



Dear Partners,

The Apis Global Discovery Fund was up 3.7% net in Q3 2024 and is up 11.6% YTD. Over the same periods, the MSCI ACWI SMID-Cap benchmark index was up 9.4% and up 12.5%, respectively.

### PERFORMANCE OVERVIEW (GROSS RETURNS)

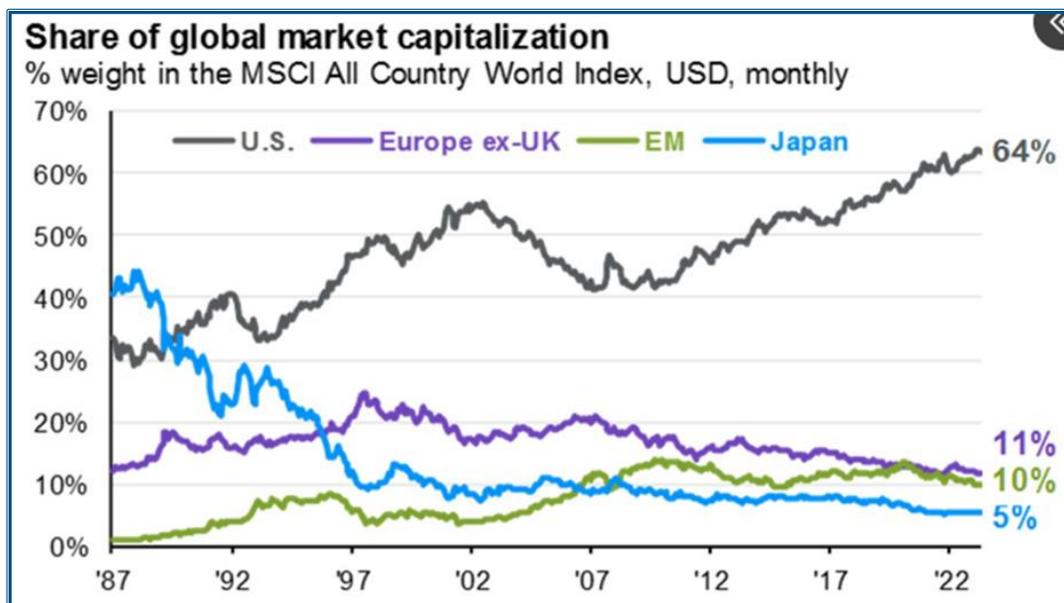
The Global Discovery Fund lagged benchmarks in the third quarter. Overweight positioning in Asia – particularly Korea, Japan, and Taiwan – dampened returns. Major indices in these markets declined by approximately 4% in Japan and Taiwan during the quarter, and by as much as 8% in Korea, while other global markets saw gains, ranging from a modest rise of a few percent in Europe to nearly 9% in the U.S. Russell 2000.

The top performer in the quarter was Talen Energy, which we feature below, along with Hallador Energy. Both companies are cheap and well-positioned to benefit from selling power to AI data centers. The bottom performer was Cheryong Electric, with another Korean power equipment company, Iljin Electric also a significant detractor. We believe the sell-off is technical as they are strong YTD gainers, making them more susceptible to the general downside experienced in the quarter. Nine of the top 10 detractors in the quarter came outside the U.S. While the U.S. proved the place to be in Q3, we remain underweight and provide some context below.

