STIP Case Study – GMX

Incentive Program Structure

GMX was the largest STIP recipient, having been allocated up to 12M ARB (~17% of all STIP incentives) through STIP Round 1. According to GMX's STIP application, the project's main purpose for receiving incentives was to increase the adoption and activity focused on GMX V2. This was to be achieved by onboarding new users, creating sustainable onchain activity and TVL growth, and attracting new developers to build on top of the GMX layer. The application didn't include any tangible KPI thresholds that, when reached, would equate to a successful program (e.g., we aim to attain a TVL of $X). This makes analyzing the program's success less objective, and instead, accountability somewhat ends at whether or not, e.g., TVL or volume grew. Some high-level goals mentioned in the original request, such as attracting CEX traders to GMX, are quite difficult to measure, and no data related to this goal was provided. If possible, it would be beneficial to abstain from creating goals on which no tangible KPIs can/will be given by the grantee.

From the incentive request posted on Arbitrum's forum, it was somewhat unclear how the received funds would be precisely divided among various incentive categories. This is because the asked amount was decreased from 14M to 12M ARB, but not all figures were amended within the request. The high-level incentive buckets included trading incentives, liquidity incentives, and a grants program. GMX stated that, through trading incentives, it wanted to decrease its average maker and taker fees to a level comparable to Binance's VIP0 program. Other than the aforementioned, no rigorous justification—such as modeling the expected usage given certain LP yields or trading fee discounts enabled by the ARB allocation—for the size of the request was given.

The grant program was led through a GMX grants committee. Bi-weekly updates posted by the protocol on Arbitrum's forum did not include any information regarding why certain projects had received funding and what their milestones consisted of, although it should be noted that funded projects posted updates on GMX's forum. The program began on November 8, 2023, and the application window was closed on December 13, 2023, reportedly due to high demand. GMX received 54 applications of which 22 (GMX's final report conflictingly mentions both 21 and 22) were accepted and funded. Out of the accepted applications, it seems that four projects were double funded by both GMX and the STIP. These include Boost (previously RabbitHole), Rodeo Finance, Umami, and Dolomite, who received between 25K and 100K ARB on top of their STIP allocations. This violates rules established in GMX's application, stating that ecosystem partners building on GMX V2 eligible for the grant given by GMX would exclude projects that directly receive incentives from the Arbitrum DAO.

Having said the above, the overall request posted on the forum provided comprehensive information regarding GMX and its historical performance. Moreover, the high-level usage of

incentives was clearly laid out, and the overall goal of creating a flywheel of increasing trading volume, TVL, and the number of builders was sensible. Nevertheless, as mentioned above, tangible KPI goals were not given, and no in-depth analysis of why the project required 12M ARB was presented. Overall, GMX had one of the most comprehensive STIP applications, but given the large number of tokens requested, it would have been beneficial to more rigorously justify why the project should receive such a large allocation of ARB and share of the total ARB distributed through STIP.

When it comes to the STIP-required bi-weekly updates, GMX posted all updates, and on time. The updates clearly showcased which contracts had been incentivized within the past two weeks, how much ARB was left over after the period's incentives had been distributed, and what the plan for leftover ARB was across the different target areas. A comprehensive Dune dashboard was shared, together with the presentation of basic KPIs such as current TVL, transactions, and volume. However, these weren't compared against historical values, and no commentary was given regarding why numbers had developed as they had. Additionally, data and commentary on many of the originally mentioned success factors, such as the growth of community engagement and the value of the GMX token, were not included. Again, if an STIP applicant mentions certain factors constituting the success of its incentive program, bi-weekly updates—or at least monthly updates—should preferably include an analysis of those factors, especially when the approved incentives are notable in size.

GMX also posted a final report on the project's incentive process, giving an overview of how ARB had been allocated in aggregate. Similar to the bi-weekly updates, the final report doesn't put much emphasis on how much growth has been achieved, what the specific growth drivers have been (e.g., pool X contributed Y% of total growth, likely because of Z), and how sustainable the growth is. For liquidity incentives, in addition to showing how much ARB had been distributed per epoch, it would have been beneficial to present how much ARB each GM pool received and the corresponding resulting yields for LPs. Such precedents would be extremely beneficial for the community when it comes to judging the structure of future incentive proposals.

