Selector High Conviction Equity Fund Quarterly Newsletter No.84
June 2024

In this quarterly, we discuss the qualities that go into the stock selection process in our articles “Founding to flourishing”, “Red flag: Debt”, “The art of letting them run” and “A company’s soul lies in its culture”.

We follow this with a collection of portfolio company commentaries flowing from the latest reporting season and explore the cumulative actions of companies that have witnessed a shift in the competitive landscape in our piece “Widening the Gap”.

We round out the quarterly with a review of Nanosonics upcoming product CORIS, delve into the popularity of GLP-1 medications and finish with macroeconomic insights following our meeting with a global strategist based in New York.

Photo. *Recent visit to Washington, D.C. | Who controls the Senate and House on Capitol Hill is as important as who enters the White House. Source Selector Funds Management Limited*

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Selector is a Sydney based fund manager. Our team combines deep experience in financial markets with diversity of background and thought. We believe in long-term wealth creation and building lasting relationships with our investors.

We focus on stock selection, the funds are high conviction, concentrated and index unaware. As a result, the portfolios have low turnover and produce tax effective returns. Our ongoing focus on culture and financial sustainability lends itself to strong ESG outcomes.

Selector has a 20-year track record of outperformance and we continue to seek businesses with leadership qualities, run by competent management teams, underpinned by strong balance sheets and with a focus on capital management.

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In Brief – June Quarter

Dear investor,

The financial year 2024 has gone in a blink. It has been four years since COVID began, two years from the onset of the fastest rise in interest rates and now one year on from a peak in inflation.

The new year will usher in further challenges no doubt. Looming large are government elections, the U.S. being the most prominent. As the Wall Street Journal reported in June, this can potentially deliver two opposing economic outcomes.

"*The 21% U.S. corporate tax rate is the biggest single variable in the sprawling 2025 tax debate, and the two parties are trying to turn that dial in opposite directions with major consequences for companies' profits and federal revenue. The rate could climb as high as 28% if Democrats sweep November's elections and move as low as 15% if Republicans gain full power. President Biden's plan for a 28% rate would reverse half of Republicans' 2017 rate cut, pushing the U.S. corporate rate back near the highest among major economies. A 15% rate would match the lowest level since 1935, boosting profits and rewarding shareholders. Each percentage point is worth more than US$130 billion over a decade in tax revenue, creating a US$1 trillion plus gap between the poles of the parties' position and giving the largest U.S companies an outsize interest in the election's outcome.*"

More generally, the economic environment already feels tougher; interest rates remain at near peak levels and inflation is driving the cost base of many businesses.

Unsurprisingly, those operating without a competitive edge are finding conditions difficult. Industries you would expect to be feeling the pressure are, including construction, restaurants and general retailers. Consumers are also feeling the pain, despite the latest handouts from the Federal Budget, which are unlikely to soothe the nerves.

The local unemployment rate, having hit a record low of 3.5% in 2022, lifted to 4% in May, providing a note of caution. This is further reflected in the Australian March quarter GDP numbers, which eked out a 0.1% lift, equal to annual growth of 1.1%. Outside the pandemic, this was the slowest rate of annual economic growth since the early 1990s.

Business leaders are responding. Our leading telecommunications provider, Telstra, is one example, as it announced plans to cut 2,800 jobs, or about 9% of its workforce, citing increasing competition. Amid a tough period, this is unlikely to be the last announcement of its type.

But that's just one part of the story.

Not all businesses are created equal and while some are failing, others are thriving. As we explore in our article, "Widening the gap", those that have built a differentiated offering and hold an innate long-term focus on reinvestment have witnessed a shift in the competitive landscape.

As the pace of competition and the introduction of new technologies force out more players, the opportunity set for those that remain grows. According to Jim Collins, author of *Great by Choice*, when excellence is married with innovation, the value of your creativity is multiplied. The exceptional companies combine discipline and creativity alongside paranoia.

The current era is likely to reward these businesses with the discipline to stay the course, the creativity to question the status quo and the paranoia to stay grounded. We like to think that we own many of these companies and undoubtedly there are a few that we don't.

Six of our businesses reported to the market during the last quarter, including ResMed, James Hardie Industries, TechnologyOne, Fisher & Paykel Healthcare, Aristocrat Leisure and OFX. Apart from online international money transfer operator OFX, the remainder are all market leaders in their respective fields. They all have a clear pathway, a commitment to reinvestment and the financial capacity to succeed. But that alone is not enough. Setbacks are part of the course, as is the grit to get things done.

As managers, we have no greater insight into how macroeconomic events unfold. At the portfolio level, if there is a skill it lies in the selection process of what gets in. So, what do we seek? Identifying proven management teams, many of which are founder-led, is a preferred choice. Additionally, we admire businesses that push to invest more and are willing to concede short-term ground for longer-term rewards. A balance sheet devoid of unnecessary debt, carrying prudent levels of cash is also highly attractive. Equally important is a capital management program that enables the benefits of compounding to take hold.

Our articles this quarter – “Founding to flourishing”, “Red flag: Debt”, “The art of letting them run” and “A company’s soul lies in its culture” – speak to all these individual qualities.

In fact, the message is consistent. Success is rarely measured in financial year intervals, although progress is. Great leaders and companies are consistently building. The combined impacts of developing people and products, expanding globally, building business scale and technology reinvestment all lead to compounding results.

In the end, it is the cumulative effect rather than a single starting point that drives success. Performance should be considered in a similar vein.

We round out the quarterly with a review of Nanosonics upcoming product CORIS, delve into the popularity of GLP-1 medications and finish with macroeconomic insights following our meeting with a global strategist based in New York.

For the June 2024 quarter, the Fund delivered a gross negative return of **0.49%** compared to the S&P ASX All Ordinaries Accumulation Index, which recorded a loss of **1.16%**.

For the financial year, the Fund has returned **20.53%** compared to the Index which recorded a gain of **12.51%**.

We trust you find the quarterly informative.

Regards,

Selector Investment Team

Thinking about debt

“There are old investors, and there are bold investors, but there aren’t many old bold investors.”

Thinking about leverage

“Never forget the six-foot-tall person who drowned crossing the stream that was five feet deep on average.”

