wallet at the time of the snap. Furthermore, residents and citizens are restricted to our new labor force definitions (see below), which is different from having a S.C.O.R.E. enlisted account.. By this measure, the number of residents drops from 35,943 to 15,079, and the balance is picked up by nonresident ship owners.



Source: ATMTA, Inc. Economics Department. Notes: Aggregate wealth is the sum of privately held R4 inventory, ships, POLIS, and ATLAS - in millions of USD. Immigration is the weekly sum.

Remarkable, too, is that the bulk of the net migration into Star Atlas came right after ecosystem wealth collapsed. Total wealth ended November down 54.8%. The largest losses in wealth came from Ships and ATLAS.

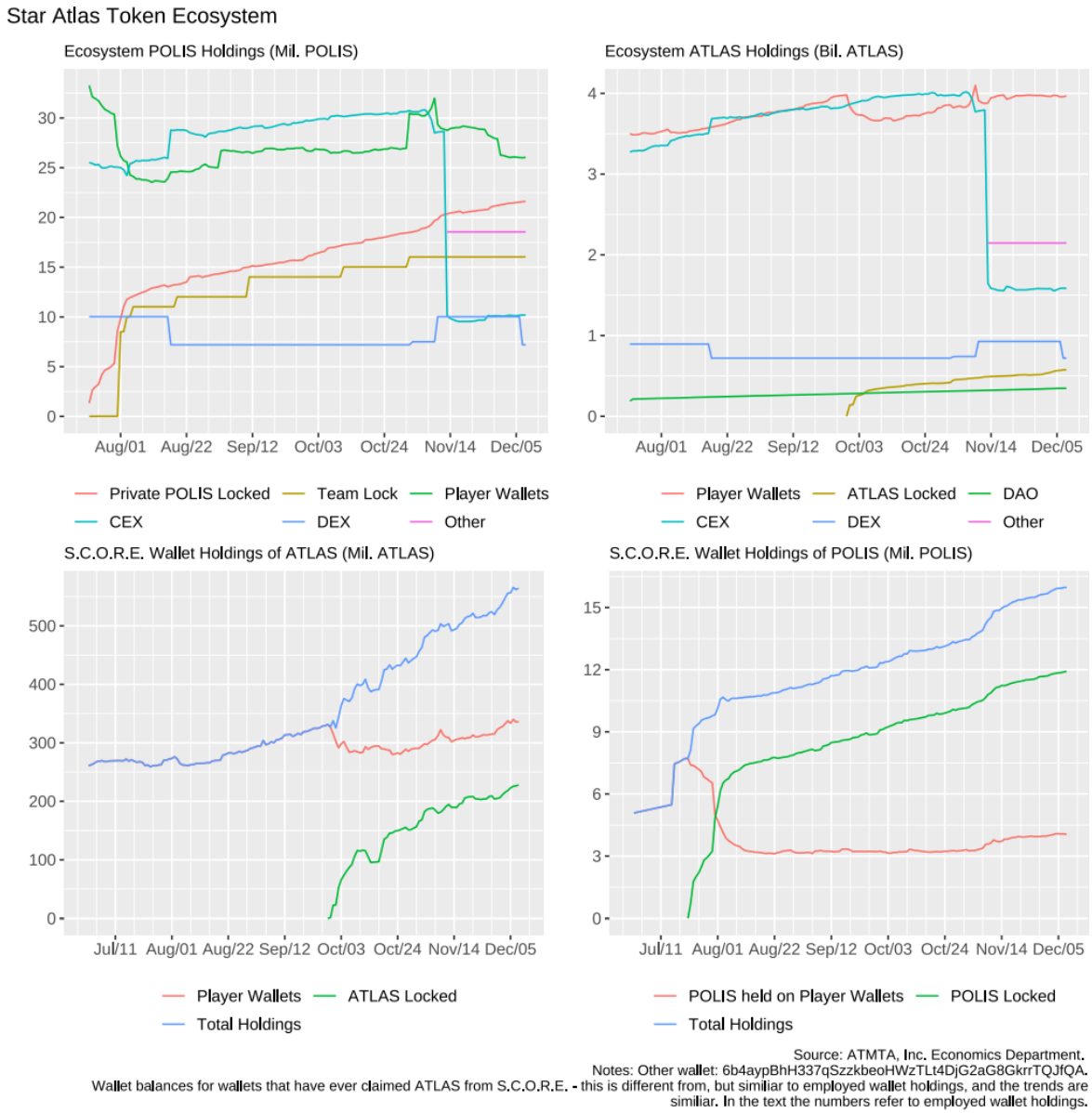
Basic details of the SA Ecosystem

The token infrastructure is critical to a well-functioning and healthy SA ecosystem. Therefore, we begin by highlighting the primary sources and uses of funds.[14]

For ATLAS, this consists of 3.98 billion ATLAS held in individual wallets; player accounts held with centralized exchanges (CEX) accounts for 1.58 billion; .93 billion in liquidity pools for decentralized

[14] All data refer to the end of the period as of November 30th, 2022.

exchanges (DEX); and .52 billion in the ATLAS locker. For POLIS, 26.34 million POLIS is in player wallets, 10.1 million remains with centralized exchanges, and 10.02 million is in liquidity pools. Of the POLIS locked, 16.03 million is held by the ATMTA Team and 21.27 million with the private sector.