It would also be preferable that projects refrain from making high-level comments regarding their success which can't be/haven't been backed with tangible evidence. As an example, GMX's final report mentions "The availability of trading incentives attracted new users plus encouraged existing users to increase their participation levels…" but doesn't go on to present any data (e.g., what % of weekly activity derives from new unique wallets) that would back this claim.

In summary, the final report is quite comprehensive but it would have been beneficial to add more discussion around what exactly has driven growth, KPIs to support this discussion, what the current situation is, how sustainable current performance is assumed to be, as well as, when possible, include more data to back statements regarding the protocol's success.

Finally, connected to the program structure, one subjective question that the DAO might want to resurface is how conflicts of interest should be handled going forward. It could be beneficial to

expand on this conversation to establish a set of rules when it comes to delegates casting votes on proposals that they stand to benefit from directly. As it currently stands, it seems as though the expectations for how protocol-aligned delegates should approach voting keep changing with proposals. When Snapshot votes were cast to support potential STIP recipients, the standard seems to have been that protocol-aligned delegates voted for their protocols. For example, Coinflipcanada, a core contributor to GMX, voted for the project Snapshot, accounting for ~7% of the votes supporting the proposal, although it's important to also mention that the conflict of interest was disclosed when the vote was cast. Meanwhile, for more recent votes, such as the LTIPP, many protocol-aligned delegates have abstained from voting when it would have benefitted them directly.

Here, Blockworks Research is not taking a stand on what the standards should look like but thinks it would be favorable to establish a clear set of rules on how these situations should be approached and put mechanisms in place to create a level playing field and consistent voting procedures in the future.

Usage of Funds

The two largest incentive buckets were liquidity and trading incentives, having been allocated ~5M ARB each. Liquidity incentives were mostly channeled to V2 BTC and ETH pools, while trading incentives were used to rebate up to 75% of open and close fees on GMX V2. Two weekly trading competitions were also allocated 280K ARB, which ran between the 13th and 27th of March. One competition was based on the highest notional PnL while the other was based on the highest PnL percentage gains. It should be noted that trading competitions might not be the most efficient usage of incentives since these can be gamified by, e.g., taking a long position on GMX and matching it with a short position on another trading venue, which is impossible to detect if the used capital is kept separated.

GMX additionally used ~166K ARB to incentivize GLP (V1) LPs to move to GM (V2) pools, meaning that these incentives could never directly attract new capital to join the ecosystem. However, the benefits from this incentivization scheme indirectly flowed to new GMX users as well since the scheme attracted liquidity to the pools to which the main incentives were directed. Moreover, the migration incentives were capped at 350K ARB, with unused capital having been redirected back to other incentive buckets, so the majority of the overall allocation was attainable by new users.

1.29M ARB was allocated to GMX's grants program, of which 208.5K was used to fund projects that also received incentives through the STIP. It should be noted that when GMX's incentive request was posted, the DAO didn't have any established incubator programs, while some delegates were unsatisfied with the grant efforts made by the Arbitrum Foundation. A subjective question for the DAO to answer is whether individual projects should function as grants distributors, especially given that the Arbitrum ecosystem now has several incubator programs, which enable builders to explore wider-reaching ideas in comparison to having to integrate with specific protocols, with committees that don't have similar conflicts of interest. From an

operational perspective, it's likely that allowing individual projects to run their own grant programs enabled by DAO funding would lead to a disorganized arrangement since there would be an increasing number of overlapping programs with similar mandates, and giving certain, more established projects privileges over others could increase perceived unfairness.

In total, GMX distributed ~11.9M ARB in incentives. One of the highlights of GMX's incentive program was the extremely low sybil ratio of ARB claimed at ~0.07%, as of February 24, 2024, as reported by OpenBlock Labs. Meanwhile, the distribution of incentives was quite concentrated. Excluding ARB utilized for the grants program, the 10 largest recipients accounted for ~20% of all claimed rewards. However, these wallets have contributed ~25% of GMX V1 & V2 volume on Arbitrum since November 3, 2023, and still account for ~8% of GMX's TVL on Arbitrum. In general, perp DEXs rely on large traders and LPs to reach a market-leading position, and it's quite infeasible to require major protocols to solely distribute incentives to smaller accounts.