Source: May 2024 Memo: Oaktree Capital Management

Portfolio Overview

Table 1: Performance as at 30 June 2024*

	3 Month	6 Month	1 Year	3 Year	5 Year	10 Year	15 Year	Since Inception
Fund (net of fees)	(0.85)	9.45	18.78	2.69	6.64	11.90	12.66	10.32
Fund (gross of fees)	(0.49)	10.25	20.53	4.29	8.49	13.86	14.69	12.35
All Ords. Acc. Index	(1.16)	4.22	12.51	6.12	7.63	8.32	9.20	8.25
Difference (gross of fees)	0.67	6.03	8.02	(1.83)	0.86	5.54	5.49	4.10

Inception Date: 16/04/2020

**Performance figures are historical percentages and returns are annualised unless otherwise specified. Past performance should not be taken as an indicator of future performance.*

Graph 1: Gross value of $100,000 invested since inception

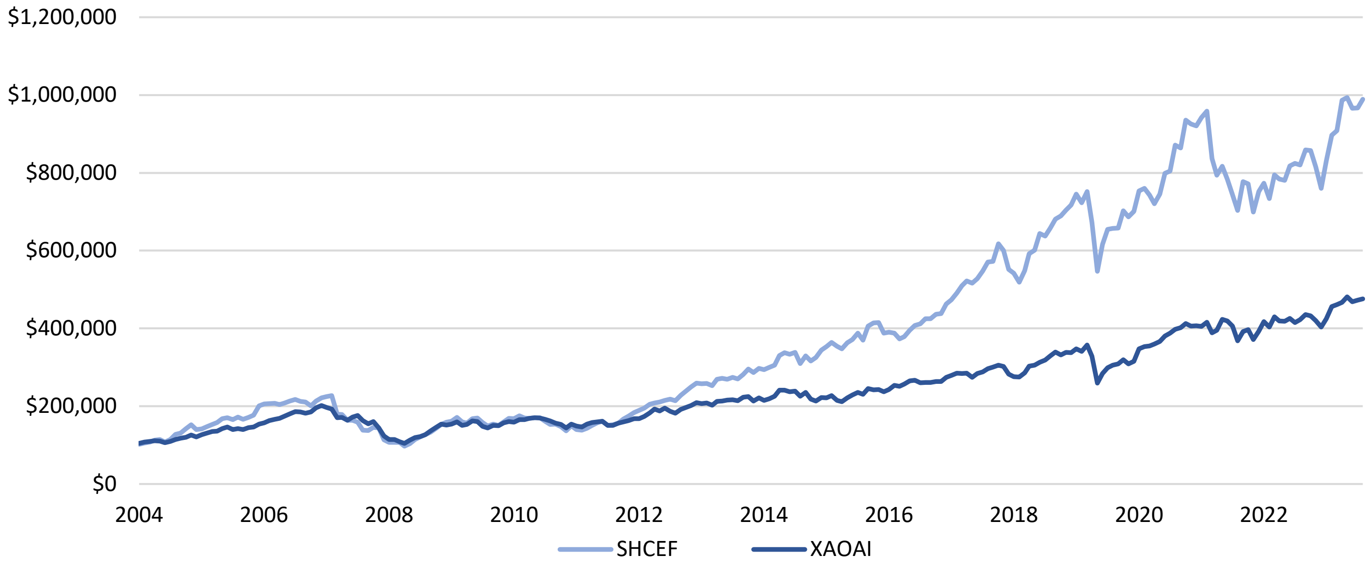


Table 2: Portfolio's Top 10 Holdings

Top 10 June 2024	%	Top 10 March 2024	%
CAR Group	7.93	CAR Group	7.84
TechnologyOne	7.38	Cochlear	6.64
Cochlear	6.81	James Hardie Industries	6.50
Aristocrat Leisure	5.46	TechnologyOne	6.46
Reece	5.21	Reece	5.58
James Hardie Industries	5.20	ResMed	4.69
ResMed	4.97	Aristocrat Leisure	4.53
CSL	4.76	CSL	4.45
WiseTech Global	4.69	WiseTech Global	4.21
REA Group	3.23	SEEK	3.23
Total	**55.63**	**Total**	**54.12**

Table 3: Unit prices as at 30 June 2024**

Unit Prices	Entry Price	Mid Price	Exit Price	Mid Price (Cum Distribution)
	3.3443	3.3360	3.3277	3.6735

*** FY24 distribution total of $0.3375 per unit*

Selector employs a high conviction, index unaware, stock selection investment strategy. The Fund's top 10 positions usually represent a high percentage of its equity exposure. Current and past portfolio composition has historically been very unlike that of your average "*run-of-the-mill index hugging*" fund manager. Our goal remains focused on truly differentiated broad-cap businesses rather than the closet index hugging portfolios offered by most large fund managers.

Table 4: ASX sector performance – June 2024 quarter

S&P ASX Industry Sectors	Quarter Performance (%)
Utilities	12.08
Information Technology	2.83
Financials	2.66
Healthcare	1.88
Consumer Staples	0.16
Consumer Discretionary	(2.91)
Telecommunications	(4.93)
Industrials	(5.15)
Materials	(5.93)
A-REITS	(6.84)
Energy	(6.89)

Table 5: Fund's industry weightings

Industry group	June 2024 (%)	March 2024 (%)
Health Care Equipment & Services	22.82	18.78
Software & Services	19.65	20.78
Media & Entertainment	13.98	13.98
Consumer Services	12.96	12.62
Capital Goods	7.23	8.01
Materials	5.20	6.50
Pharmaceuticals, Biotech & Life Sciences	4.85	4.58
Financial Services	2.83	1.98
Commercial & Professional Services	2.69	2.91
Automobiles & Components	2.43	2.53
Insurance	2.01	2.03
Consumer Durables & Apparel	1.87	1.79
Cash & Other	1.48	3.52