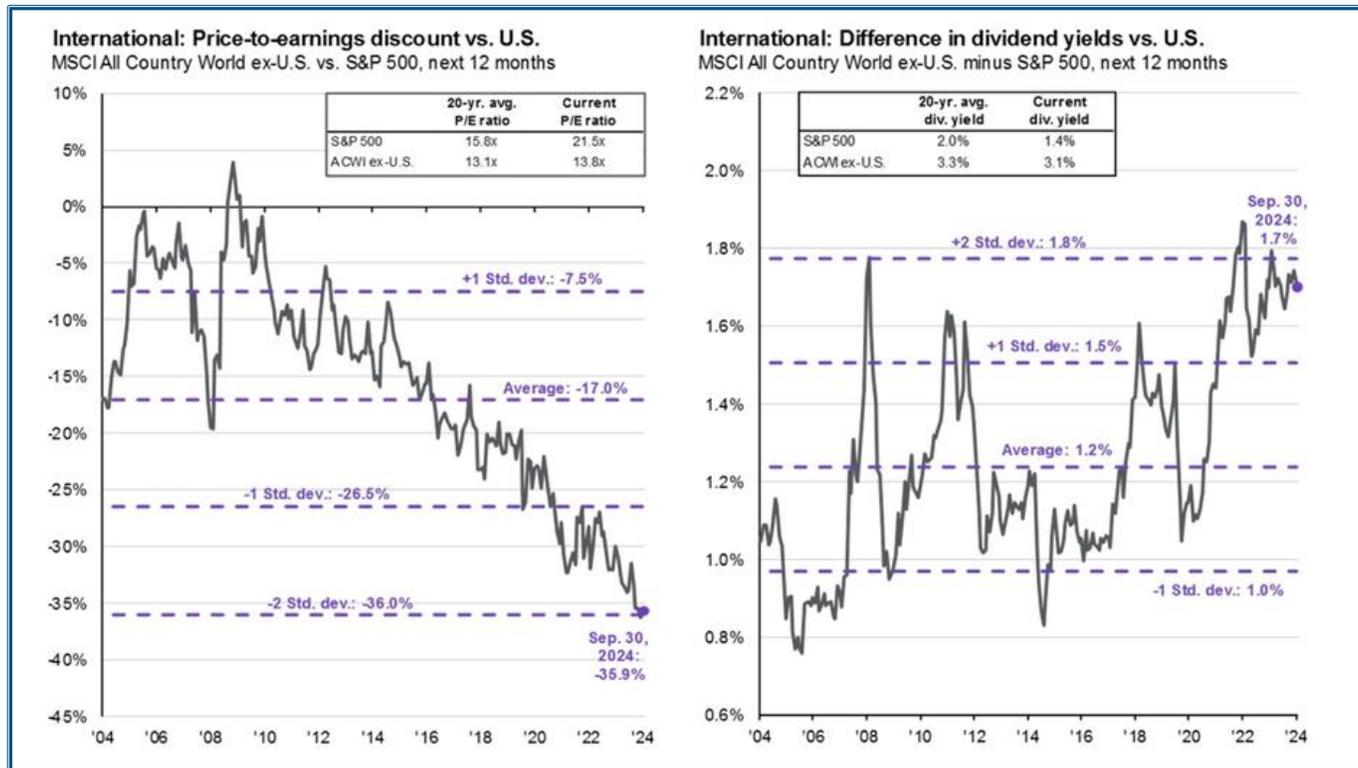
### PORTFOLIO OUTLOOK AND POSITIONING

We believe in the benefits of geographic diversification and are committed to maintaining a global fund with strong representation from all major regions. However, our positioning primarily reflects the appeal of individual investment ideas. We identify what we consider the best opportunities and allow geographic distribution to follow naturally.

As you can see from the chart below, we have been migrating away from the U.S. even as the U.S. has increasingly dominated global benchmarks. One could argue that these so-called 'global' benchmarks are no longer truly global. Despite accounting for only 25% of global GDP, the U.S. now makes up nearly two-thirds of the benchmark. In contrast, Japan – albeit coming out of a bubble – has seen its benchmark weight plummet from over 40% just 35 years ago to around 5% today!



Can we reconcile our bottom-up driven approach ex-U.S. overweight with a top-down perspective? The charts below indicate that, based on valuation and dividend yield, we are currently two standard deviations from the norm. In other words, 95% of the time, valuations and yields do not diverge this significantly, suggesting that a reversion is likely based on historical trends.



We consistently observe this in our stock picks – more attractive valuations combined with superior growth, thanks to our ability to choose individual stocks rather than simply index. This growth has likely offset years of less-than-optimal geographic positioning, enabling us to perform well even when diverging from broader trends. While we can't predict the timing of these changes, if these disparities stabilize or, dare to dream, normalize, we are in an excellent position to benefit.

