

# Global Mobility Unit Class

## TAMIM Fund

At 31 December 2022



### Overview

The TAMIM Global Mobility portfolio is a global long/short strategy that seeks to invest in companies which benefit from the ongoing \$7-10 trillion autonomous and electric vehicle revolution while shorting those that will suffer.

### Commentary

The unit class generated a -1.55% return in December, resulting in an annualised net return to investors of -15.51% since inception in February 2021. For reference, over the same period, the S&P/Kensho Smart Transportation index - designed to measure the performance of companies focused on autonomous and electric vehicle technology and advanced transportation systems - was down -13.75% in December and has returned -36.21% per annum. Given the broader mobility universe performance, as well as the fact that most of the portfolio negative return was a result of currency movements, we continue to believe the portfolio is well positioned for the next leg of this current market environment (see the below quarterly commentary for a detailed view on our current market position). Overall, the portfolio was net long 0.90% on a delta-adjusted basis (note: long and short positions are shown on a delta-adjusted basis). We are now seeing US inflation numbers come off significantly. We are looking to build out both our long and short books but will remain patient over the next couple of months while the current volatility settles down.

### Portfolio Performance

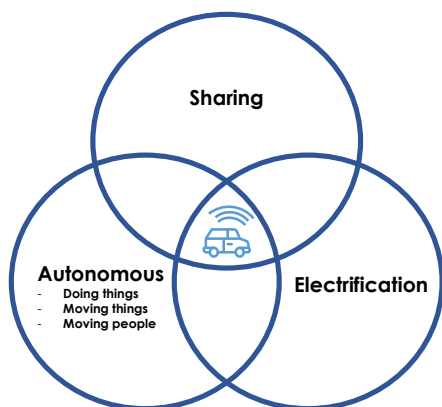
Inception: 8/2/2021	1 m	6 m	12 m	Since inception (p.a.)		
Global Mobility	-1.55%	-1.27%	-22.24%	-15.51%	<b>Equities (long)</b>	27.3%
Transportation Index	-13.75%	-13.90%	-46.22%	-36.21%	<b>Equities (short)</b>	-26.4%
Cash	0.25%	1.16%	1.30%	0.73%	<b>Equities (net)</b>	0.9%

Position counts include options, hedges and warrants in addition to long and short equity positions. Option positions are shown on a delta-adjusted basis and spread trades are collapsed to show performance and exposure on a total trade basis, not on an individual leg basis. The administrative NAV reflects options on a single leg basis and will differ from the number presented in this report.

### NAV

	Buy Price	Mid Price	Redemption Price
AU\$	\$0.7321	\$0.7295	\$0.727

### The Three Pillars



These three pillars are the building blocks for the future of mobility. The pillars are not mutually exclusive, but overlapping, synergistic, and collectively “constructing” the \$7 - 10 trillion revolution.

Autonomous, connected, and electrified vehicles are likely to have profound effects on various industries and geographies. The strategy is focused on taking advantage of these changes by initiating long and short positions related to these overarching themes. Thematic focuses include, but are not limited to:

- artificial intelligence (“AI”),
- enabling hardware and software,
- sensor technology,
- cyber security,
- logistics-related technology,
- fleet management,
- electrical systems,
- safety systems,
- communication infrastructure,
- communication platforms,
- data monetisation, and
- basic materials.

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We believe we are at a major inflection point across the technological, geopolitical, and financial cycles, the confluence of which creates a rare investment opportunity looking out over the next three to five years. From a financial world perspective, valuations have significantly compressed, driven primarily by one of the fastest rises in interest rates in history. For context, the mobility universe is down approximately 80 percent over the last 18 months. In the real world, the trends we are focused on are all accelerating out of necessity, from energy to reshoring to automation. With the evolution of all of these tangible signposts from multi-trillion-dollar fiscal packages focused on semiconductors and reshoring to the accelerated energy build out in Europe, our conviction is high.