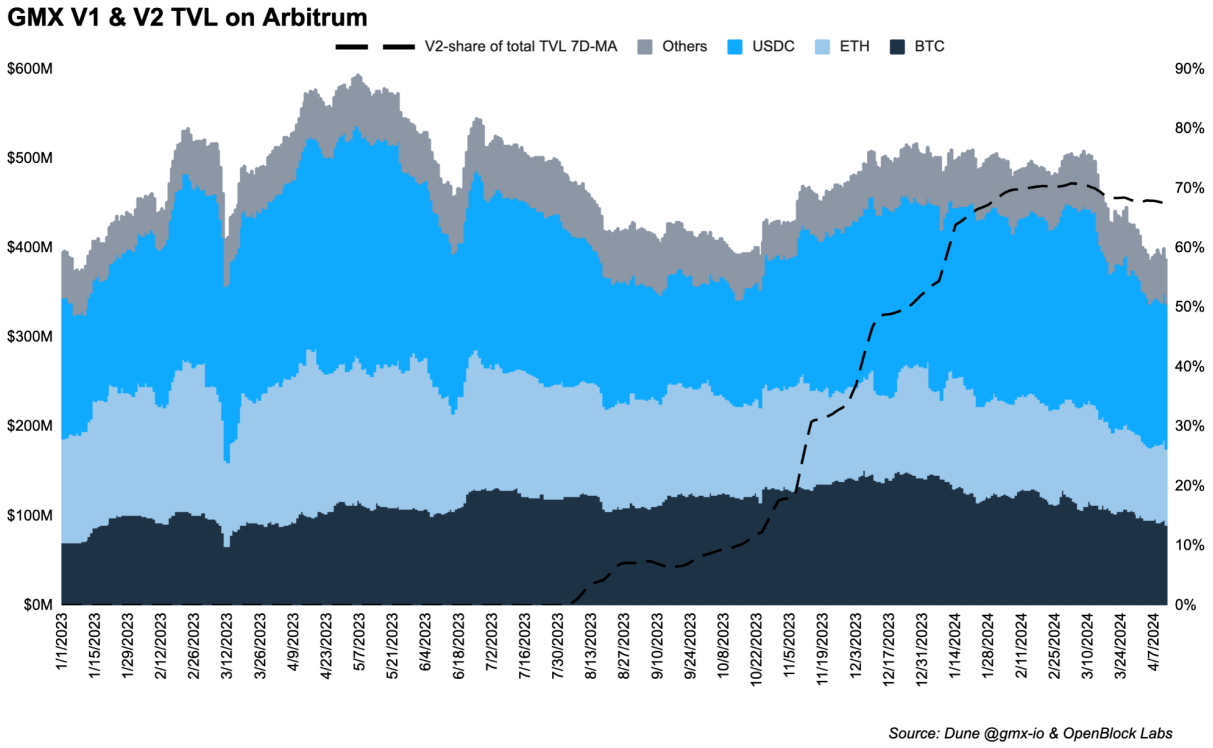
The Impact of Incentives

To quantify the effectiveness and, especially, the short-term sustainability of GMX's incentive program, we present short data-driven analyses on the development of incentivized TVL and trading volume, enabled by the STIP. Concerning the grants program, apart from the failure to exclude/halt incentives to projects that were also funded by the STIP, measuring success is much more subjective. It would be somewhat naive to make conclusions solely based on basic KPIs, as some of the funded projects are purely focused on improving the UX, both on the user and developer side, and assessing the impact holistically would require another case study evaluating each funded project individually with a focus on what the program's impact has been on developers.

TVL

Beginning with TVL on Arbitrum, GMX saw a notable increase from the inception of the incentive program on November 8, 2023, until the end of the year, with TVL growing from ~$430M to a peak of ~$515M—an increase of ~20%. While the V1 TVL continued its downward trend that started at the beginning of May 2023, V2 TVL began expanding notably, coinciding with the start of the incentive program. This phenomenon could partly be explained by LPs migrating to the newer version.