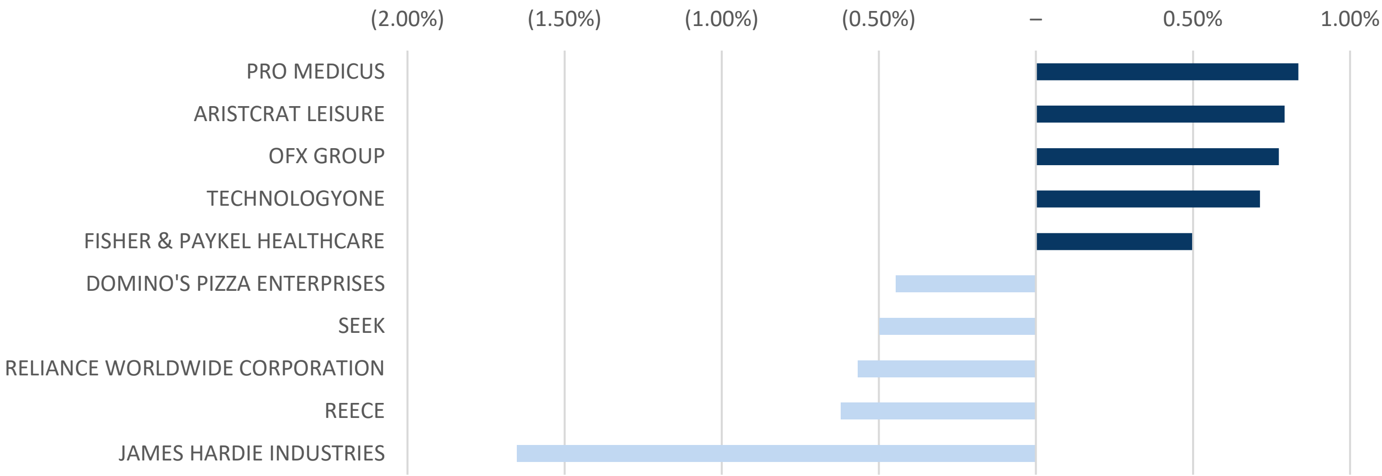
Table 6: Portfolio turnover as at 30 June 2024

Period	Turnover %
1 Year	8.27
2 Years	6.65
3 Years	7.79
5 Years	7.64
10 Years	7.02
15 Years	6.76
Since inception	6.20

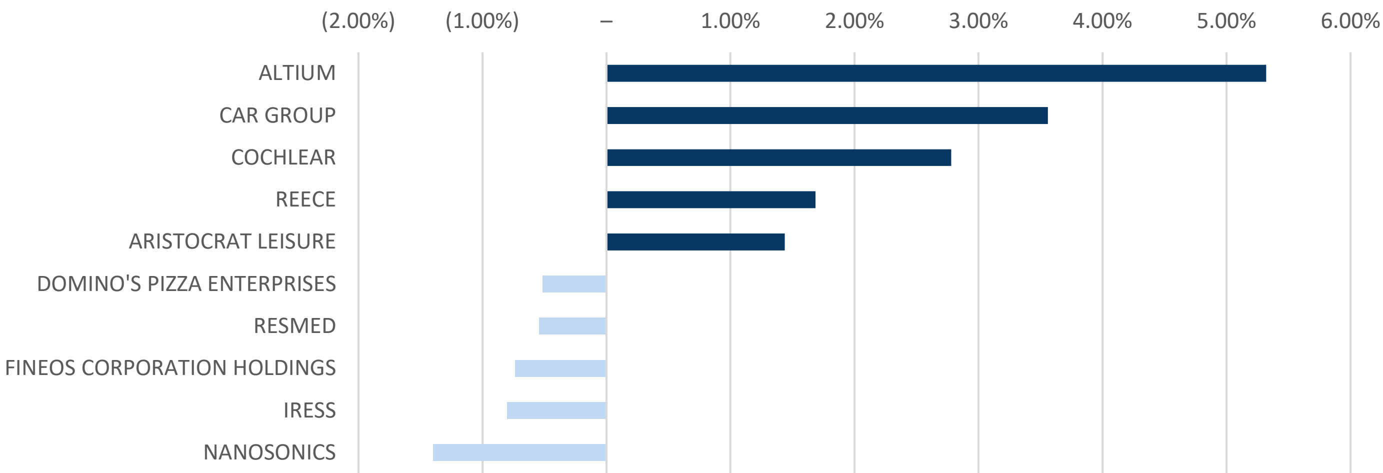
- Turnover shown as annualised percentages
- Turnover = Lesser of purchases or sales divided by average funds under management for the period
- Turnover calculation excludes cash flows greater than 1% of FUM over any given period

Portfolio Contributors

Graph 2: Contributors and Detractors – June 2024 quarter



Graph 3: Contributors and Detractors – June 2024 financial year



Environmental, Social and Corporate Governance (ESG)

- ## ESG risk of the portfolio

Table 7: SFML ESG Scores

Company Name	ESG Roadmap	ESG Score
ARISTOCRAT LEISURE	2.0	8
ARB CORPORATION	2.0	6
BREVILLE GROUP	2.0	8
CAR GROUP	2.0	8
COCHLEAR	2.0	7
COMPUTERSHARE	2.0	8
CSL	2.0	9
DOMINO'S PIZZA ENTERPRISES	2.0	7
FINEOS CORPORATION HOLDINGS	2.0	8
FLIGHT CENTRE TRAVEL GROUP	2.0	8
FISHER & PAYKEL HEALTHCARE CORPORATION	2.0	9
INFOMEDIA	2.0	3
IRESS	2.0	8
JAMES HARDIE INDUSTRIES	2.0	8
JUMBO INTERACTIVE	2.0	7
MEDICAL DEVELOPMENTS INTERNATIONAL	2.0	6
NANOSONICS	2.0	9
NIB HOLDINGS	2.0	9
OFX GROUP	2.0	7
PRO MEDICUS	2.0	6
POLYNOVO	2.0	7
REA GROUP	2.0	9
REECE	2.0	9
RESMED	2.0	8
RELIANCE WORLDWIDE CORPORATION	2.0	9
SEEK	2.0	9
TECHNOLOGYONE	2.0	7
WISETECH GLOBAL	2.0	9

ESG 2.0 Roadmap

Consideration			
Social	Human Capital Management	Community (including MS*)	Best Interests
Governance	Board effectiveness	Shareholder interests	Risk, Litigation & Cyber
Environment	Climate Targets	Renewable targets	Progress against target

Roadmap scorecard
9 filters applied to each portfolio business

*Modern Slavery (MS)

The ESG 1.0 Roadmap, developed in-house in 2019, defines ESG issues that may impact companies and applies a score of 1 or 0 for each of the 12 areas under consideration. The ESG 2.0 Roadmap iteration was created in 2021, with changes integrated into our portfolio models thereafter. The ESG 2.0 Roadmap consists of 9 areas under consideration.