Source: ATMTA, Inc. Economics Department.
Notes: Other wallet: 6b4aypBhH337qSzzkbeoHWzTLt4DjG2aG8GkrrTQJfQA.
Wallet balances for wallets that have ever claimed ATLAS from S.C.O.R.E. - this is different from, but similiar to employed wallet holdings, and the trends are similiar. In the text the numbers refer to employed wallet holdings.

From 9/1 -11/30, the correlation between the seven-day rolling sum of net ATLAS transfers[15] by the S.C.O.R.E. and non- S.C.O.R.E. sectors was -50%, and for POLIS, this relationship was even stronger at -66%. This empirical evidence strongly suggests that nonresident currency holders act as liquidity providers. These nonresidents provide liquidity to employed wallets seeking to transfer their excess ATLAS for USDC and voters seeking to transfer into POLIS. Therefore, it can be inferred that the behavior of employed wallets shapes the fundamentals around ATLAS and POLIS since the non-employed sector primarily provides liquidity.

[15] These "transfers" are commonly referred to as "swaps" which occur on DEXs such as Orca and Raydium.

The figure above charts the ATLAS and POLIS balances for wallets that have ever claimed ATLAS.[16] Since S.C.O.R.E. remains the primary source of ATLAS, those in the labor force remain net receivers of ATLAS.[17] Employed wallets actively associated with rewards wallet payouts are the first to interact with ATLAS issuance. Their actions determine how ATLAS issuance disseminates throughout the ecosystem. Since September 1st, they received 452.3 million in ATLAS rewards and locked up 239.9 million[18] or 53% in the ATLAS locker. They spent 278.11 million ATLAS on ATLAS-denominated ships, R4, and other NFTs. Employed wallets sank 116.6 million into primary market ATLAS purchases: 82.27 million into R4 purchased from the DAO, 4.10 million on comics, and 30.23 million on primary market ships priced in ATLAS.[19]

Net transfers out of ATLAS to USDC totaled roughly 106.26 million ATLAS. Most of this subsidized the purchase of secondary market ships priced in USDC following the collapse in token prices and ship withdrawals during the FTX collapse. Following the ship discounts policy initiated on November 23rd, sales of primary market ships further contributed to the net transfers out of ATLAS (see figure D below). As a result, ATLAS-to-USDC transfers covered about half of the employed wallet purchases of primary market ships priced in USDC (208.46 million ATLAS equivalent). Total USDC purchases came to an ATLAS equivalent of 1165.02 million, which implies that ATLAS-to-USDC transfers funded roughly 9.1% of all USDC purchases made by employed wallets.

Employed residents and citizens transferred 24.12 million ATLAS into POLIS. SOL remains a source of funding; net transfers out of SOL totaled 24 million. On net, ATLAS held in employed wallets declined by 15.34 million over the period.

This group also contributes positively to the POLIS token environment. The chart on the right shows us that for former and present ATLAS claimers, POLIS token balances are growing not in their wallet but in the locker.[20] For employed citizens, wallet balances grew from 1.92 million to 2.42 million POLIS. In contrast, their locker holdings grew by 3.26 million (from 5.5 million to 8.76 million).[21] Of the growth in POLIS locked, 2.17 million came from net transfers into POLIS (.33 million of which came from net transfers out of ATLAS), and .86 million came from POLIS rewarded (from POLIS and ATLAS locking).

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[16] This refers to any wallet that has received an ATLAS rewards payment, regardless of when. Since the composition of wallets is the same, this procedure creates a smooth dataset that is resilient to new data, changing definitions, and missing observations. We use FACT token transfers which include the pre and post-balances of a transaction to extend out our series and fill in missing data. This definition differs from employed wallets, but the trends are similar.

[17] The data in the section refer to the period of September 1st through the end of November. A wallet must interact with at least one S.C.O.R.E. program within the previous 28 days to be part of the labor force. The definition differs from the SA Census table, which defines a ship in a S.C.O.R.E. enlisted account as employed, and is closely related to the definition used for employment above. We apply that definition for easy conceptualization.

[18] This is the end of period amount locked, throughout the period employed wallets locked 256.6 million ATLAS

[19] After primary market purchases and ATLAS locked, we are left with 96.1 million ATLAS.

[20] Data in the chart is distinct from the definition of employed wallets used here, but again follows a similar trend.

[21] This accounts for 47% of the total amount locked over the period.

