Platinum International Technology Fund

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Portfolio Manager

Overview

- The Fund generated a return of nearly 7% during the quarter with solid contributions from semiconductor lithography giant, **ASML**, **Netflix** and **Amazon**. Our short positions had a negative effect on performance as some weak companies benefited from the perception that US interest rates would fall, which increased the market's risk appetite. We believe many of the companies we are shorting have structural weaknesses that will be exposed over time.
- GPU maker **Nvidia** delivered exceptional returns in 2023. Upon reviewing this stock, we decided against deploying investor capital behind the theme. We are cautious because we believe current spending in this area is funded by private markets and not by adoption among consumers and businesses. As a result we think investor expectations imply a level of capex spending which may prove to be too high.
- In the current market, stocks with poor business models, substandard execution and a clouded path to future earnings continue to attract investors' interest. We're focused on finding, understanding and investing in quality businesses we can buy at an attractive price.

Performance

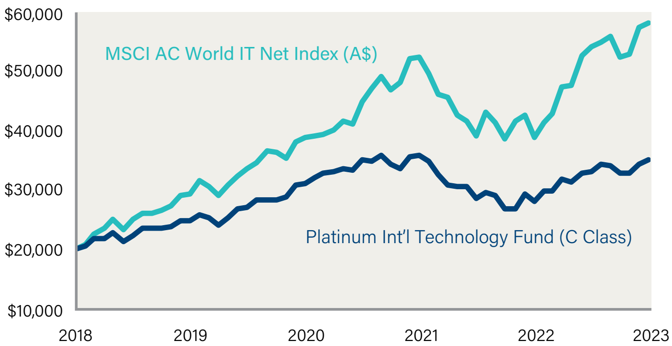
compound p.a.+, to 31 December 2023

	QUARTER	1YR	3YRS	5YRS	SINCE INCEPTION
Platinum Int'l Tech Fund*	7%	25%	4%	12%	10%
MSCI AC World IT Index^	11%	50%	14%	24%	5%

+ Excludes quarterly returns.
* C Class – standard fee option. Inception date: 18 May 2000.
After fees and costs, before tax, and assuming reinvestment of distributions.
^ Index returns are those of the MSCI All Country World IT Net Index in AUD.
Source: Platinum Investment Management Limited, FactSet Research Systems.
Historical performance is not a reliable indicator of future performance.
See note 1, page 5. Numerical figures have been subject to rounding.

Value of $20,000 invested over five years

31 December 2018 to 31 December 2023



After fees and costs, before tax, and assuming reinvestment of distributions.
Historical performance is not a reliable indicator of future performance.
Source: Platinum Investment Management Limited, FactSet Research Systems.
See notes 1 & 2, page 5.

The Fund was up +6.8% during the quarter. The long book performed well, up +9% in AUD terms. **ASML** (+22%), **Netflix** (+29%), **Infineon** (+20%), **Broadcom** (up around 30%) and **Amazon** (+19%) were the major contributors to performance. Our China tech stocks – **Alibaba** and **Tencent** (down 10 – 20%) were detractors.

Disappointingly, the short book detracted ~1.5% from total returns. As a reminder, our short book consists of:

i) structurally challenged businesses

ii) businesses which we believe are meaningfully manipulating earnings

iii) companies which are still priced as if they are benefiting from COVID

iv) 'science projects' and stock promotion schemes trading at multi-billion dollar valuations.

These types of stocks performed strongly in November as investors' risk appetites increased on the perception that US monetary policy was easing. We are holding onto the majority of our short positions and believe these businesses will be worth significantly less in the medium term. Ultimately, lower interest rates do not make up for weak business models, poor unit economics or deceitful management conduct.

Reshaping the portfolio

At the beginning of the quarter, we exited some companies which *looked* cheap but didn't meet our quality and/or growth criteria and used the proceeds to fund existing positions which we believe are undervalued. During the quarter, we also trimmed some positions which performed well and funded new positions in Broadcom, **Visa**, **Qualcomm**, **AMD**, **Intel** and **Adyen**.