Between the beginning of 2024 and the middle of March 2024, the V1 TVL shrunk roughly at an equal pace as the V2 TVL grew. Since then, both versions have seen capital outflows, with the total TVL reverting to ~$370M, below where it started when incentives were introduced. V2's share of total TVL has increased from ~20% to ~70%, which should be expected as V2 pools were only introduced in early H2 2023, and all incentives related to liquidity and trading were channeled to these pools.



Source: Dune @gmx-io & OpenBlock Labs

As such, it's fair to say that GMX hasn't reached its goal of sustainably growing its TVL. Liquidity incentives to the V2 pools ended on March 27, 2024, but V2 TVL began shrinking a few weeks earlier, and this trend is still ongoing. Consequently, more time would be required to understand where GMX's unincentivized TVL will stabilize. One prominent possible explanation for capital leaving the project while incentives were ongoing is new passive, almost risk-free, high-yield opportunities having recently entered the market, and LPs may have begun rotating into these opportunities. Furthermore, it's important to remember that market conditions are vastly different compared to Q4 2023—investors are more willing to go further out on the risk curve and, consequently, don't want as much exposure to stablecoins.

Based on a high-level analysis, recent capital outflows have been notably driven by large LPs pulling out funds from GMX. This is the downside of the incentive distribution being concentrated across a few large accounts. As mentioned earlier, established perp DEXs require large traders and LPs, and it isn't feasible to cap their incentives arbitrarily. Instead, it might make sense to do further research on distribution structures that impel large capital contributors to stay in the protocol for an extended time. A naive example of this would be requiring LPs to maintain capital in the system for, e.g., three months after the incentive program has ended if they're allocated over X number of tokens. They could also withdraw whenever, but this would lead to their incentives being slashed by Y%, which would be redistributed to traders who have continued to use the platform after the incentive program has ended.

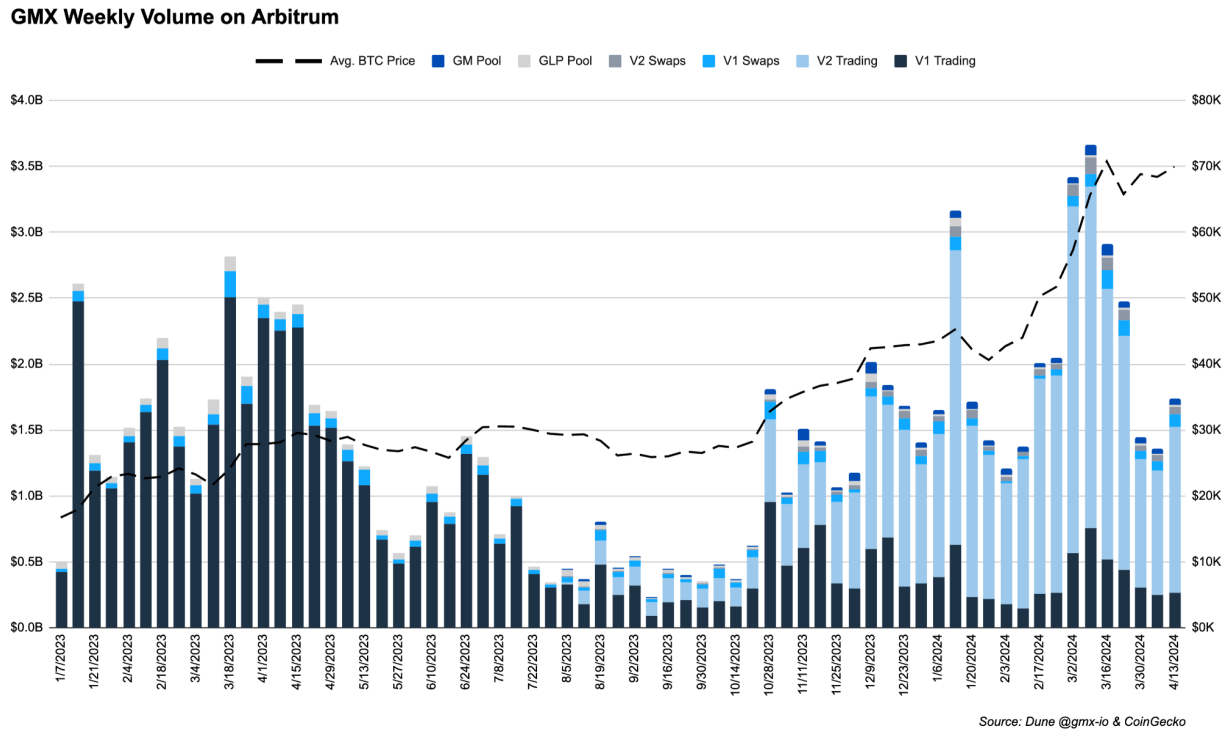
It should be noted that although the incentivized TVL on GMX hasn't been sustainable, the liquidity incentives could still be considered a success if they attracted new capital to Arbitrum,