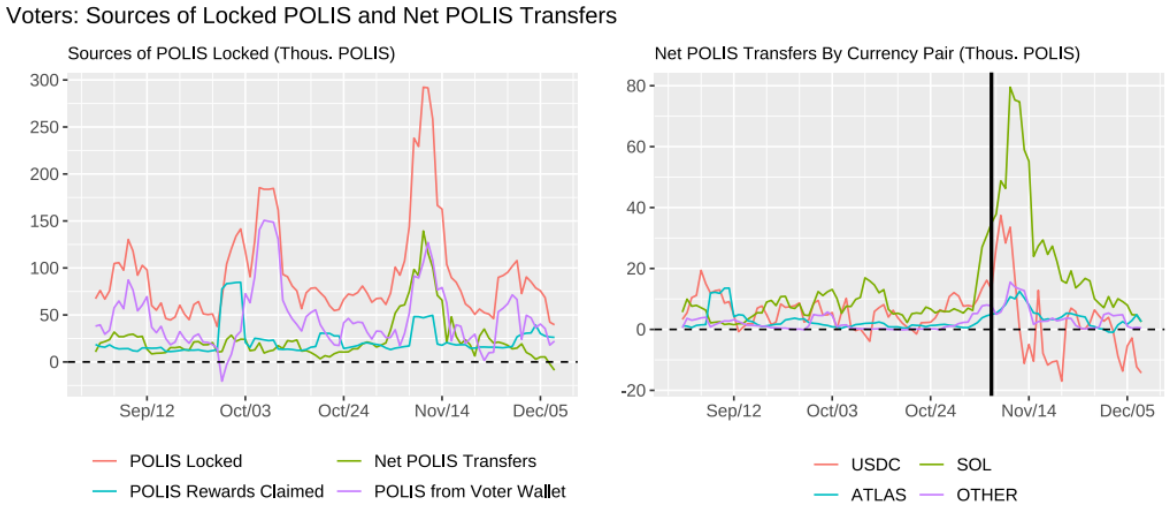
Since most of their overall POLIS balance growth comes from net transfers into POLIS, this group contributes positively towards POLIS price movements.

Source: ATMTA, Inc. Economics Department. Notes: First vertical line denotes the day of FTX's failure, 11/06; Second vertical line denotes the first day of the ship discount program, 11/23. Figures A and B are in 7-day rolling sums.

196.9 million was spent on ATLAS-denominated ships. On net, wallets that purchased a ship priced in ATLAS transferred into 36.5 million ATLAS on the same day. The largest transfers into ATLAS to buy ships occurred from 11/7 and 11/10. During that window, net transfers into ATLAS totaled 15.59 million. Most of this came from transfers from SOL (5.39M) and USDC (9.43M).

The above shows us that S.C.O.R.E. participants are actively using their funds to subsidize their accumulation of assets and are passionately supporting the project rather than transferring out their tokens. That is a remarkable and inspiring truth. However, as long as there are assets priced in USDC, there will be transfers to USDC to purchase. Therefore, the most significant outflows from the ecosystem are for purchasing ecosystem assets priced in different currencies.

Private POLIS locker balances grew by 6.97 million since September 1st, but the total amount locked throughout the period was 8.75 million. Of this, 2.4 million came from net transfers to POLIS (12.5% of which came from S.C.O.R.E. via ATLAS to POLIS transfers), 2.05 million in POLIS rewards, and 4.3 million came from the voter wallet. The locker has been a net absorber of POLIS, thereby providing support for the token. Those participating in the locking facility on net transferred from USDC .52 million, SOL 1.33 million, ATLAS .301 million, and other tokens .25 million.



Source: ATMTA, Inc. Economics Department. Notes: Five-day moving average, in thousands of POLIS. Black vertical line at 11/06. Data only considers wallets with POLIS locked.

The reasons for POLIS outperforming ATLAS are clear. First, demand for ATLAS ships has lagged behind that of USDC, causing one of the largest ATLAS sinks to run dry. This has led to less transferring of ATLAS to buy ships and more transferring to subsidize USDC purchases. Additionally, employed wallets tend to reallocate a portion of their ATLAS earnings into POLIS, directly contributing to POLIS appreciation relative to ATLAS. On the POLIS side, net transfers from sources other than ATLAS have also increased, and a larger share of POLIS is locked up, reducing the ability of players to engage in forced selling. These factors explain why POLIS outperformed ATLAS by 41% during the quarter.