All of these real-world trends that will define the next decade, from the energy transition to reshoring to automation, have been accelerated. Yet the financial world has seen a simultaneous significant reset lower in valuations. So these financial assets with accelerating tailwinds are now significantly cheaper, and this combination creates a rare entry point into an investment thesis we have a high and rising conviction in.

### **Macro view and Geopolitical Update:**

Our views remain consistent with prior updates. In short, the continued macro and geopolitical developments give us further conviction that the energy and transportation revolution is not only on track but has been massively accelerated. In late 2019 electrification, reshoring, and automation were nice-to-haves. Fast forward to today, post-COVID, Russia-Ukraine, and the rising tensions with China, these are must-haves. We have hit the kink in the S-curve, and we now expect all of these trends will happen a lot faster than originally anticipated. On the geopolitical front, we are in the process of moving to a multi-polar world from a unipolar world. The system, from supply chains to currency to energy and trade agreements, has been shifting slowly over the past several years. But this shift was significantly accelerated by, first, the COVID pandemic, then Russia invading Ukraine, and now the rising China- US tensions and unrest in the Middle East. This East versus West fracturing has highlighted the fragility of the previous system and brought forward several key trends, from energy security to supply reshoring to automation and AI. We have seen a significant response by governments in the West to help accelerate those trends and build a more resilient, albeit likely less efficient, new system.

A few examples. **The CHIPS-Plus Act**, passed in August of 2022, focused on bringing the semiconductor supply chain, particularly manufacturing, back to the US. The roughly \$300 billion deal has not even begun to be dispersed. Based on industry conversations, this should begin to flow in the second half of 2023 and even more so into 2024. This has already spurred hundreds of billions of planned upcoming spending in the sector, from TSMC's expanded Arizona fab to Samsung's massive facility in Texas to GlobalFoundries and Wolfspeed building in New York. This is going to drive a semiconductor renaissance in the US.

The **Inflation Reduction Act** also passed in August 2022. This one is focused primarily on the alternative energy ecosystem, manufacturing, and transportation infrastructure in the US. This bill with over \$700 billion in spending and incentives started in early 2023. But this will accelerate later this year and into 2024 as the rules and requirements are clarified this spring. Similar to the CHIPS- Plus Act, this has already spurred hundreds of billions of dollars of planned Capex announcements, from Tesla, Panasonic's EV battery plant in Oklahoma to Honda, LG in Ohio, Ford in Tennessee and Kentucky, and Toyota in North Carolina just to name a few. This is going to drive battery materials and manufacturing back to the US.

The **Infrastructure and Investment and Jobs Act** This was passed in November of 2021. It's focused primarily on transportation infrastructure, internet connectivity, and electricity grid build-outs. This has \$1.2 trillion in spend, and it's set to ramp in the second half of this year and again into 2024 and beyond. We've seen a whole slew of industry spending announcements in response to this, from Verizon and others building out rural internet access to ChargePoint and Revel accelerating the build out of the EV charging network. This is going to drive ubiquitous internet connectivity and EV infrastructure over the coming years.

Finally, Europe's response to the Inflation Reduction Act, likely to be called the **European Net Zero Industry Act**, is on the come. Expect more formal announcements and details this spring. In anticipation of this, we've already seen TSMC start to evaluate building a fab in Germany, and many solar manufacturers start to accelerate Capex plans.

All of these in the US have already been passed into law with spending authorised, but none of the spending has even really begun. So effectively, none of the funds, subsidies, or stimulus spending has even started. It is going to take years and trillions of dollars to build out. It's going to require a massive Capex Cycle, and we are expecting an industrial revolution in the US and potentially the broader West, one of the main themes we're focused on over the next decade as we rebuild the global supply chain. You will want to be focused and invested where governments will be directing and incentivising these trillions of dollars. Geopolitics and the fiscal spend is a huge tailwind for these themes and our fund is one of the few directly focused on these trends.