No commentary on the third quarter would be complete without mentioning the August market crash (at least in Japan) driven by the unwind of the 'carry trade.' While we are not macro investors, we believe the carry trade plays a significant role in this phenomenon; what we do know is that a sudden repositioning occurred. As a result, we observed several stocks plummet by 10-20% in a single day. Equally surprising was how quickly the market rebounded, seemingly leaving the event forgotten. This marked the largest crash in Japan since 1987 and only the third time when the volatility index exceeded 60 (the other two instances being the Lehman Brothers collapse and the COVID-19 panic). In hindsight, it appears that everything should have been bought that day; however, we can't shake the feeling that something remains out of balance. Unlike our politicians, we cannot be entirely "unburdened by what has been," and have taken positioning in Asia down about 6% while bringing the U.S. up 9% to 29% (still well below benchmark weights).

Despite the volatility, our recent trip to Asia – specifically Japan, Taiwan, and Korea – has left us feeling optimistic. While the U.S. and other countries restrict sales to China, companies elsewhere in these Asian markets are capitalizing on this shift by filling the void in trade with China and capturing market share from Chinese exporters that are increasingly sidelined in the developed world.



## THOUGHTS ON CHINA

Chinese markets recently surged on stimulus hopes, but we remain cautious, as this approach does not tackle one of the key underlying drivers of their economic malaise – an estimated oversupply of 60 to 90 million homes. Stimulus in the form of weakened lending standards and down payment requirements, etc., won't do much to support this grossly oversupplied market. What is probably needed is for the government to buy this excess inventory at an inflated price and bulldoze it – that would be a far more direct and bullish stimulus.

The Chinese government has also talked about buying stocks directly, a tool utilized elsewhere to prop up markets. China's Shanghai Index rallied by about 10 trillion RMB, while there are reports of a 500 billion RMB fund for stocks, which is probably more than priced in. The country also continues to face some severe trade blowback from the West, most recently in the electric vehicle market, where China is (again) massively oversupplied. China has a host of issues to address, including geopolitical tensions, supply chains that proved to be vulnerable to tariffs and COVID-19 lockdowns, trade restrictions, demographic headwinds, and a habit of oversupply in industries like property, autos, and renewable energy, among others. Consider that the "target" with this stimulus is to reach 5% GDP growth – a level previously considered anemic. It is possible that China unleashes a massive fiscal stimulus or increases its current programs, but we remain skeptical that any rally endures without something much more substantial.

## INVESTMENT HIGHLIGHTS

### U.S. Power for AI Data Centers

We believe U.S. power prices are likely entering a period of sustained upward pressure driven by a confluence of factors on both the demand and supply sides. Looking at demand, growth is expected to jump to approximately 2.5% annually through 2030, up from a relatively flat trend over the last decade. Several themes are contributing to this, such as on-shoring, EVs, and industrial electrification, but by far, the biggest driver is expected to be demand from data centers, which are estimated to account for nearly half the demand growth. According to the U.S. Department of Energy, data centers could account for 9% of U.S. power demand by 2030, up from 4% in 2023. On the supply side, we are not seeing an equivalent response. In fact, in some areas like the Midcontinent Independent System Operator (MISO) region, we are witnessing quite the opposite, with a declining supply curve just as demand accelerates. Regulations have led to the closure of many existing coal and gas plants, and while their capacity is being replaced, the intermittent nature of solar and wind power is not well-suited to meet the 24/7 energy demands of data centers. Rather than help to mitigate, policies such as the Inflation Reduction Act (IRA) will likely only aggravate the situation with its wind and solar incentives. The hyperscalers building data centers appear to see the same risks as we do. Take Amazon's power purchase agreement (PPA) with Talen Energy in March, for example. The deal gives Amazon access to "behind the meter" power from Talen's Susquehanna nuclear plant for the next ten years at prices 50% above the forward curve. It includes the option to extend for decades longer. And just a few weeks ago, Microsoft made headlines with the announcement of its deal with Constellation Energy to bring part of Three Mile Island, the site of the worst commercial nuclear accident in U.S. history, back online to generate power for its data centers. While this has begun playing out in the U.S., we believe it will likely be a global theme that lends itself to our global perspective as similar events play out in other geographies that attempt to keep up in the "AI race."