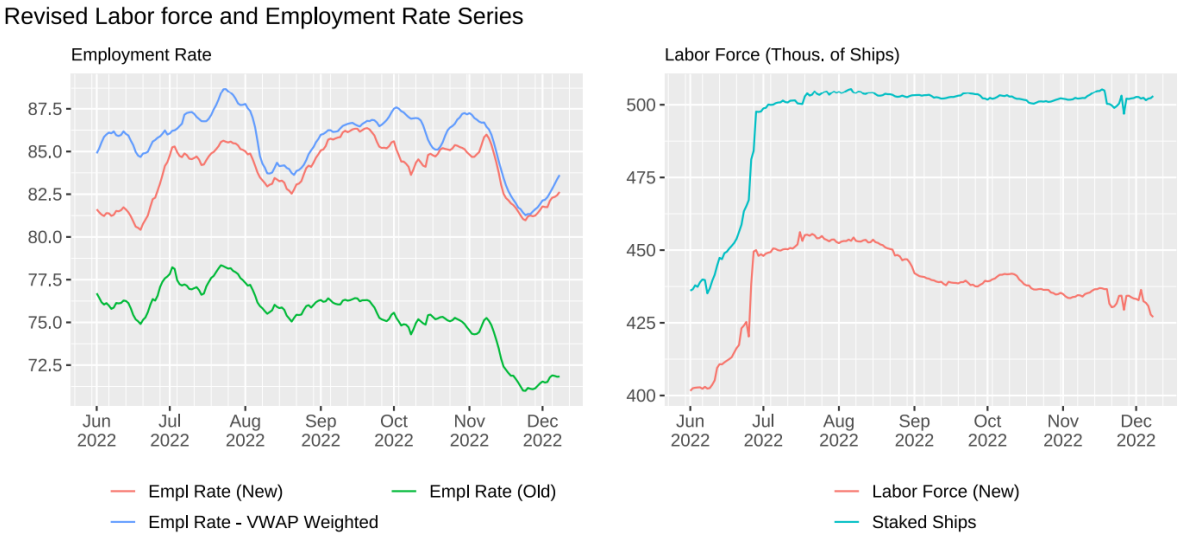
Updates to our Statistical Methodology

We continue to iterate on and expand our breakdown of who is employed and unemployed. Our new methodology mainly impacts the size of the labor force because our definition of unemployment and out-of-the-labor force has changed. Previously, for a ship to be considered out-of-the-labor force (OLF), it had to be held outside a S.C.O.R.E. enlisted account. Our new definition of the labor force relies on a time-based measure rather than blockchain snapshots of enlisted account addresses.

Under the new methodology, a wallet is OLF if it has had no activity within the past 28 days. This is because there are many inactive enlisted accounts, and we need to account for this inactivity. The figure below shows the ramifications. If the labor force is not allowed to adjust, then employment

and unemployment rates will exhibit trending behavior, making them less useful and intuitive from an economic standpoint.[22] The employment definition is still the same as it was in the last report.

We amend the definition of unemployed ships to ships that have not seen activity since employment to 28 days. A simple example helps to illustrate this. A Fimbul ECOS Treearrow will spend eight days from its last refill date in continuous full employment and the next 20 days in unemployment. If there is no refill action, it will leave the labor force (8 days + 20 days = 28 days). In contrast, a Rainbow Chi will spend three days from its refill date in continuous employment; without further action, it will spend 25 days in unemployment, after which it will drop out of the labor force.



Source: ATMTA, Inc. Economics Department. Notes: Seven-day moving average of the employment rate.

Lastly, we update how we measure ATLAS claimed. In previous estimates, we were overstating ATLAS claimed from ship withdrawals. The table we had been using previously to calculate the rewards claimed from ship withdrawals was overstating the rewards because it included the lifetime earnings of the ship. Unfortunately, these numbers were small enough to go undetected until now. Therefore, we now rely on transfers between the ATLAS reward wallet and player wallets.

Main Economic Summary

A number of events in November may have had a major impact on the Star Atlas economy, including:

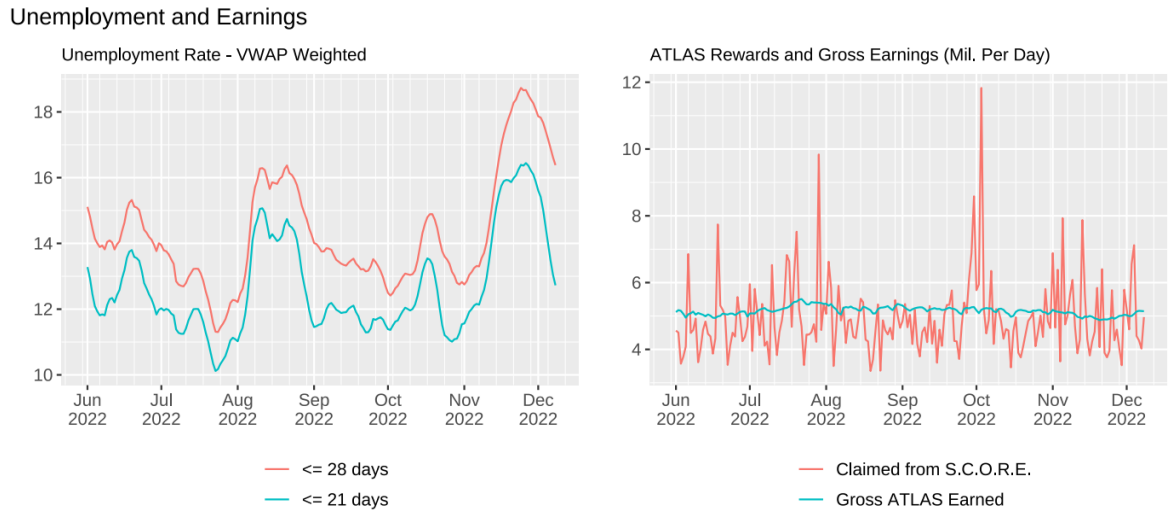
- The failure of FTX on November 6th and resulting ripple effects throughout the industry
- ATMTA's announcement of its exposure to FTX on November 11th
- The start of the ship discount program on November 23rd

These and other factors—such as macroeconomic conditions that have affected all industries—correlate with fluctuations in player participation in the S.C.O.R.E. economy.

[22] A similar solution amends the aggregate employment rate by weighting the per ship employment rates by their vwaps. See the blue line in the figure on the left.