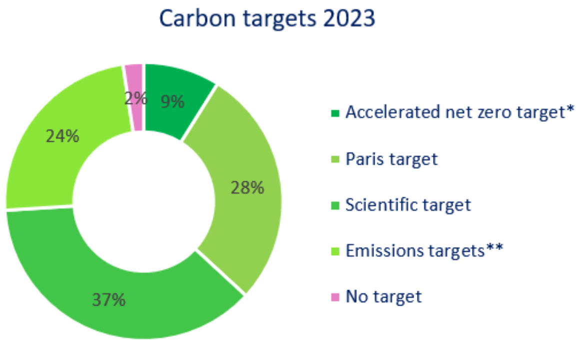
The following is a breakdown of each consideration:

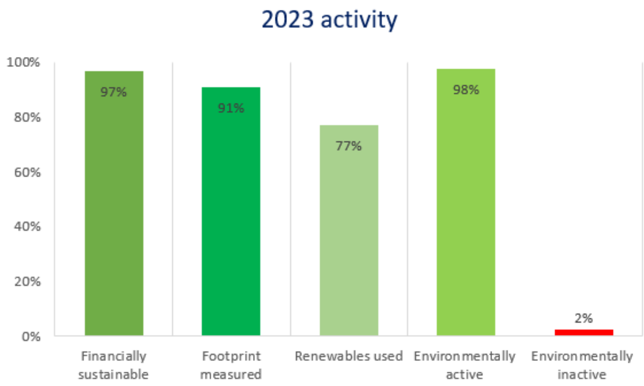
- Human Capital Management – "Is there a history of human rights violations, workplace and IR disputes, discrimination and harassment claims?" Rating of the company's employee engagement, turnover and productivity. Compare the company's work, health, and safety (WHS) standards against peers, including their recording and track record of incidents.
- Community – Rating of the company's community engagement and social licence to operate. Consider whether the company has a framework on social issues across its supply chain, including labour standards, child labour, health & safety, discrimination, and harassment.
- Best Interests – "Is the company behaving in a manner that is in the best interests of stakeholders."
- Board effectiveness – Assessment of the board including industry experience, independence, age, diversity, tenure, equity ownership and capacity.
- Shareholder interests – Assessment of the remuneration structure, shareholder communication, corporate disclosure, and reliability of financial statements. Test the factors against the company's corporate strategy and whether they are in line with shareholder interests.
- Risk, Litigation & Cyber – Rating of the company's internal risk and control framework.
- Climate targets – Assessment of the company's plans relating to carbon neutrality, Paris commitments, scientific targets, or emission targets. "0" rating for no effort.
- Renewable targets – Assessment of the company's documented use of renewables mix or implemented targets for renewable energy.
- Progress against target – Measuring progress made against announced targets. "0" rating for no effort.

The ESG Roadmap is reviewed quarterly with data updated annually by reporting companies. Further detail on our ESG Roadmap can be found in the SFML ESG & Voting Policy, available at https://selectorfund.com.au/esg

▪ Carbon Risk Analysis

Figure 1: Portfolio Reporting 2023





What we are seeking

- Paris targets
- Science based targets
- Emissions targets
- Renewable energy targets

What we are monitoring

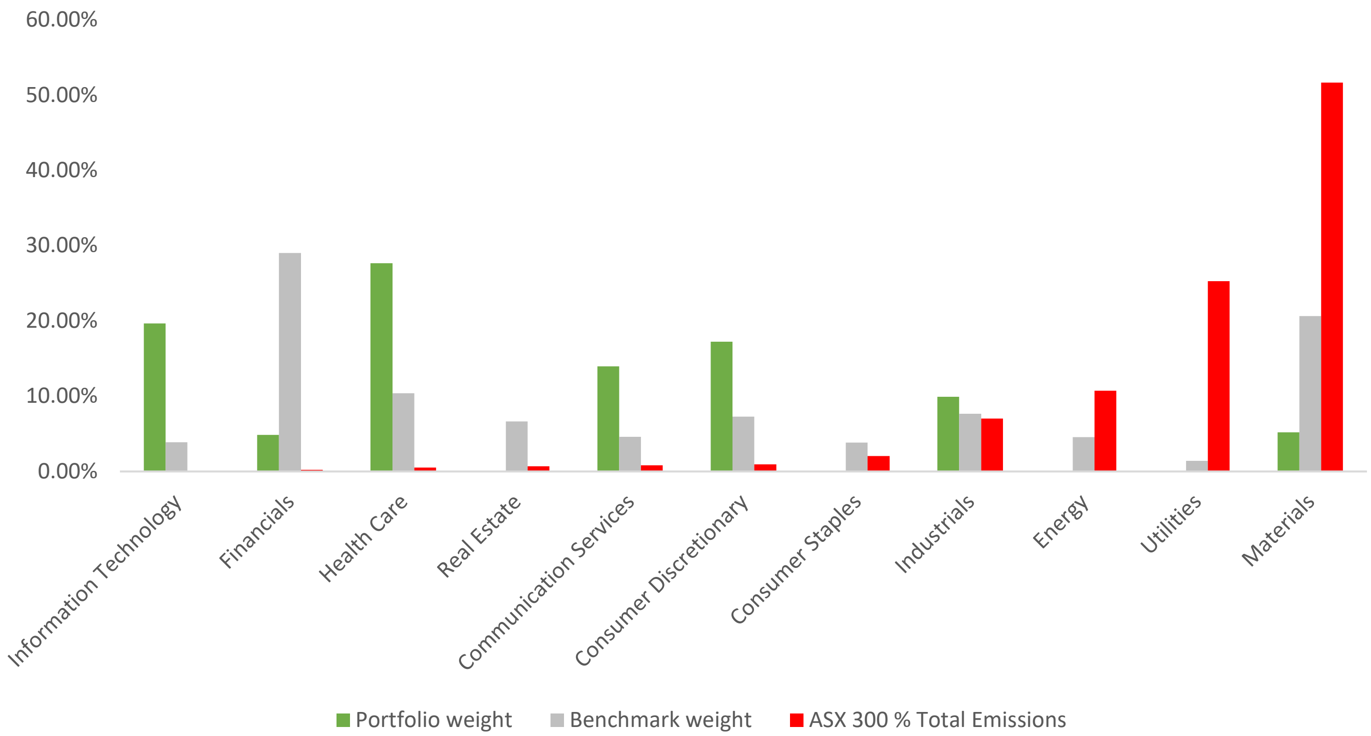
- Financial sustainability
- No efforts
- No accountability