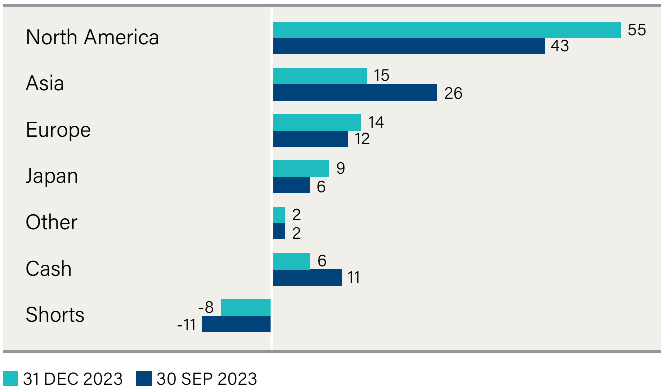
The table below highlights the changes in portfolio positioning versus the September quarter.

Top 10 Holdings Current vs Previous Quarter

31 December 2023		30 September 2023	
Alphabet Inc	4.5%	SK Hynix Inc	4.5%
Taiwan Semiconductor	4.3%	Samsung Electronics Co	4.3%
Adobe Systems Inc	4.3%	Alphabet Inc	4.3%
Netflix Inc	4.1%	Taiwan Semiconductor	4.3%
ASML Holding NV	4.1%	Micron Technology Inc	4.2%
Universal Music Group NV	4.0%	Infineon Technologies AG	4.1%
Amazon.com Inc	4.0%	Microchip Technology Inc	4.0%
Broadcom Inc	3.7%	Meta Platforms Inc	3.7%
Keyence Corp	3.6%	Amazon.com Inc	3.3%
Nintendo Co Ltd	3.4%	Constellation Software Inc	3.0%

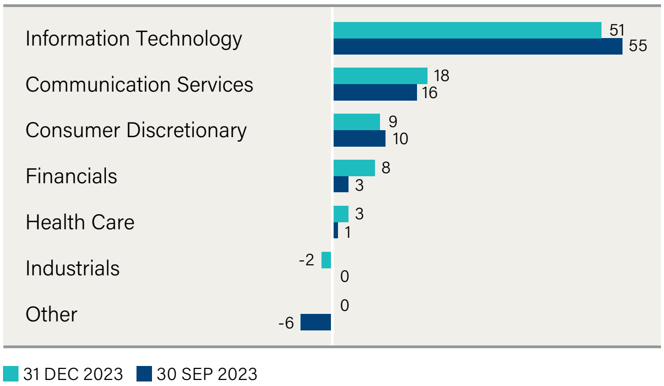
NEW TOP TEN HOLDINGS IN THE DECEMBER QUARTER
Source: Platinum Investment Management Limited. See Note 5, page 5.

Disposition of Assets %



See note 3, page 5. Numerical figures have been subject to rounding.
Source: Platinum Investment Management Limited.

Net Sector Exposures %



See note 4, page 5. Numerical figures have been subject to rounding.
Source: Platinum Investment Management Limited.

Commentary

One of the best performing stocks in tech last year was **Nvidia**, which was up nearly 250%. The company is dominant in the graphics processing unit (GPU) chips market, which are used for PC gaming, crypto mining and AI model training and inferencing. Revenues and earnings declined in CY2022 as PC demand normalised and due to the wash-out in the crypto market. They then soared in 2023 as the rapid growth in ChatGPT's user base and industry excitement about potential generative AI applications triggered a scramble to buy GPUs for AI model training.

The Nvidia quandary[1]

Not owning Nvidia was an error of omission in 2023. We were aware of Nvidia's strong position in AI, however, our mistake was in believing that GPU demand from AI training would ramp up much more gradually and investor enthusiasm for the AI theme would be more muted. Whilst generative AI is really interesting from a technology and scientific perspective, we believe the technology is still immature and use cases, adoption rates and business models all remain, to this day, unclear. Acknowledging the above, we went back and reviewed the investment case in August/September. After the review, we remain very reluctant to deploy investors' capital in this area given two concerns.