Due to the ship repricing in July, the lack of new ships entering the market, and the decline in partial depositors, the size of the labor force was likely to contract from the previous quarter. With ship inflows moderated, ship withdrawals became more significant. Employment rates remained steady as long as the labor force was allowed to adjust. However, in November, the volatility in crypto markets led to a significant and widespread increase in unemployment due to fleet withdrawals. As a result, all ship classes experienced a decline in net ATLAS earned.

Aggregate daily ATLAS wages declined 5.35% from September 1st through November 30th.[23] Average wages increased by .74%, the employment rate per ship decreased by 4.1%, and the labor force contracted by 2%. The largest factor impacting aggregate wage growth was the fall in the employment rate. This decline in employment rates is related to the decline in ATLAS/USD.



Source: ATMTA, Inc. Economics Department. Notes: Seven-day moving average of the vwap-weighted unemployment rate. ATLAS claimed is equal to the amount of ATLAS distributed through reward harvests and fleet withdrawals.

Table 2: ATLAS Earnings Growth Decomposition

Date	ATLAS Earned	Average Wage	Employment Rate	Labor Force
2022-09-01	5.31 M	13.96	86.0%	442
2022-11-30	5.04 M	14.07	82.6%	433
log change	-5.35%	0.74%	-4.10%	-1.99%

Net ATLAS wages declined the most for XS ships at -12.5%, followed by Large ships at -9%. The labor force shrank for all classes of ships except for Medium and Capital ships. As reflected in the employment rate, ship utilization decreased for all classes of ships, which acted as the primary driver

[23] From September 1st through November 30th, players claimed a total of 452.3 million ATLAS. The average daily ATLAS claimed was 4.97 million.

of the decline in net ATLAS wages. Employment declines impacted the Large class the most at -7.9%, followed by Medium and XS ships, which both saw contractions of -5.9%.[24]

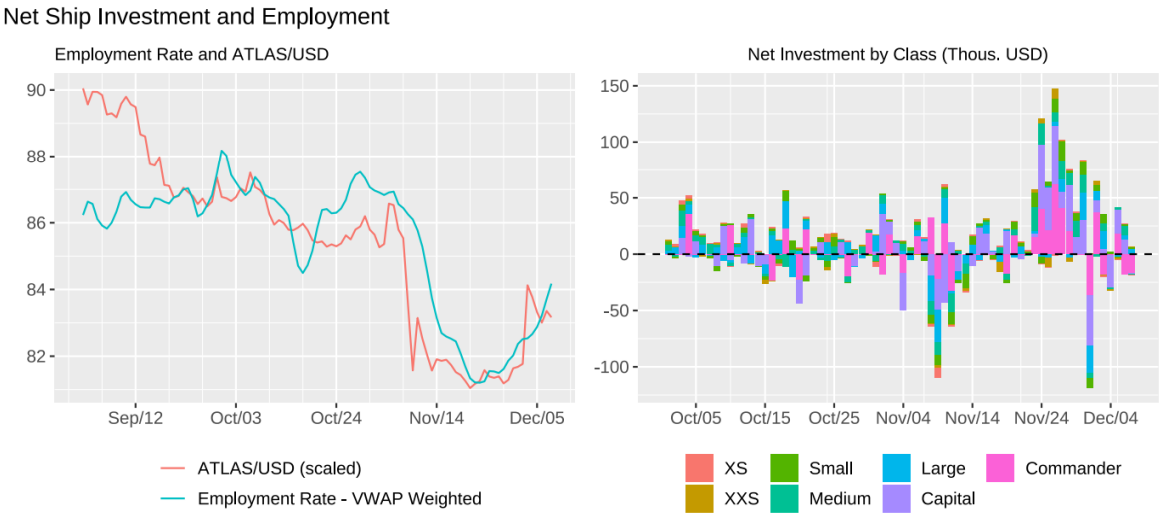
Table 3: Net ATLAS Earnings By Class

Class	Source	Percent Change	September 1, 2022	November 30, 2022
Commander	Net Wages	-6.0	0.69	0.65
	Avg Net Wage	0.5	3185.46	3202.60
	Employment Rate	-2.6	93.50	91.10
	Labor Force	-3.5	232.00	224.00
Capital	Net Wages	-1.1	0.89	0.88
	Avg Net Wage	0.0	1079.81	1080.16
	Employment Rate	-3.7	89.20	86.00
	Labor Force	3.4	920.00	952.00
Large	Net Wages	-9.0	0.81	0.74
	Avg Net Wage	0.0	332.82	332.66
	Employment Rate	-7.9	89.80	83.00
	Labor Force	-2.0	2724.00	2670.00
Medium	Net Wages	-5.4	0.76	0.72
	Avg Net Wage	-1.5	93.37	92.02
	Employment Rate	-5.9	84.30	79.50
	Labor Force	2.2	9661.00	9875.00
Small	Net Wages	-4.5	0.91	0.87
	Avg Net Wage	0.3	31.21	31.29
	Employment Rate	-4.2	84.40	80.90
	Labor Force	-1.2	34594.00	34175.00
XS	Net Wages	-12.5	0.17	0.15
	Avg Net Wage	-1.2	6.72	6.64
	Employment Rate	-5.9	68.10	64.20
	Labor Force	-3.5	36189.00	34949.00
XXS	Net Wages	-5.4	0.19	0.18
	Avg Net Wage	0.0	0.61	0.61
	Employment Rate	-3.9	88.10	84.70
	Labor Force	-2.0	357738.00	350530.00