**Net zero across all scopes by 2030*

**Has at least measured emissions or energy use or set a target*

Source: SFML Research

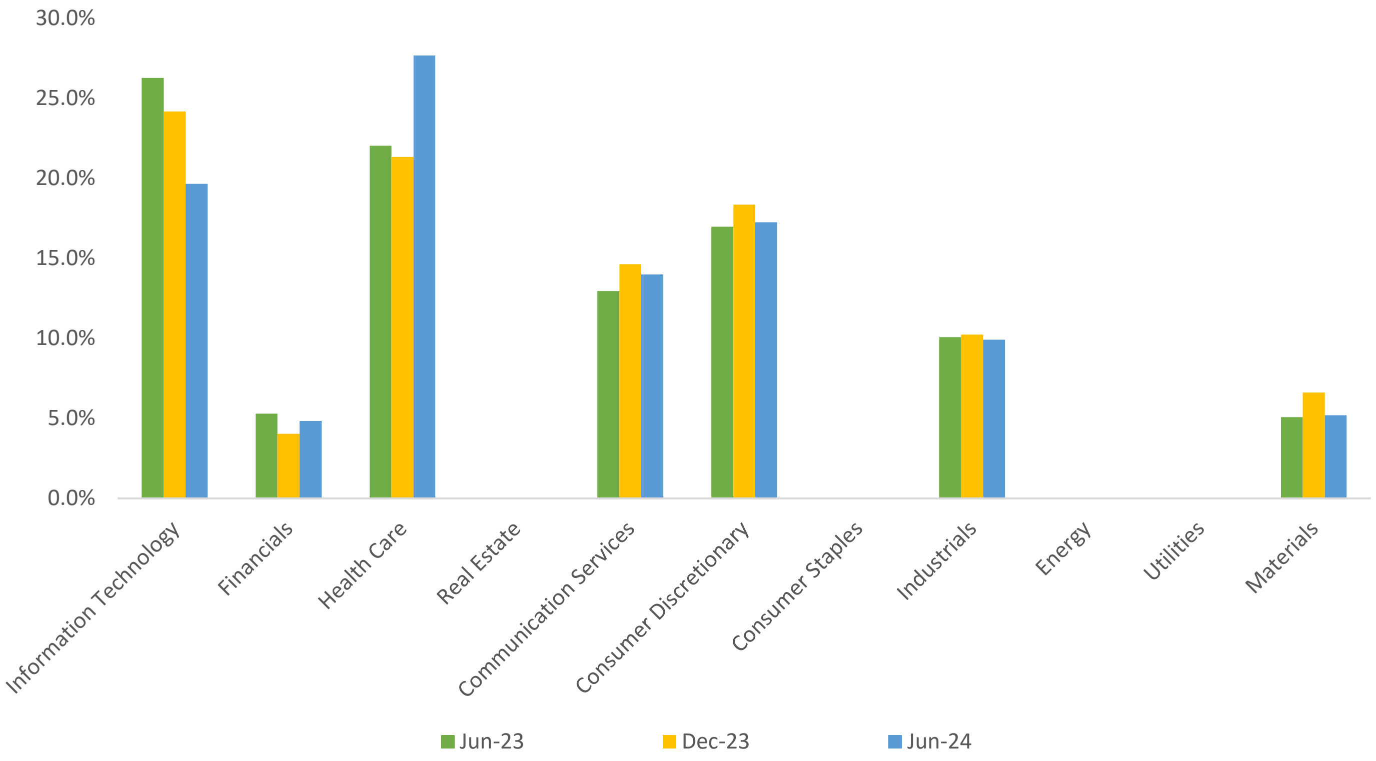
Graph 4: SHCEF vs ASX 300 Carbon Exposure 30 June 2024



**Estimates based on LSEG data*

Source: SFML & LSEG

Graph 5: Portfolio Carbon Exposure Periodic Change



Source: SFML & LSEG

Table 8: SFML Portfolio carbon intensity

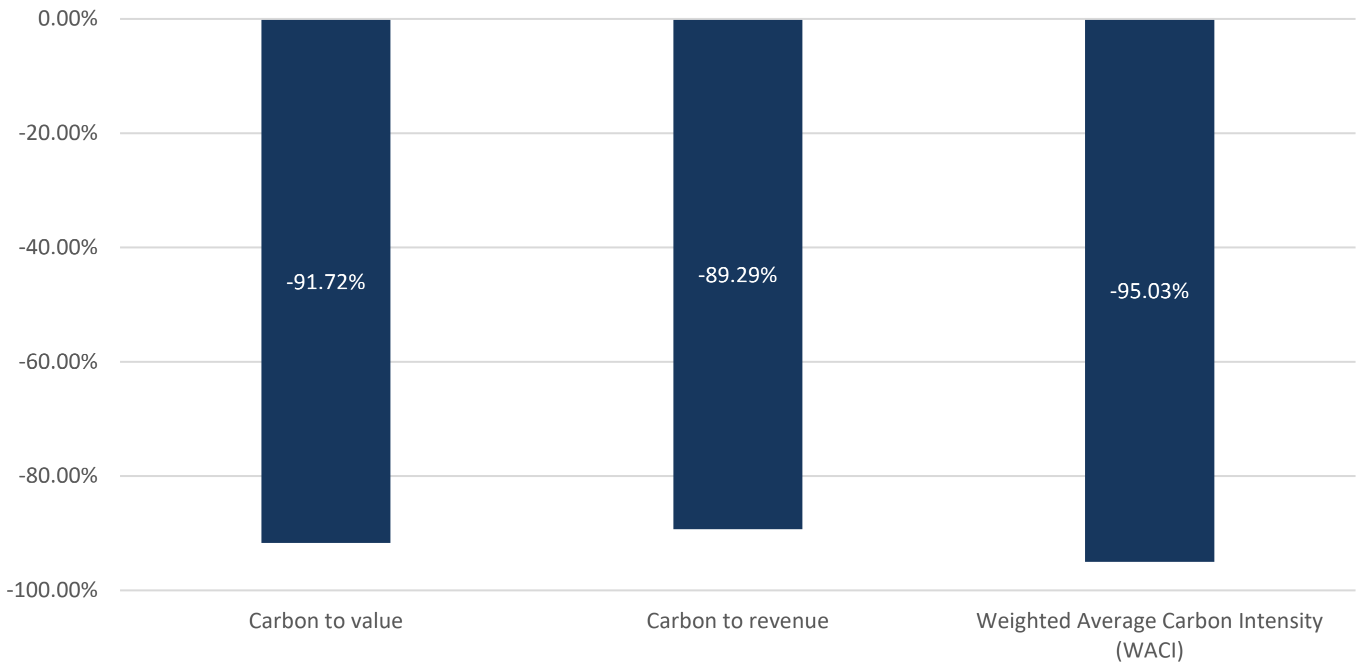
Carbon intensity method[1]	SFML	Benchmark[2]
Carbon to value invested	3.08	37.17
Carbon to revenue	13.39	125.01
Weighted Average Carbon Intensity (WACI)	6.51	130.96