Our first concern is the vulnerability of short-term demand. Despite popular belief, generative AI adoption (and demand for GPU capacity) among consumers and enterprises remains minimal. The majority of demand is driven by private capital which has flooded the sector. A portion funded AI application companies who are renting thousands of GPUs from large cloud service providers (the big three being Amazon AWS, Microsoft Azure and Google Cloud) to train new AI models and build AI applications. This in turn is causing a capacity shortage at the cloud service providers, who in turn are scrambling to buy more GPUs.

The remaining portion of capital funded small cloud service providers who are buying up as many GPUs as they can and renting them out as cheaply as they can. Neither of these groups are profitable or have sustainable business models (yet) and it's fair to assume that future GPU demand will be highly dependent on the ability of these companies to raise money and the willingness of investors to fund them.

Our second concern is the risk that investors' expectations for Nvidia over the next three years are too high. Consensus estimates now think Nvidia will generate an additional ~$170bn in revenues from generative AI. Given that GPUs make up ~70% of data centre capex for AI workloads, this implies that the cloud service providers (CSPs) will invest ~$240bn in capex over the next three years on AI workloads, effectively doubling their capex spend vs the last three years. In our view, it's unlikely that the CSPs are willing to make a risky bet of this magnitude in such a short time frame on such an immature technology. We have calculated where we think AI adoption could be in three years' time and think the CSP industry will make ~$45bn in revenues from generative AI. Such level of revenues on ~$240bn of capex suggest capacity utilisation of less than 30% and industry losses of ~$25bn per year.

1 For more on Nvidia see our Funds in Focus webinar (www.platinum.com.au/insights-tools/the-journal/funds-in-focus-platinum-international-technology-fund)

Lessons from history

As we worked our way through the case with Nvidia, we couldn't help but draw parallels between what is happening today and what happened with Cisco during the telco boom and bust in the late 1990s.

For background, the US telco industry tripled fibre capacity from 1996 to 2000, with capacity added by incumbents and new entrants (some with unsustainable business models). At the turn of the century investors funded this extraordinary capex due to rapid growth in internet usage and huge optimism on how big the internet could be in the future.

By 2000 however, telco capex was cut and funding dried up. There was a widespread realisation that a lot of the capacity that was added was underutilised, the macroeconomic environment was weakening and investors had lost confidence in the new entrants' business models.

During the upswing in the capex cycle from 1996 to 2000, Cisco, a maker of networking equipment, saw revenue grew from ~\$4bn to ~\$19bn and EPS from ~15c to ~36c. The stock traded on 25x sales in 2000 as investors extrapolated strong historical growth rates well into the future and justified this by assuming that internet usage growth, telco capex demand and Cisco revenues would continue to grow at those outsized rates.

What investors missed at the time was the fact that ultimately, telco capex was driven by external funding and not by underlying user demand for the internet nor by sustainable business models amongst the new entrants of the day. When the telcos cut back on capex, Cisco's EPS fell only ~30%. Yet the stock was down ~80% as investors were forced to reset their lofty expectations.

The slide below highlight some commonalities between Cisco and Nvidia – and the lessons for investors.