### Long: Talen Energy (U.S. – \$9.5 billion market cap)

Talen is an independent power producer (IPP) that serves the Pennsylvania-Jersey-Maryland (PJM) market. It owns 10.7 GW of generation capacity, with the Susquehanna nuclear plant accounting for 2.2 GW, while the remaining assets are various natural gas "peaking" plants that operate at 25-65% utilization. The company went public in 2015 as a combination of Pennsylvania Power & Light's unregulated energy business and the power generation portfolio of a PE shop, Riverstone Holdings. Riverstone took the business private in 2016. Overleveraged following the take-private and poor hedges eventually forced Talen to file for bankruptcy in 2022, and it reemerged as a public company in 2023 on the OTC market



with a new board, management, and cleaned-up balance sheet. In July, shares were uplisted to the Nasdaq and will likely be added to several indexes over the coming months.

The Susquehanna plant is Talen's prize asset. It is the 6th largest nuclear plant in the country, and while it accounts for only 20% of Talen's overall capacity, it is responsible for nearly 50% of Talen's annual power generation. The IRA legislation passed in 2022 made nuclear plants particularly attractive assets by introducing a production tax credit (PTC) mechanism that effectively sets an approximate \$40/MWh floor on power prices generated from nuclear. Compare this to Susquehanna's operating costs of about \$23/MWh, and you get a floor of around \$300mm in operating cash flow to Talen from Susquehanna alone.

Talen is already a beneficiary of the ballooning demand from data centers. As previously mentioned, Talen signed a PPA with Amazon in March to deliver power to its new data center campus, which will continue to be built over the next decade. The pricing implied in the PPA is over \$70/MWh, a 50% premium to current PJM prices. There is no contribution from this to the financials currently, but it should help drive double-digit EBITDA growth for Talen over the next decade. We also don't believe Talen is done signing data center PPAs, and it has about 1.2GW of uncontracted capacity from Susquehanna that could be made available for a similar deal.

Talen's stock doesn't appear cheap on current year multiples, but at the midpoint of its recently announced 2026 targets, it is trading at 8x EV/EBITDA and 12x FCF, and we believe there is upside to these targets. Constellation Energy (CEG), Talen's closest peer by asset mix and growth profile, trades at 22x EV/EBITDA and 30x P/FCF. Given Talen's superior growth runway, it should arguably deserve a premium. On the downside, we believe that the replacement cost of the Susquehanna plant alone supports a floor valuation much higher than the stock price today. Recent estimates suggest that it costs north of \$8,000/KW to construct a new nuclear power plant in the U.S., which, if applied to Susquehanna, would support a value 80% higher than the current market. Even still, this might be too conservative. The last nuclear plant built in the U.S. was the twin 1.25 GW units in Vogtle, Georgia. The project took 14 years to complete, cost \$34bn, and bankrupted Westinghouse Electric. Management recognizes the valuation gap and has been buying back shares as aggressively as it can. Since October 2023, Talen has repurchased 14% of its shares, with another \$1.25bn remaining on its authorization that would account for another 15% of shares at current prices. If Talen completed this authorization tomorrow, it would still be under its leverage target and could repurchase even more shares with the free cash flow it is set to generate.

### **Long: Hallador Energy (U.S. – \$450 million market cap)**

Hallador Energy is a legacy coal mining company in Indiana that is transitioning to a vertically integrated independent power producer (IPP). During the ESG craze a few years ago, Hallador acquired the grid interconnection rights from its customer Hoosier Energy to build a solar plant on the location of Hoosier's soon-to-be-closed coal plant. The idea was that coal was dead, and Hallador would reimagine itself as a more ESG-friendly solar company. However, when the power market tightened in 2022, the grid operator requested the plant remain in operation. Hoosier was forced to sell the plant at a discount to the only logical buyer – Hallador – who owned the grid interconnection rights. The plant is 40 years old and will be fully depreciated over the next 10 years, but management believes it can operate for at least another 15 years. Today, the power generation segment accounts for only about 45% of Hallador's revenue yet nearly all of its profit.