Source: SFML & LSEG

1. Denominated in tonnes per CO2e/AUD$m
2. Benchmark used is S&P/ASX 300

- ***Carbon to value invested*** – this calculation is the aggregation of estimated owned constituent greenhouse gas emissions per $1m market capitalisation as at 30 June 2024. It allocates the emissions investors are responsible for based on their level of ownership, enabling them to measure their contribution to climate change.
- ***Carbon to revenue*** – this calculation reflects the aggregation of estimated owned constituent greenhouse gas emissions per $1m generated in apportioned revenues. It allocates the emissions investors are responsible for based on their ownership of company revenues.
- ***Weighted Average Carbon Intensity (WACI)*** is the weighted average of individual company's estimated carbon intensities (emissions over revenues), weighted by the investment proportion of the constituents.

Graph 6: SFML Carbon Intensity Relative to ASX 300



Source: SFML & LSEG

SFML's carbon to value invested and carbon to revenue are both lower than the S&P ASX 300 index, at 91.72% and 89.29% respectively. SFML's WACI is 95.03% lower than the index, due to no exposure to Energy and Utilities sectors, and low exposure to the Materials sector.

Table 9: SFML Top 10 emitters and total Portfolio Revenue impact of AUD$90 Carbon tax

Portfolio	**Revenue ($m)[1]**	**CO_2 Emissions[2] (Tonnes)**	**$90 Carbon Tax ($m)**	**Impact on Revenue (%)**
SFML Top 10 Emitters	56,964.38	1,245,252	112.07	(0.20%)
SFML Portfolio – Total	74,746.32	1,262,932	113.66	(0.15%)
ASX300 Top 30 Emitters	630,611.50	195,280,462	17,575.24	(2.79%)
ASX 300 Index – Total	1,276,588.49	208,418,878	18,757.70	(1.47%)

Source: SFML & LSEG CO2 Emission data

1. Last reported financial year revenue as at 30 June 2024
2. Scope 1 and 2 emissions (estimated if not reported).

*Note: ASX 300 index revenue impact from a carbon tax is **9.7x** larger than SFML portfolio*

Table 10: Fundamentals behind comparing SFML Top 10 Emitters and ASX300 Top 30 Emitters

Portfolio	**Percentage of Total Portfolio**	**Percentage of Total Portfolio's Emissions**
SFML Top 10 Emitters	32.51%	98.60%
ASX 300 Top 30 Emitters	29.12%	93.70%

Source: SFML & LSEG CO2 Emission data

*Note: ASX300 Top 30 Emitters revenue impact from a $90 carbon tax is **14x** larger than SFML Top 10 Emitters*

Table 11: SFML Portfolio Top 10 Emitters Carbon Tax Scenario Testing

Company	CO_2 Emissions (Tonnes)	NPAT[1] (AUD $m)	EPS[1] ($)	Value of Carbon Tax ($)	Cost of Carbon Tax ($m)	Impact on NPAT (%)	EPS Post Carbon Tax ($)
JHX	646,409	1,075.96	2.42	90	58.18	(5.41%)	2.29
CSL	336,000	3,880.65	8.04	90	30.24	(0.78%)	7.98
REH	65,889	387.61	0.60	90	5.93	(1.53%)	0.59
DMP	60,400	122.60	1.37	90	5.44	(4.43%)	1.30
RWC	34,086	207.64	0.26	90	3.07	(1.48%)	0.26
FLT	29,886	47.41	0.23	90	2.69	(5.67%)	0.22
RMD	25,059	1,334.52	9.07	90	2.26	(0.17%)	9.05
ALL	17,258	1,535.60	2.02	90	1.55	(0.10%)	2.02
FPH	16,816	237.96	0.42	90	1.51	(0.64%)	0.41
ARB	13,449	88.46	1.08	90	1.21	(1.37%)	1.06

Source: LSEG CO2 Emission data

1. Last reported financial year values as at 30 June 2024

▪ How ESG factors are incorporated into research and decision-making processes

We believe ESG is incorporated into our investment process and our research efforts. We make this distinction to provide further insight.

ESG incorporation into investment process

ESG consideration is integrated into the three core areas of our investment process:

1. Corporate engagement program
2. Quantitative modelling program
3. Voting program.

The three programs of work listed above are applied consistently to each business that we research. Ultimately, we are seeking businesses with leadership qualities, run by competent management teams, underpinned by a strong balance sheet and with a focus on capital management. Each of these four elements has its roots in culture and ESG.

We believe Culture and ESG are intertwined. We consider them both integral to our assessment of a business. Voting is the other half of ESG, all resolutions are documented, researched and voted inhouse.

Our ongoing focus on the individual culture and financial sustainability of a business lends itself to strong ESG outcomes at a business and portfolio level. This is evidenced by portfolio emissions significantly lower than index emissions, coupled with outperformance since inception.

ESG incorporation into research

All research is undertaken in-house by the Portfolio Managers and investment team. This is an intensive, granular and in-depth approach to continuous learning. We seek businesses with leadership qualities, run by competent management teams, underpinned by strong balance sheets and with a focus on capital management. This approach lends itself to strong ESG outcomes. Our approach is to fully integrate ESG into each of these four areas.

This is a risk out process. We are trying to take as much risk off the table as possible before we invest. The key areas of risk we focus on are board and management competency and the culture they are responsible for, business qualities, balance sheet and capital management. We believe a common-sense approach holds that a net cash balance sheet carries lower risk and more optionality than an optimised or extended balance sheet. We ultimately compare equity risk to a risk-free rate.