### **Market Update:**

We have progressed through the three stages of our expected bear market. From liquidity peaking [Phase one] in February of 2021, with the ARK ETF epitomising this, down about 80 percent since the peak to the duration sell-off and inflation shock [Phase two] beginning in November of 2021, highlighted by the NASDAQ down about 35 percent since its peak. To now, Phase three, the growth slowdown we are currently in, where the focus shifts away from inflation rates towards earning cuts and where growth names likely begin to bottom relative to cyclicals. The fourth phase, outright contraction, remains dependent upon the Fed and geopolitical events impacting the price of energy and food. Assuming the Fed raises rates to around 5 percent and pauses this spring with no major issues on the food and energy side of things, we expect a general risk-on rally for the first half of this year as China opens and global growth remains resilient. Transitioning to a general slowdown and likely more fiscally driven second half. And as we've highlighted, a lot of the fiscal packages are just beginning to spend later this year.

The other path [Phase four], given we have not really seen a commodity supply response as of yet, if we do see issues with food and energy prices spiking, the Fed might be forced to stay tighter longer than typical (thinking Volcker of the '80s). And this could lead to a deeper slowdown in the

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second half of 2023 into early '24. But regardless, we expect the government to use this fiscal spend that we've highlighted to help buffer that, and it's going to be particularly focused on areas that we are focused on, those main themes.

### **Industry update:**

Despite the financial market carnage, the specific themes around energy and transportation that we are focused on are accelerating. While this doesn't necessarily immediately translate to stock performance, it does give us increased conviction in our views about themes, the spending to come, and ultimately the cash flows over the next decade. And where the cash flows go, stocks should follow.

For the tech and growth side of our universe, in particular, this broader progression continues to closely mirror what we saw from 2000 to 2002 with the internet bubble and subsequent bursting. Amazon is a good example of one of the internet's major winners. In 2002, everyone thought the internet was dead. Amazon stock was down 95 percent. In reality, the internet was just beginning to take off. Similar to today, there was a huge disconnect between the real world and the financial market. Over the ensuing decade-plus, the internet turned into one of the greatest value-creating technologies out there. Amazon stock went up 600x. We see the mobility revolution as analogous. Many are writing it off. Stock prices and valuations have been decimated, yet the actual trends in the real world are accelerating.

A second useful technology analogy that we often cite is the smartphone cycle. In the early 2000s, it was difficult to identify the smartphone OEM winner. You had Apple, Samsung, Nokia, among many others. This is similar to today's list of auto OEMs from Tesla to Toyota to Ford. But back then, it was a lot easier to identify that smartphone penetration would go up from something around 5 percent to 50 percent plus over the coming years. Today's EV penetration percent is very similar to where smartphone penetration was back in the 2007, 2008 timeframe. We are at a potential kink in the S-curve where adoption starts to go exponential. And Tesla's recent price cuts are a huge signpost, similar to the iPhone moment in 2007. The best risk-reward investments in the smartphone cycle were the blue jeans to gold miners businesses. Notably, areas like semiconductors, such as Avago, Qualcomm, and Skyworks, as they sold into all smartphones. They didn't care who was making it. They benefited from both rising volumes as well as rising content per phone. These stocks 10, 20, 30x'd over the cycle.

Vehicles are the next platform. The next smartphone. They are literally a smartphone on wheels with rising content and complexity. There's a reason all the big tech giants like Apple are focused here. And adoption-wise, we see EVs as similar to smartphones in 2007. Penetration is hitting an inflection point, roughly 5 percent today, going a lot higher in coming years. And the best opportunities are in the components such as semiconductors, rare earth minerals, battery materials, as they will benefit from both rising volumes and rising content per EV. The number of cars in the world today, sits at around 1.4 billion. Only 15 to 20 million are electric so far. There's a long way to go.