Hallador's power plant sits in the MISO region which, according to the North American Electric Reliability Corporation's 2023 Long-Term Reliability Assessment, is one of the two regions designated as high risk for power shortages in the coming years. MISO has many old coal plants like Hallador's that are slated to be retired, and the replacement capacity is solely coming from intermittent power generation like wind and solar. Even with this backdrop, hyperscalers such as Amazon and Google continue to announce new data center projects in the area, in part drawn by the region's lower power prices compared to neighboring regions like PJM. While generation prices have yet to rise, the capacity market is already responding, as seen by the growth in Hallador's capacity revenue, which is expected to be approximately \$65mm this year vs \$10mm last year and \$1.5mm just a few years ago. Hallador currently has an RFP out to data center operators and management and has said that it is in discussions over a 10-year PPA to contract for the majority of its capacity. It expects an announcement later this year or early next.



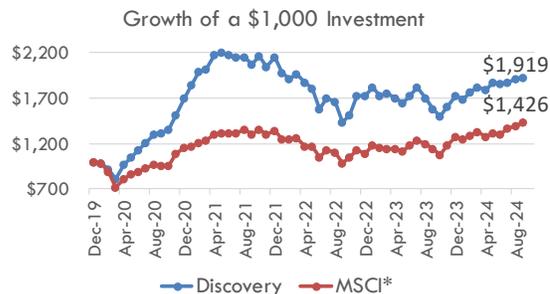
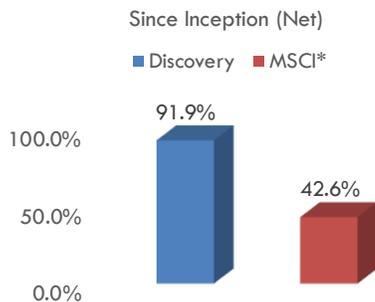
While time will tell what the pricing from the data center PPA will be, simply using MISO forward pricing as a proxy, we believe that Hallador could generate over \$2.50 in FCF per share in 2026. This would price Hallador shares at less than 4x P/FCF, compared to IPP peers that are all trading above 10x. As seen by Talen's Amazon deal, there is a good chance that the data center PPA will likely be priced significantly above forward prices.



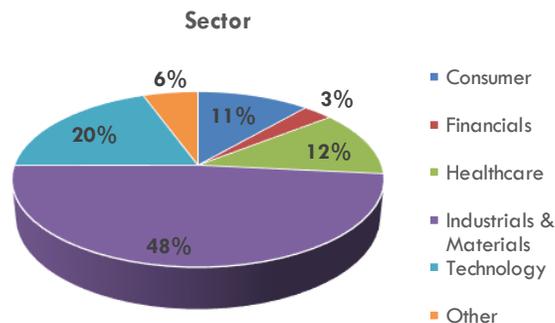
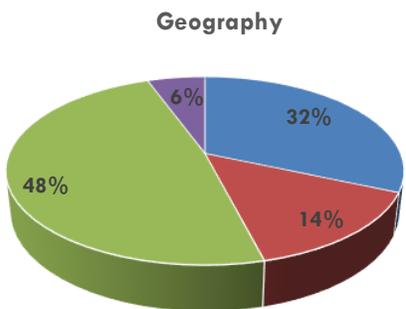
**APIS GLOBAL DISCOVERY FUND, LP**  
Monthly Performance – 2024

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
<b>Discovery Fund</b>	-2.5%	5.1%	3.2%	-1.7%	4.6%	-1.0%	1.3%	1.7%	0.7%				11.6%
<b>MSCI*</b>	-2.1%	3.6%	3.5%	-4.0%	3.2%	-1.1%	4.9%	1.7%	2.5%				12.5%