Using a five-day moving average, the vwap-weighted employment rate fell from 86.9% on November 5th to 85.3% on November 11th and continued to decline until reaching a quarter low of 81.2% on November 23rd, the first day of the ship discount program. The fall in the employment rate shows a decrease in players' efforts to keep their ships employed. This may have been caused by the decline in the value of ATLAS/USD, which reduced the USD value of S.C.O.R.E. emissions and, therefore, the incentive to work. As a result of the decline in the employment rate, ATLAS earned fell by 2.9% in November. This highlights the important relationship between the strength of ATLAS and the incentive to work.

[24] Table definitions: Net wages are the daily aggregate ATLAS earnings less the ATLAS cost of R4 burned in millions of ATLAS. The average net wage is the daily average wage of ships in that class net of R4 in ATLAS. The employment rate is the number of ships actively earning ATLAS divided by the labor force. The labor force is the number of ships active in S.C.O.R.E. in the past 28 days.

A liquidity event occurred in the ship markets, causing a collapse and leading to a precautionary balance motive. This fueled the need for players to raise cash and exit the ecosystem by withdrawing their fleets. The largest fleet withdrawal days occurred between 11/09 - 11/12, with 416 unique wallet withdrawals. Although over the same time period, 478 wallets made initial deposits.[25]



Source: ATMTA, Inc. Economics Department. Notes: Five-day moving average of the VWAP weighted employment rate. ATLAS/USD is re-scaled to fit the figure. Net investment by class is in thousands of USD.

As in the first quarter, the increase in withdrawals and decline in token prices led to processes that foreshadowed their reversal through new ship investment. The fleet withdrawals coincided with a deeply discounted price of ATLAS relative to USDC, creating attractive buying opportunities in the secondary ship markets. Many players took advantage of these opportunities by transferring out of ATLAS for USDC and purchasing ships with the proceeds. However, some transferring into ATLAS also occurred to buy primary and secondary ships priced in ATLAS.

Table 4: ATLAS Earnings Growth Per Month

	September	October	November	Total
Avg Wage Per Ship	1.29	-1.20	0.65	0.74
Employment Rate	-3.39	2.52	-3.23	-4.10
Labor Force	-0.64	-1.00	-0.35	-1.99
ATLAS Wage Growth	-2.74	0.32	-2.93	-5.35

On November 23rd, ATMTA rolled out a ship discount program to improve primary sales. The community and guilds responded by purchasing many new ships at a discount, further increasing the capital stock and thus raising the productive capacity of the economy. As the effects of this policy fade, we can reasonably expect the trend decline in the labor force to resume. These opportunistic purchases likely moved ship purchases forward in time, as they did with the announcement of the July ship repricing. Additionally, the ships eligible under the discount program

[25] Over the quarter, 4,343 unique wallets made an initial deposit, 2,901 withdrew ships, and 2,194 wallets made a partial deposit.

are of a higher class, which means their net additions to the labor force will increase the average ATLAS wages per ship.

Net ATLAS Emission Summary

From September 1st through November 30th, residents and citizens claimed 452.3 million ATLAS (+4.97 million per day) in gross employment earnings. In addition, 87.15 million ATLAS (-.96 million per day) flowed back into the DAO from the sale of resources. The sale of primary origination ships denominated in ATLAS absorbed 30.39 million ATLAS (-.33 million per day). 4.37 million ATLAS from the comic book; and lastly, 519.3 million ATLAS was locked (EOP). After accounting for the sinks and the locker, net ATLAS emissions totaled a negative 188.91 million (or -2.07 million ATLAS per day).

Concluding Thoughts

We posed three questions at the outset of this report that aimed to encompass the strength of Star Atlas this quarter. The answers to these questions bring new insights to the forefront and highlight the most impactful activity that occurred within the ecosystem during the period.

How effective was the POLIS locking facility during the period, and how did the community behavior affect the price of POLIS?

From 11/6 through 12/06, net transfers of POLIS for USDC came in at 959.6 thousand POLIS, and the differences by wallet status are informative. During this period, the SA ecosystem and the relative attractiveness of the POLIS locker helped insulate POLIS from macroeconomic events. Those actively locking POLIS on the same day transferred into 349 thousand POLIS from USDC. Citizens provided support with 185.4 thousand POLIS transferred from USDC, and wallets with a ship enlisted in S.C.O.R.E. were net neutral over the period.

Contrast these positive results with the rest of the ecosystem. Wallets in the POLIS locker but not actively locking transferred out 331.6 thousand POLIS, and non-voters transferred 1.02 million. Wallets with no ships in S.C.O.R.E. contributed 979 thousand in net transfers out of POLIS, 832.5 of which was attributable to the actions of nonresident currency holders.