On the energy/electrification side we think the Tesla price cut are a very big deal. It is an aggressive, offensive move by the leader in the EV space with the lowest cost structure. This should do a few things. One, it's going to lower the price point, and that should increase the affordability and accelerate demand for EVs, reiterating our point on hitting the kink in the S-curve on the adoption front. On the competitive landscape front, we expect this will accelerate the demise of the poorly positioned legacy OEMs with inefficient cost structures as well as undercapitalised marginal EV OEMs. We're already seeing a forced price cut by Ford. Given the layers of vertical integration, Tesla is one of the only companies that actually has the margin to be able to cut prices and the capacity to handle an influx on the demand side.

Waymo and Cruise tripled their city coverage this last quarter, and Cruise highlighted the total time from the start to actual rollout of a city has now compressed to 90 days. This compares to years to rollout the first city. Point being is we're about to see an acceleration in city rollouts in the coming years. It's a lot easier to copy and paste and go from one to three cities and then three to six than it is to go from zero to one. Doing things and moving things is happening at a faster rate as well. The use cases are widespread. Kodiak Robotics, a company focused on self-driving trucks, just got a \$50 million contract from the US Army to automate military vehicles. Overall, automation is set to accelerate out of necessity.

### **Big winners and losers:**

We are beginning to see asymmetric opportunities in our universe. On the winners' side, **semiconductors** are the new oil and will be the most critical input in building out both the next-gen energy ecosystem as well as the automation ecosystem over the next decade. Teradyne, a key industrial robot and semi-cap equipment supplier, is down over 50 percent from its peak. Nvidia, the brain behind the automation trend, down over 55 percent, driven primarily by an inventory correction and China restrictions. And similarly, Ambarella is down over 65 percent. They're a leader in AI vision processors for things like autonomous robots and vehicles. These and many others like TSMC, Enovix, and Texas Instruments should benefit massively from the fiscal in the pipeline that's set to come later this year.

The **next-gen energy ecosystem**. This will require a commodity super cycle as we simply need more supply to meet the rising demand, demand of lithium, copper, et cetera. Freeport, a leading copper producer, which is a critical input to all things battery, wind, solar, among others, is down over 30 percent, caught up in this cyclical slowdown. MP Materials, one of the only rare earth mineral companies in the US, is down 60 percent from its peak. We think the build out in the US is going to be massive in the coming years. There are a few platforms we think have a shot at doing what Apple did in smartphones to the auto industry. Tesla is down about 70 percent. We think the price cuts are a game changer. It's likely to be painful for Tesla in the short run, but it solidifies their leadership over the long run. They have a very intelligent razor-blade approach as they now have millions of vehicles on the road collecting data to feed into their software and self-driving systems. Google (Alphabet), down over 40 percent from the peak. We think Waymo remains an under-appreciated hidden asset that's likely to emerge in the coming years.

On the negative side of things. We see a few areas that are likely to face challenging years ahead. **Legacy auto OEMs**. We are expecting all the cyclical tailwinds we've had over the past few years to turn into cyclical headwinds as we progress through 2023. Inventory is likely to be up. Incentives, which are at all-time lows, are starting to rebound. Pricing is starting to come down as supply grows. Volumes are likely to come down as demand slows. And operating leverage will be negative to the downside. On top of that, you have financing costs as an issue with higher rates.



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Many of these legacy players also operate separate lines, internal combustion engine and EV, with limited to no synergies. We expect this inefficiency of the legacy auto OEM model, particularly for those poorly positioned, to become evident as the tide goes out and we enter this growth slowdown. The recent Tesla price cuts highlight the importance of vertical integration and battery technology. The provider with the lowest cost structure is likely to win. And this cut likely accelerates the bankruptcy of several legacy auto OEMs as well as marginal EV players. Ford is just one example of a legacy OEM with no real software talent, a large debt balance, and an inefficient operating structure

**Used and new auto dealers.** There is the same industry backdrop we just described for auto dealers. Cyclical tailwinds are turning into cyclical headwinds as we progress through this year. All of these dealers are significantly over-earning. They have inflated gross profit per unit, both cyclically and secularly. As these cyclical issues become evident, we expect these secular issues, such as auto OEMs shifting to direct sales, to enter the conversation and lead investors to question the terminal value. AutoNation is one example here. And others, like the car rental companies, also have been significantly over-earning due to elevated residual values.

