

Platinum International Health Care Fund



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Portfolio Manager

Performance

(compound p.a.+, to 31 December 2022)

	QUARTER	1YR	3YRS	5YRS	SINCE INCEPTION
Platinum Int'l HC Fund*	4%	-19%	4%	8%	9%
MSCI AC World HC Index^	7%	1%	10%	13%	10%

+ Excludes quarterly returns.

* C Class – standard fee option. Inception date: 10 November 2003.

After fees and costs, before tax, and assuming reinvestment of distributions.

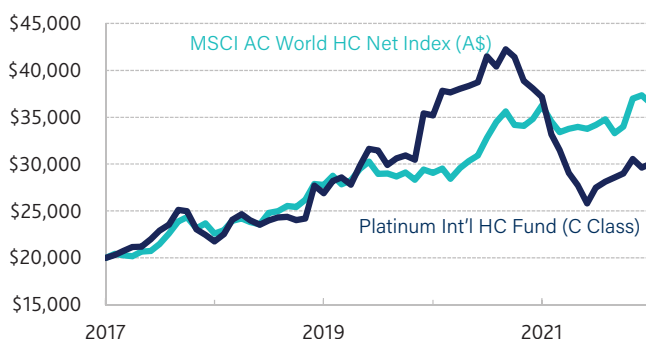
^ Index returns are those of the MSCI All Country World Health Care Net Index in AUD. Source: Platinum Investment Management Limited, FactSet Research Systems.

Historical performance is not a reliable indicator of future performance.

See note 1, page 4. Numerical figures have been subject to rounding.

Value of \$20,000 Invested Over Five Years

31 December 2017 to 31 December 2022



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 4.

The Fund (C Class) returned 3.6% for the quarter.¹

The sentiment towards biotechs has changed ever so slightly in recent months: successful progress is rewarded, while failure results in sell-offs. Previously, positive news saw very muted and even declines in share prices. Many investors continue to hide out in managed care and pharmaceutical stocks, with Eli Lilly being the consensus-favourite stock, despite its high valuation and increasing competition in the obesity treatment space. Within healthcare, biotech and emerging life science tool companies remain the most interesting sector, given the outstanding innovation potential and valuations.

Contrary to public opinion, the funding environment for these companies is healthy, and equity financings are being completed quickly, particularly when clinical data is successful. **Prometheus Biosciences** (+86% over the quarter), a holding in the Fund since its initial public offering (IPO) in March 2021, was able to raise US\$500 million following solid phase 2 data for its anti-TL1A antibody for inflammatory bowel diseases (IBD).

Licensing deals continue unabated, with several of our holdings receiving non-dilutive cash from partners along with a share price uplift. Jazz Pharmaceuticals took out its option to develop **Zymeworks'** zanidatamab (Her2 antibody for the treatment of metastatic breast cancer), paying US\$325 million to Zymeworks (a holding in the Fund, +28%). GSK entered a significant collaboration with Fund holding **Wave Life Sciences** (+94%) to develop oligonucleotides to treat rare diseases. Wave will receive US\$170 million (US\$120 million in cash and US\$50 million in equity). **Sanofi** expanded its partnership with French natural killer (NK) cell biotech **Innate Pharma**, giving them €25 million. Both companies are held in the Fund and rose 15% and 56%, respectively, over the quarter.

¹ References to returns and performance contributions (excluding individual stock returns) in this Platinum International Health Care Fund report are in AUD terms, unless otherwise specified. Individual stock returns are quoted in local currency terms and sourced from FactSet Research Systems, unless otherwise specified.

There is a lot of money sitting on the sidelines. Sanofi and Johnson & Johnson (JNJ) both took a closer look at Horizon Therapeutics, with Amgen acquiring the company in the end for almost US\$28 billion, while Sanofi and JNJ stayed disciplined and decided against a purchase. **Takeda Pharmaceutical** (+9%) paid US\$4 billion for Nimbus' Tyk-2 inhibitor (for inflammatory diseases) during the quarter - a pretty steep cash payment. It was obviously a very competitive bidding process. In drug development, the key is to ensure there are no side effects, which is what Nimbus has been focusing on. Many investors were hoping for Takeda to do "a deal", and this one has been well-received.

Inflammatory diseases are a very broad and important disease area. **Immunovant**, another of our holdings in this space, had very strong performance over the quarter (+218%), as investors started to realise the potential of its anti-FcRn assets for the treatment of auto-immune diseases.² We first invested in Immunovant when it was trading at valuations that were close to its cash balance. **Roivant Sciences**, the parent company of Immunovant and a holding in the Fund, also performed well (+148%), as one of its other "vant" subsidiaries, Dermavant, launched a new topical psoriasis cream. Also, during the quarter, Sumitomo Pharma raised the bid for **Myovant Sciences**, a company it has had a significant interest in since 2019. We have trimmed our position in Immunovant given its performance, and we exited Myovant (+49% over the quarter to exit point).

Vaccine biotech **Icosavax** (+151%) announced that its virus-like particle (VLP) vaccine against RSV exhibits solid durability in a phase 1/1b trial. We see great potential for Icosavax's VLP technology to develop combination vaccines in the future. Recently, Icosavax shares traded below the company's cash balance, and we have been adding to our position.

During the quarter, we also saw some disappointing returns with a couple of our biotechs, **Recursion** (-28%) and **Exscientia** (-35%), two companies that are using computer sciences to change drug discovery. Both companies continue to see their valuations decline, with Exscientia trading below its cash balance. Both companies are making progress, but the market is not currently assigning any value to their platforms. We believe this will change once clinical data becomes available.