Table 5: Daily POLIS Transfers With USDC By Sector (Thous. POLIS)

		Net Transfers By Locker Status			By Ship Staked Status		Other Groups	
	All	Other Locked	Locked on day	NoLock	Not Staked	Staked	Nonres Curr	Citizens
11/06	-86.9	-8.0	0.8	-79.6	-67.6	-19.2	-65.2	-17.4
11/07	-108.5	49.3	42.1	-199.9	-157.6	49.1	-215.6	48.8
11/08	-121.3	34.3	37.3	-192.9	-181.4	60.1	-232.2	66.3
11/09	-195.2	-65.6	39.5	-169.1	-143.4	-51.7	-114.6	-22.1
11/10	-36.9	-65.6	103.9	-75.2	-179.2	142.3	-103.0	107.1
11/11	-146.5	-94.3	3.2	-55.3	-44.3	-102.2	-19.7	-66.4
11/12	-38.4	-12.4	20.0	-46.0	-2.6	-35.9	-18.2	-3.4
11/13	-8.2	7.5	8.0	-23.6	43.7	-51.9	43.6	12.7
11/14	-14.7	-1.0	6.1	-19.9	-9.4	-5.3	-10.0	4.1
11/15	-56.8	-16.4	27.0	-67.4	-69.7	12.9	-74.5	5.5
11/16	13.2	17.0	8.3	-12.1	10.2	2.9	0.6	1.9
11/17	-81.0	-96.2	0.6	14.6	-113.7	32.7	-1.9	13.4
11/18	36.4	-4.8	1.0	40.1	1.2	35.2	5.5	-2.6
11/19	14.9	9.4	0.8	4.8	4.6	10.3	6.7	6.4
11/20	30.3	5.2	7.1	18.0	44.7	-14.4	38.8	6.7
11/21	-20.2	-15.0	7.0	-12.1	-16.8	-3.4	-7.5	1.3
11/22	37.5	2.7	2.7	32.1	18.2	19.4	11.3	3.3
11/23	13.6	7.6	7.5	-1.5	9.6	3.9	4.5	9.9
11/24	-16.0	2.1	2.3	-20.4	-1.2	-14.8	-16.3	-9.7
11/25	-31.7	-20.1	4.4	-16.0	-3.1	-28.6	2.3	-13.9
11/26	-14.4	-10.0	1.6	-6.0	-29.9	15.5	-23.0	-7.3
11/27	34.7	4.5	10.7	19.5	16.0	18.6	9.2	12.0
11/28	21.0	36.3	0.3	-15.6	-13.9	34.9	-10.0	36.0
11/29	-21.0	-10.6	4.8	-15.3	-5.6	-15.4	-4.9	-5.1
11/30	-32.9	-36.1	12.1	-8.9	-3.1	-29.8	20.1	-4.7
12/01	-45.5	-6.0	3.9	-43.3	-22.7	-22.8	-16.6	0.0
12/02	-11.2	-9.4	1.5	-3.3	-4.2	-7.0	4.2	-4.3
12/03	-38.3	-6.5	2.6	-34.4	-41.9	3.5	-30.7	8.9
12/04	-30.4	-31.9	1.4	0.1	5.0	-35.4	14.3	-19.7
12/05	-7.3	10.1	7.0	-24.4	-10.3	3.0	-22.3	3.5
12/06	2.0	-7.3	18.4	-9.2	-10.6	12.6	-7.3	14.5
Total	-959.6	-331.6	394.1	-1022.1	-979.0	19.5	-832.5	185.4

The days highlighted in blue are when those in the locker facility, but not locking that day, transferred POLIS for USDC. 11/09 and 11/17 corresponded to major venues removing support for Solana-based USDC.

Those not in the locker facility put the most significant pressure on the governance token between 11/7 and 11/9, with their three-day net outflows of USDC totaling 561.9 thousand POLIS. In addition, wallets that locked POLIS acted as liquidity providers to the non-voters by transferring 118.9 thousand POLIS from USDC.

Transfers between SOL and ATLAS are also of interest when gauging the performance of POLIS during this period. Net transfers into POLIS from SOL have been overwhelmingly positive from 11/06-12/06 and totaled 1086 thousand POLIS. There were only two days where net POLIS transfers for SOL were negative during the week of 11/06. 611.5 thousand POLIS or 56% of the net transfers from SOL came from employed ship owners. Citizens transferred SOL for 516.3 thousand POLIS. Locker participants accounted for 784.8 thousand, or 72% of all transfers.

Table 6: Daily POLIS Transfers With SOL By Wallet Status (Thous. POLIS)