**PERFORMANCE VS. MSCI ACWI SMID CAP INDEX**  
Since Inception



**FUND EXPOSURES (AS % OF NET ASSETS)**  
As of 09/30/24



**PORTFOLIO CHARACTERISTICS**  
As of 09/30/24

**Top 10 Positions**

Company	Country	Sector	Position
Sharkninja Inc	USA	Consumer	3.8%
Talen Energy Corp	USA	Industrials	3.8%
Poongsan Corp	Korea	Materials	3.3%
Hyundai Rotem Co	Korea	Industrials	3.1%
KINX Inc	Korea	Technology	3.0%
DPC Dash Ltd	China	Consumer	3.0%
Ijjin Electric Co Ltd	Korea	Industrials	3.0%
Osaka Soda Co Ltd	Japan	Healthcare	2.8%
Maire SpA	Italy	Industrials	2.8%
SUSS MicroTec SE	Germany	Technology	2.6%
<b>Total</b>			<b>31.1%</b>

**Portfolio Characteristics**

Average Market Cap	\$1.8B
Median Market Cap	\$791M

**Market Cap Breakdown**

<\$1B	50%
\$1B-\$5B	36%
>\$5B	14%



### Historical performance

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD NET	MSCI*
2024	-2.5%	5.1%	3.2%	-1.7%	4.6%	-1.0%	1.3%	1.7%	0.7%				11.57%	12.47%
2023	5.9%	-5.4%	1.3%	-2.9%	-2.9%	5.0%	5.2%	-6.8%	-6.5%	-5.5%	7.4%	7.0%	-0.01%	16.02%
2022	-7.9%	-3.4%	3.4%	-5.3%	-2.9%	-12.4%	7.4%	-2.8%	-13.1%	5.1%	13.7%	0.2%	-19.63%	-18.72%
2021	8.4%	7.6%	1.3%	7.9%	1.2%	-1.0%	-1.4%	0.5%	-4.0%	4.4%	-5.3%	4.7%	25.74%	16.24%
2020	-2.4%	-5.9%	-11.2%	18.6%	8.9%	7.5%	6.0%	8.7%	0.5%	3.3%	11.9%	12.2%	70.19%	15.67%
Inception													91.87%	42.59%

As always, we encourage your questions and comments, so please do not hesitate to call our team here at Apis or Will Dombrowski at +1.203.409.6301.

Sincerely,

**Daniel Barker**  
Portfolio Manager & Managing Member

**Eric Almeraz**  
Director of Research & Managing Member

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*Performance shown is historical and is not indicative of, nor does it guarantee, future results. Performance among investors may vary, depending upon the date(s) of capital contribution and withdrawals, new issue eligibility, and fee arrangements.*



*Apis Global Discovery Fund, LP (“Global Discovery” or “Discovery Fund”) launched on 1/1/20 (the legal entity was repurposed from our former research portfolio, Hapa Fund, LP). Investment returns are for an unrestricted (new issue eligible) investor net of all fees and expenses including a “1 or 30” fee structure, which is calculated as the greater of a management fee equaling 1% or an annual performance allocation equal to 30% (calculated as 30% of the difference between the Global Discovery Fund’s performance – only when positive – and the MSCI benchmark index as detailed below). Also included is an approximate 0.50% expense cap on certain professional fees.*

*A complete discussion of the fees and expenses associated with a Fund is contained in its Offering Materials.*

*Any returns shown for a particular subset of a portfolio’s investments are gross, meaning they do not include the fund’s fees and expenses. These subset returns are shown for informational purposes only. Please refer to the net return presented as investors do not experience the return of any particular subset of investments but rather the entire portfolio after fees and expenses.*

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**MSCI\* Refers to MSCI ACWI SMID Cap Index:** *The MSCI ACWI SMID Cap Index captures mid- and small-cap representation across 23 Developed Markets (DM) and 24 Emerging Markets (EM) countries. With 7,861 constituents, the index covers approximately 28% of the free float-adjusted market capitalization in each country.*