Finally, within this section, **profitless prosperity.** These are the businesses that are selling a dollar for 80 cents, and they aren't going to make it in an era of higher interest rates. By definition, they require access to capital markets. And we expect that they will face a reckoning as cash burn continues, and refinancing at either higher interest rates or significant equity dilution creates a vicious cycle. DoorDash and Uber are two of these business models that simply don't scale without automation. They need automation, and as long as the spigot of free money is closed, these companies are in a difficult position.

### **Portfolio update:**

The portfolio has generally been positioned more defensively than typical. We continue to selectively build position in winners we've identified. We are beginning to get more aggressive on the long side as many of the real companies we've identified as winners are beginning to bottom. And on the short side, many of these cyclical indebted zombie companies are set to face a reckoning in the years ahead as higher interest rates and slowing nominal growth begin to bite.

While our fund launch in 2021 had an amazing vision, it was frankly early. These trends, like electrification and automation were simply nice to have. Fast forward to today, all of these trends are beginning to inflect, and they are need to have.

### **Bold bets:**

We think **99 percent of current auto OEMs will go out of business.** This has already started. Tesla price cuts have accelerated it. ELMS was one of the first of many to go bankrupt, and we expect some potential big legacy auto OEM bankruptcies in the coming two years.

**Semiconductors are the new oil.** Wall Street Journal is even starting to come around to this with a good recent article. We will be heavily invested in the semiconductor space over the coming years. And the recent roughly 40 percent draw-down in the space is setting up to be a unique entry point.

**China will see its population growth start to go negative.** This has already started. We expect a big bounce in Chinese equities in 2023, probably one of the best-performing subsectors. Then, we expect Chinese GDP growth to likely go negative within the coming years. The West will have the biggest Capex boom we've ever seen with trillions of dollars to rebuild supply chains. Notably, energy and transportation related, really starting in the second half of this year and set to go on for multiple years. This is already authorised spend, and it's just set to come in terms of actually being funded and spent later this year.

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## Why Mobility? Why Now?



**\$7-10 Trillion Revolution:** That's right, trillion with a "T." We believe this is going to be the biggest technological revolution of our lifetime... and very few are paying attention.



**It's Happening Now:** EV adoption is inflecting, and autonomous vehicles are already on the road today across the US. Google's Waymo division has over 600 self-driving cars (no safety drivers!) that have collectively driven over 20 million miles (32 million kilometres). In the Phoenix area, consumers can hail one today with a simple click in the app.



**Every Industry Will Be Affected:** We believe there will be massive winners and significant losers – given our structure, we plan to make money on both. On the winner side, think about: semiconductors (digital and electric vehicle content), cloud software & infrastructure, and autonomous technologies. On the loser side, think about the industries that will disappear: car rental companies, internal combustion engine (ICE) components, and Big Oil...



**Multiple Ways to Win:** While the end state is already coming into view, there are multiple building block evolutions that we are actively seeking to capitalize on – namely, Sharing/Connectivity, Electrification, and Autonomy.

## Key Facts

<b>Investment Structure:</b>	Unlisted Unit Trust	<b>Exit fee:</b>	Nil
<b>Minimum investment:</b>	A\$100,000	<b>Buy/Sell Spread:</b>	+0.35% / -0.35%
<b>Management fee:</b>	1.50% p.a.	<b>Management style:</b>	Active - Long/Short
<b>Admin &amp; expense recovery fee:</b>	Up to 0.35%	<b>Target number of holdings:</b>	45-70
<b>Performance fee:</b>	20% of performance in excess of hurdle	<b>Investable universe:</b>	MSCI ('mobility' universe)
<b>Hurdle:</b>	Greater of: RBA Cash Rate + 2.50% OR 4%	<b>Cash level (typical):</b>	0-100% (0-10%)
		<b>Lock up:</b>	12 months

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