Before we invest, we seek to understand which risks a business can control verse those outside its control. For this to be possible, risk must be reported in a consistent and transparent fashion, to avoid any surprises. Here we are considering the possibility of assets becoming stranded (environment) or compromised (Social, Governance, legal, IP, cybersecurity as examples).

Risk sits in each bucket of E, S and G. Our program of corporate engagement has aided our understanding of risk in the S and G buckets since inception. In more recent years we have taken progressive steps to better understand Environmental risk and today, we are actively seeking better financial disclosure from the companies we invest in.

Our conviction in this process generates a concentrated portfolio of our best ideas, or our highest quality stock picks. The aim is to capture as much real earnings per share growth as possible over the long-term.

Our approach has been consistent since inception. It is framed by our Roadmap. This template is both qualitative and quantitative in nature, it focuses our research efforts on the aspects of ESG that we hold important in assessing the risk associated with a long-term investment. This internal scoring system is integrated into our financial model.

Our Roadmap provides a repeatable framework that drives our corporate engagement program, our quantitative program of financial modelling including our stock universe data screen, and our structured voting program. It also holds a strong relevance to our portfolio construction.

Our Roadmap has a material bearing on our investment process from screening ideas to portfolio construction. As an example, we highlight the top left-hand corner of the Roadmap, “Individuals we can trust”. If we are unable to establish confidence in management, board and the culture that they are responsible for, we will not invest in a business. We are index unaware and have the luxury of sitting on the sideline or saying no to an investment.

We believe culture and ESG are intertwined, with the former driving the later. We have focused on the culture that drives the social attributes and governance process within a business since inception.

In 2019 we developed our ESG Roadmap which provides an additional framework for integrating ESG into our research. It is also incorporated into our financial models. This is an iterative approach whereby we are building upon successful initiatives and discarding those that do not add value to our process.

We have taken progressive steps to better understand environmental risk. We measure emissions targets and renewables use across the portfolio. We also measure portfolio emissions against index emissions.

We have long had confidence that our process drives strong ESG outcomes in relation to social and governance issues. We believe our long-term outperformance and low turnover is evidence of this. It is now also apparent, from the portfolio reporting discussed above, that we are driving equally strong ESG outcomes in relation to environmental issues.

In addition, we use our templates and framework to actively seek better transparency and financial disclosure from the companies we invest in.

▪ Examples of where ESG issues have been integrated into investment analysis and decision-making processes including company engagement and voting

As part of our corporate engagement program, we have proposed a sustainable capital management program to businesses we engage with. The ongoing ability to deliver strong ESG outcomes requires long term business sustainability. The model that SFML promotes is a sustainable approach to ongoing re investment into innovation and R&D programs, a sensible payout ratio, and a consistent buyback of shares that drives real EPS growth over the long term while maintaining a strong balance sheet. These financial elements promote business sustainability that are hallmarks of good financial stewardship including. We have actively discussed this model with:

- CAR Group
- Fisher & Paykel Healthcare
- TechnologyOne
- Cochlear
- Reece
- Flight Centre Travel Group

▪ Details of any ESG research sources (internal and external) used during the reporting period

We endeavour to read widely. This includes publicly disclosed documents, such as annual reports, sustainability statements, company and board charters and broker research. We subscribe to news services, various publications and a global business transcript service that also collates broker research and financial data.

SFML has integrated LSEG, which provides extensive ESG coverage and data insights across ASX All Ordinaries securities. LSEG's reported and estimated emissions data has been used to generate the detailed analysis of SFML's portfolio emissions as seen above. LSEG will also enable data to be refreshed more frequently.

All research is undertaken in house by the Portfolio Managers and investment team. This is an intensive, granular and in-depth approach to continuous learning. We believe this is a differentiated approach that generates strong ESG outcomes.

Reporting Season Snapshot

Aristocrat Leisure (ASX:ALL)

Aristocrat Leisure is a leading global gaming content and technology provider with more than 8,500 employees operating in over 100 countries. Founded in 1953, the company houses 32 dedicated studios developing proprietary content for land-based, online and mobile gaming markets.

	HY24 ($m)	HY23 ($m)	Change
Revenue	**3,270**	**3,080**	**6.1%**
Aristocrat Gaming	1,826	1,686	1.1%
Pixel United	1,334	1,322	1.0%
Aristocrat Interactive	109	72	1.5%
Gross Profit Margin	**58.1%**	**55.0%**	
Design & Development (R&D) expense	**425**	**372**	**1.1%**
% revenue	*13%*	*12%*	
EBITDA	**1,196**	**1,017**	**17%**
margin	*36.6%*	*33.0%*	
Underlying Net Profit After Tax*	**764**	**659**	***15%***
margin	***23.4%***	***21.4%***	
Operating Cash Flow	**656**	**613**	**7%**
Capital Expenditure (CAPEX)	(248)	(173)	43%
Net Cash	**366**	**440**	

**Net profit after tax and amortisation of acquired intangibles (NPATA)*

In May, global gaming operator Aristocrat Leisure delivered an *"outstanding"* set of results, with revenue growth of 6% to $3,270m and operating profit (EBITDA) margins expanding 3.6 percentage points to 36.6%. The company's North American land-based gaming business delivered a *"strong"* performance with continual share gains and industry leading game performance.

Content

Aristocrat's library of games remains best in class, reflecting continual reinvestment efforts across people, technology, content and customer support. For the half, the company invested $425m in Design and Development, representing 13% of revenue.

In North America, Aristocrat operates a leasing (Gaming Operations) and outright sales model, representing 56% and 44% of revenue respectively. North America remains the group's largest market, accounting for 79% of revenue.

For the half, the portfolio delivered a 1.4x floor average and represents 20 of the top 25 performing premium leased games, according to research house Eilers and Krejcik.

In the Gaming Operations space, the company earns revenue as a fixed fee or percentage of daily wins per install base. Aristocrat ended the half with market share exceeding 40%, driven by its leading premium content and customer service. These share gains were further highlighted in the group's net new install base of 3,812 units in the half, representing nearly 100% of the total new premium units added across the market. Aristocrat ended the period with 67,212 units, earning a market leading average fee per day of US$55.50, an increase of 1.2% on the prior corresponding period.

NeoGames acquisition

In April, the company announced the completion of the NeoGames acquisition and its combination with Aristocrat's iGaming division Anaxi to form Aristocrat Interactive. The new segment houses three businesses: iLottery, Content and Gaming Systems. NeoGames materially enhances Aristocrat's presence and ability to scale its gaming content and brands in the Real Money Gaming (RMG) segment through its full-service technology solution and global leading iLottery business.