which is now rotating into other ecosystem projects. If there is demand from the DAO, this is something the ARDC could focus on going forward.

Finally, it could be argued that GMX requires ongoing liquidity incentives to stay competitive with other protocols engaging in liquidity mining programs. The problem here is that there will always be new protocols that come to the market and incentivize users through such programs. As history has shown, a DAO can't sustainably continue allocating large amounts of tokens to projects with a return of just maintaining activity.

Trading Volume

Compared to TVL, trading volume on GMX's Arbitrum deployment has been stickier following the incentive program's conclusion. Trading incentives began on November 15, 2023, which seemingly had an immediate effect on V2's share of total swaps and leverage trading volume, growing from ~50% to ~70% within roughly one month, and currently at ~80%. The week preceding the beginning of trading incentives, total trading volume was at ~$1.5B, reaching a high of ~$3.7B at the beginning of March, and has now returned to ~$1.7B. As can be seen from the graph below, volume growth is correlated with the price of BTC. As market conditions have become better, investors are also demanding more leverage. Nevertheless, the incentive program has been successful based on GMX's objective to grow volume sustainably, although, as with the liquidity program, more time is required to assess where trading volumes will stabilize.

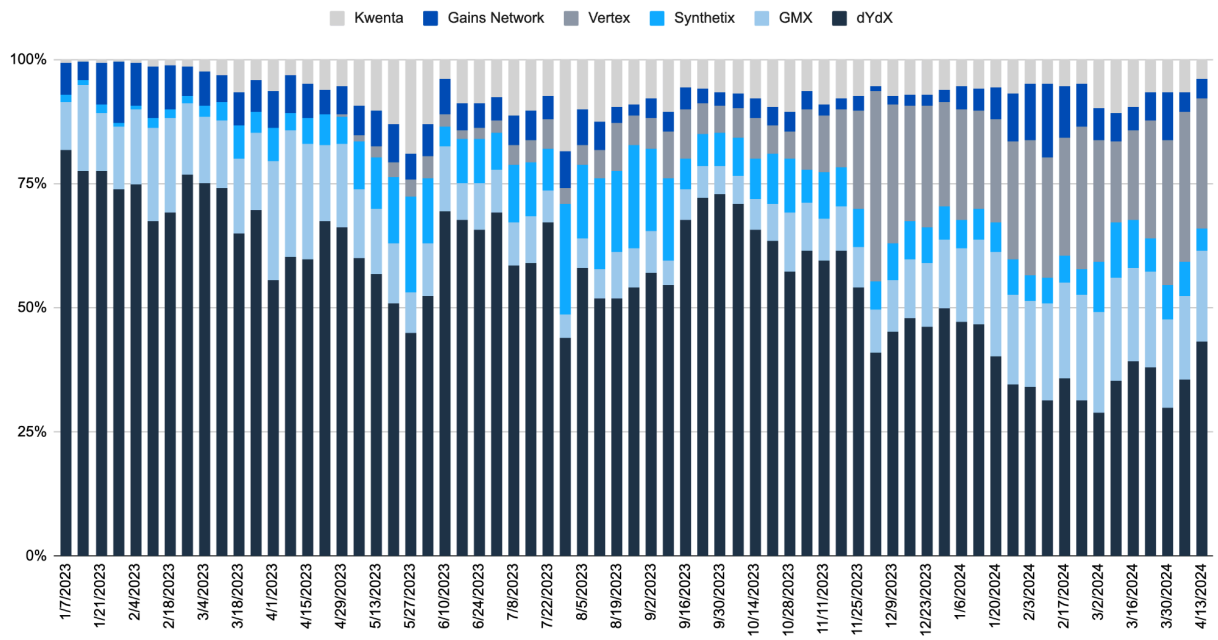


Source: Dune @gmx-io & CoinGecko

To account for the changed market conditions, it's sensible to evaluate how GMX's market share across some of the largest perp DEXs has developed over the incentive program, as market

conditions ought to affect volume across the major perp DEXs similarly. In the three months preceding the beginning of trading incentives, GMX's market share hovered around 5-10%, while it has been between 15-20% for the whole of 2024. This implies that the trading incentive program has been a massive success when it comes to creating trading volume that has been maintained on a market share basis even after the incentive program ended.

The Weekly Market Share Distribution Across Notable Perp DEXs



Source: Token Terminal

Conclusions

The main takeaway from this case study is that even the most comprehensive STIP requests from protocols with the most resources lack robust justifications concerning the request size. Generally speaking, as historical incentive allocations haven't been rigorously justified, it's probably unwise to base upcoming allocations on precedents. In future incentive programs, it might be beneficial to require requests over X ARB to be accompanied by a model that estimates outcomes based on the requested incentives, pursued yields/discounts/etc., and different activity levels. The application template given to LTIPP applicants is a step in the right direction and has enhanced protocols' grant request justifications, but many projects have still passed with little/without any strong rationalization. When an incentive program has a fixed amount of capital to allocate, it could be advantageous to require applicants to normalize the estimated growth figures based on the amount of ARB requested to make it easier for the community and facilitators (council/advisors/etc.) to compare applications against each other and figure out the best relative funding opportunities.