² Neonatal Fc Receptor (FcRn) is part of the humoral immunity system that recycles IgG antibodies. IgG is part of the anti-inflammatory system; however, in several auto-immune diseases, IgG antibodies start acting against self-antigens. Using FcRn inhibitors reduces the number of IgGs, and hence these inhibitors are a new class of therapies for auto-immune diseases.

Disposition of Assets

REGION	31 DEC 2022	30 SEP 2022	31 DEC 2021
North America	44%	40%	44%
Europe	26%	25%	22%
Australia	14%	12%	12%
Japan	4%	4%	4%
Asia	4%	3%	8%
Other	1%	1%	1%
Cash	7%	15%	10%
Shorts	-5%	-5%	-4%

See note 3, page 4. Numerical figures have been subject to rounding.
Source: Platinum Investment Management Limited.

Net Sector Exposures

SECTOR	31 DEC 2022	30 SEP 2022	31 DEC 2021
Biotechnology	53%	50%	56%
Pharmaceuticals	27%	23%	23%
Life Sciences Tools & Services	7%	6%	7%
Other	1%	1%	0%
TOTAL NET EXPOSURE	88%	80%	86%

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

Top 10 Holdings

COMPANY	COUNTRY	INDUSTRY	WEIGHT
SpeedX Pty Ltd	Australia	Biotechnology	7.3%
Takeda Pharmaceutical	Japan	Pharmaceuticals	4.2%
Telix Pharmaceuticals Ltd	Australia	Biotechnology	3.6%
Sanofi SA	France	Pharmaceuticals	3.5%
Prometheus Biosciences	US	Pharmaceuticals	3.0%
Bayer AG	Germany	Pharmaceuticals	3.0%
Gilead Sciences Inc	US	Biotechnology	3.0%
Exscientia Plc	UK	Biotechnology	2.6%
Quanterix Corp	US	Life Science Tools	2.6%
Immunovant Inc	US	Biotechnology	2.4%

As at 31 December 2022. See note 5, page 4.
Source: Platinum Investment Management Limited.

For further details of the Fund's invested positions, including country and industry breakdowns and currency exposures, updated monthly, please visit <https://www.platinum.com.au/our-products/pihcf>.

We added **BioNTech** and **Moderna** back to the portfolio during the quarter as we are seeing progress in cancer vaccines as well as a very disciplined approach by both companies to their cash piles. Our investment case when we first invested in both companies in 2018 and 2019 was very much focused on cancer vaccines.

Commentary

During the quarter, Prometheus Biosciences announced solid phase 2 data for its anti-TL1A antibody³ in ulcerative colitis (UC) and Crohn's disease (CD) patients. In addition, Prometheus also showed that its proprietary genetic marker algorithm increases the likelihood of responders, something payers will see as an advantage. These results essentially show that Prometheus has a very competitive drug. The company subsequently raised US\$500 million, double the amount it initially set out to raise. It was a highlight for us this quarter.

As mentioned above, Prometheus has been a holding in the Fund since its IPO in March 2021. With a market capitalisation of over US\$5 billion today, the investment proposition is different from what it was in March 2021, but so is the maturity of clinical data. We have been interested in gastric diseases for some time, and through our current investments in Takeda and Galapagos and previous investments in JNJ and Morphosys, we have become well aware of the limitations of current IBD therapies. Current therapies hit a certain level of response and remission rates but are far from curative. We also know that pharma and large biotechs are interested in this space, paying significant money for differentiated assets (such as the recent Takeda/Nimbus deal). Different mechanisms are required, and it would be ideal to have a test that could predict who is likely to respond. Prometheus meets that profile.

The company traces its origins back two decades ago, when one of its founders at the Cedars-Sinai Medical Center started a biobank collecting patient samples from IBD patients. Over the years, this biobank has matured and is now at the core of Prometheus' R&D engine. This means Prometheus is not just a one-asset company; there is more beyond its anti-TL1A antibody.

TL1A was identified through the database, but it is clinically less validated, and at the time of the IPO, only Pfizer and Teva were pursuing it. Prometheus' antibody exhibits features that could make it superior to the Pfizer and Teva drug; recently, Pfizer and Roivant formed a new "vant" around Pfizer's TL1A antibody. This is an interesting move by Pfizer and something we are watching carefully.

The team in charge of Prometheus continues to tick many boxes, with the right combination of science, clinical development and commercial acumen. CEO Mark McKenna is not your typical scientific executive; McKenna has strong experience managing commercial companies, particularly in the gastric field, having turned around Salix Pharma (a division of Bausch Health). His commercial and operational focus makes this company different from many other biotechs. The board, until his passing, was led by Tachi Yamada, who has been a visionary, particularly at Takeda when he ran R&D and saw the potential in Entyvio, the leading UC and CD treatment today. Prometheus now has to repeat the data in larger clinical trials. We have trimmed our position slightly following strong share price performance, but continue to stay the course, particularly given the company has started to expand its pipeline.

Outlook

As is the custom every year, in early January, healthcare companies and investors gather in San Francisco to kick off the new year. This year, 2023 guidance will be watched carefully, and business development teams will be busy. The coming year is very important for healthcare, given that we could see the approval of further gene therapy products to treat haemophilia A and Duchenne muscular dystrophy, as well as the launch of beta-amyloid antibody lecanemab, an antibody medication that slows the cognitive decline in Alzheimer's disease. It will be crunch time for many smaller companies. Expectations are for a more volatile first half of the year, while the latter part of the year should see further consolidation of this industry.

³ Tumor necrosis factor-like cytokine 1A is a protein that sits in the membrane of a variety of cells.

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.

Disclaimers

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