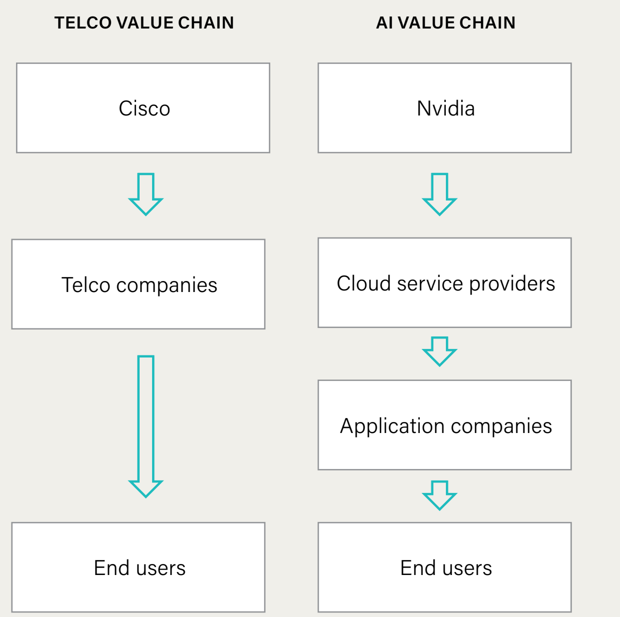
Outlook

Today's market conditions feel a lot like 2021, in that one needs to move down the quality and risk spectrum to find a level of return that is acceptable. Instead of chasing these risky returns, we remain patient and continue to spend time identifying a list of quality businesses we would like to own at the right price.

We also continue to remain patient with the short book despite its weaker performance last quarter. Over the medium term, we believe most of the businesses we are shorting are worth a lot less than their current market caps.

Historic Parallels – Cisco and Nvidia

FACTORS	CISCO IN TELCO BOOM/BUST	NVIDIA IN 2023
Capital intensity of customers	High – laying fiber	High – adding GPU capacity
Capacity expansion by new entrants	Qwest, Level 3, IXC	CoreWeave, Lambda, Applied Digital
New entrants' business models	Undercut incumbents on price, profitability questionable	Undercut incumbents on price, profitability questionable
Bullish demand side forecasts	"Internet use doubles every 3 to 4 months"	"GenAI will double IT spend"
Use cases and monetisation	Internet – unsure	GenAI – unsure
Valuations	P/S 25x at peak	P/S 21x for CY23e



Investor enthusiasm, capacity overbuilds and stock market boom and busts in capital intensive industries is not new...

Source: Platinum Investment Management Limited – PITF Funds in Focus webinar.

Notes

Unless otherwise specified, all references to "Platinum" in this report are references to Platinum Investment Management Limited (ABN 25 063 565 006, AFSL 221935).

Some numerical figures in this publication have been subject to rounding adjustments. References to individual stock or index performance are in local currency terms, unless otherwise specified.

1. Fund returns are calculated by Platinum using the net asset value unit price (i.e. excluding the buy/sell spread) of the stated unit class and represent the combined income and capital returns over the specified period. Fund returns are net of fees and costs, pre-tax, and assume the reinvestment of distributions. The MSCI index returns are in AUD, are inclusive of net official dividends, but do not reflect fees or expenses. MSCI index returns are sourced from FactSet Research Systems. Platinum does not invest by reference to the weightings of the specified MSCI index. As a result, the Fund's holdings may vary considerably to the make-up of the specified MSCI index. MSCI index returns are provided as a reference only. The investment returns shown are historical and no warranty is given for future performance. Historical performance is not a reliable indicator of future performance. Due to the volatility in the Fund's underlying assets and other risk factors associated with investing, investment returns can be negative, particularly in the short term.
2. The investment returns depicted in the graph are cumulative on A$20,000 invested in C Class (standard fee option) of the Fund over the specified period relative to the specified MSCI index in AUD.
3. The geographic disposition of assets (i.e. other than "cash" and "shorts") shows the Fund's exposures to the relevant countries/regions through its long securities positions and long securities/index derivative positions, as a percentage of its portfolio market value. Country classifications for securities reflect Bloomberg's "country of risk" designations. "Shorts" show the Fund's exposure to its short securities positions and short securities/index derivative positions, as a percentage of its portfolio market value. "Cash" in this table includes cash at bank, cash payables and receivables and cash exposures through derivative transactions.
4. The table shows the Fund's net exposures to the relevant sectors through its long and short securities positions and long and short securities/index derivative positions, as a percentage of its portfolio market value. Index positions (whether through ETFs or derivatives) are only included under the relevant sector if they are sector specific, otherwise they are included under "Other".
5. The table shows the Fund's top ten positions as a percentage of its portfolio market value taking into account its long securities positions and long securities derivative positions.

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