		Net Transfers By Locker Status			By Ship Staked Status		Other Groups	
	All	Other Locked	Locked on day	NoLock	Not Staked	Staked	Nonres Curr	Citizens
11/06	34.8	9.6	19.8	5.4	18.1	16.8	5.4	16.7
11/07	35.4	14.7	7.8	12.9	10.1	25.3	11.4	22.3
11/08	141.0	15.5	97.5	28.0	82.1	58.8	21.5	43.2
11/09	61.1	16.9	28.4	15.8	22.9	38.2	-6.7	32.0
11/10	179.8	87.9	99.5	-7.6	31.8	148.0	4.0	144.6
11/11	25.4	-16.7	24.9	17.2	3.9	21.6	16.7	24.6
11/12	4.1	-5.2	24.8	-15.5	-2.5	6.6	-8.1	11.1
11/13	25.2	5.9	28.4	-9.1	10.1	15.2	-5.7	18.1
11/14	40.2	12.9	13.6	13.6	23.8	16.3	14.6	17.3
11/15	43.5	24.3	6.7	12.5	14.0	29.6	8.7	25.8
11/16	30.3	-0.5	25.9	5.0	25.4	4.9	9.7	9.3
11/17	41.3	5.6	23.9	11.7	12.9	28.4	7.9	27.0
11/18	8.5	-2.7	13.3	-2.1	-0.4	8.9	-2.9	8.6
11/19	62.1	13.9	26.4	21.8	33.6	28.4	16.4	23.2
11/20	5.1	-3.5	9.0	-0.4	2.5	2.6	-0.6	2.4
11/21	-8.9	-9.3	3.6	-3.2	0.0	-9.0	-0.3	-5.2
11/22	36.4	11.9	13.4	11.1	25.8	10.6	8.4	9.1
11/23	27.2	14.2	16.5	-3.5	12.7	14.5	-1.9	16.0
11/24	15.5	1.9	10.4	3.2	11.5	4.0	1.3	2.4
11/25	10.8	2.5	10.0	-1.7	-0.8	11.6	-1.3	12.1
11/26	26.6	-0.7	3.7	23.7	5.3	21.3	8.3	6.6
11/27	56.6	14.9	6.3	35.4	29.3	27.4	19.9	10.5
11/28	11.1	0.9	0.3	10.0	1.9	9.2	2.2	1.4
11/29	5.4	3.9	0.7	0.8	5.6	-0.2	2.4	0.5
11/30	16.1	4.6	1.0	10.5	10.1	6.0	9.5	5.2
12/01	111.4	5.5	15.8	90.1	79.2	32.2	67.5	11.6
12/02	20.8	2.5	1.1	17.2	12.3	8.5	7.6	3.8
12/03	16.9	11.5	3.7	1.7	4.4	12.5	-1.9	9.6
12/04	-8.0	-2.7	2.7	-8.0	-11.8	3.8	-10.4	2.0
12/05	1.9	-1.2	1.0	2.0	-0.7	2.6	-2.9	-0.8
12/06	8.6	4.8	0.7	3.1	1.6	7.1	1.8	5.1
Total	1086.4	244.1	540.7	301.6	474.9	611.5	202.7	516.3

The sum of all transfers by those who locked on the day was 1089.5 thousand POLIS. Net transfers into POLIS by other voters contributed an additional 21.1 thousand, and net transfers out of POLIS by those outside the facility were 627.5 thousand. This activity resulted in total net transfers of 484.5 thousand POLIS into the token.

Of the 3.45 million POLIS locked, 31.4% came from net transfers into POLIS on the same day, and 22.3% came from total POLIS rewards. We can conclusively state that the actions taken by those locking helped to provide support for POLIS. This support mainly came at the expense of SOL which directly contributed to POLIS outperforming SOL. Overall, the actions taken by those locking helped to provide support for the token.

Have the players run for the exits? Or are they digging in and preparing for battle?

According to the dynamic census, 3,639 wallets joined the ecosystem from 11/06 to 12/06. Over the period, 70 wallets joined the ranks of citizens, and 961 wallets experienced a separation from employment, which accounts for a large share of the growth in nonresident ship owners, which increased by 1,160. 247 became nonresident voters, and 3,123 became nonresident currency holders.

The decline in residents is a long-standing trend, and the total population of Star Atlas grew during this period, therefore, it is difficult to suggest that people ran for the exits. For example, on 11/12, the community mobilized with the release of the Star Atlas Community Rescue Survey. A survey meant to help the Star Atlas team extend its runway. To further gauge the community's commitment, we compare the performance of the discounted ships program against that of the survey results.

How closely did the community's willingness to pay align with the realized purchases during the ship discount program?

Among the unprecedented action taken by the community was the drafting of the Star Atlas Community Rescue Survey—which was run entirely without ATMTA's involvement.[26] Question five of the survey dealt with the willingness to spend on discounted ships. Survey respondents, totaling 373, shared their willingness to spend versus the realized 364 distinct purchasers of ships. The midpoint of the total willingness to spend was $531,850. Through December 11th, purchases under the discount program totaled $534,701. The total was 100.5% percent of the planned amount. By this standard, the community's actions aligned fully with their words.

In summary, the SA ecosystem has held up well under the developments of the quarter. The performance of the S.C.O.R.E. economy followed a path that was primarily in continuation of last quarter's trends. What is impressive is how well the SA ecosystem continued to absorb POLIS and ATLAS rewards. Regarding POLIS, the stress placed on the SOLANA USDC market was offset by the locking activity of citizens and other participants. The ATLAS locker has also greatly reduced net ATLAS emissions. The efforts of the dedicated SA community, supported by stability-enhancing infrastructure, have produced tangible results.

[26] The cleaned survey data referenced here was generously provided by StarDustEconomy - for survey data responses provided through November 15th. The discounted ship sales data are for the period from November 23rd through December 11th.