Another possible solution for limiting incentives exhibiting a top-heavy distribution and projects arbitrarily asking for a certain amount of tokens is to require large, established grantees to

match a percentage of the allocation, or even request that projects share a percentage of fees created through incentives with the DAO, which could more or less be seen as a simultaneous treasury diversification strategy.

Another key finding from this case study is the absence of a growth driver analysis and in-depth commentary. Given that insiders are likely to be the most knowledgeable about the protocol they are working at, it should be expected that updates to the DAO include further explanations and justifications for the incentivized performance. It would also be extremely helpful if projects were required to set milestones and final KPIs that, when reached, would constitute the success of a program. Again, the LTIPP has already led to improvements on this front. As LTIPP Incentive Advisors are tasked with guiding protocols throughout the incentive period, it is important that they pay careful attention to any gaps in updates made by grantees in order to ensure that all the relevant data is made available and incentive streams can be halted accurately if protocols don't follow the set guidelines.

When it comes to a grantee running an incentive program where a share of the total incentives is distributed to another protocol, the other protocol should also be added to a shared database as an incentive recipient. This is to ensure that projects don't get double-funded or receive other types of preferential treatment compared to protocols that always apply individually.

Additional high-value data that would preferably be incorporated at some point in the future comprises a closer examination of customer types, and how the average user's behavior has changed with incentives. Example metrics include what % of incentivized usage is deriving from new wallets and capital, where this capital originates from (i.e., was it moved to Arbitrum from another chain or another ecosystem project), customer acquisition costs, and customer lifetime value. Additionally, more focus should be given to the sustainability of usage, i.e., are users staying within the protocol after incentives end, are they moving to other ecosystem protocols, or do they completely leave the chain, and what changes can be made to avoid unfavorable behavior?

Lastly, the DAO might want to begin thinking about solidifying a set of rules around situations where conflicts of interest could arise. As it currently stands, standards across protocols and operational areas differ quite widely, and it might be beneficial to create a structure that systematizes, e.g., voting procedures and committee position elections.