In the iGaming space, Aristocrat launched 20 unique games and is live with 10 major operators across the U.S., Canada and the U.K. In the U.S., Aristocrat operates in three states with access to approximately 90% of the market. The company's leading game performance has earned it recognition as a top 10 U.S. supplier within 6 months of releasing content. This achievement reinforces the company's view that land-based content and brands will resonate with digital players.

Digital review

With the completion of the NeoGames acquisition, Aristocrat announced a strategic review of its Social Casual and mid-core gaming assets (Big Fish and Product Madness). The decision reflects management's strategy to leverage its brand and core capabilities in designing and distributing regulated gaming content across multiple verticals, including land-based and online content, mobile social casino and iLotteries. The company will provide further details on the review outcome as appropriate.

Guidance

Aristocrat remains committed to expanding its player base through re-investment in content design and development across all segments. For financial year 2024 the company expects to deliver positive net profit after tax and amortisation of acquired intangibles (NPATA) growth, reflecting continual share gains in the land-based business and further scaling of content within Aristocrat Interactive.

Aristocrat Leisure has a market capitalisation of $31.7b.

Fisher & Paykel Healthcare (ASX: FPH)

Fisher & Paykel Healthcare, founded in 1969, is a leading global medical device manufacturer in humidified respiratory care and obstructive sleep apnea (OSA). The company employs 7,100 staff across 54 countries, including New Zealand, North America and Europe. A large portfolio of revenue (89%) comes from recurring items, consumables and accessories, which are sold in more than 120 countries.

	FY24 (NZ$m)	FY23 (NZ$m)	Change
Revenue	**1,743**	**1,581**	**10%**
Hospital	*1,088*	*1,023*	**6%**
Homecare	*652*	*554*	**18%**
Underlying Gross Profit Margin	**61.1%**	**59.4%**	
R&D Expense	**198**	**174**	
% revenue	*11.4%*	*11.0%*	
Underlying Operating Profit (EBIT)	**373**	**332**	**12.4%**
margin	*21.4%*	*21.0%*	
Underlying Net Profit After Tax	**264**	**250**	**5.6%**
margin	*15.2%*	*15.8%*	
Operating Cash Flow	**430**	**238**	**80%**
Capitalised Expenditure (CAPEX)	*339*	*211*	
Net Debt (Cash)	**32**	**(38)**	

Fisher & Paykel Healthcare posted a solid financial year 2024 result, driven by double-digit revenue growth in its hospital new application consumables (+15%) and homecare OSA face masks (+18%) portfolio. The business continues to shift towards greater recurring revenue, with consumable revenue representing 90% and 88% of total hospital and homecare revenue respectively.

Underlying gross margins increased 172 basis points to 61.1%, benefiting from improved freight rates and reduced use of airfreight, as well as manufacturing efficiencies. Fisher & Paykel is confident in its ability to return to its longer-term gross margin and operating margin (EBIT) target of 65% and 30% respectively.

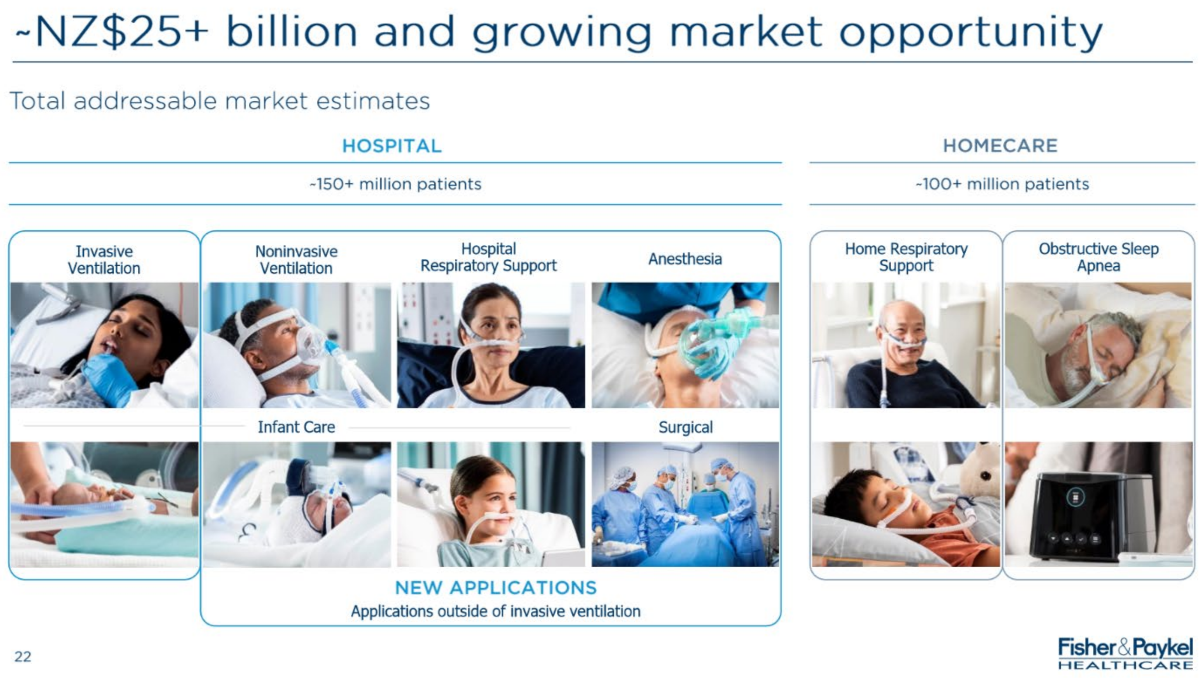
Hospital

In the Hospital division, consumable growth was driven by its Non-Invasive Ventilation (NIV) and Nasal High Flow (NHF) therapy offering, as well as surgical applications, which remain in the early stage of commercialisation.

The company received regulatory clearance in the U.S. for its new generation respiratory humification system (F&P 950) and a new NHF canular mask (Optiflow Duet). Its next generation Optiflow High Flow Therapy System (Airvo3) was also launched in the second half of the financial year, allowing patients to maintain high flow therapy treatment as they are transferred throughout the hospital.

Despite the company offering NHF applications within the hospital segment for decades, the opportunity remains significant. During FY24 alone, NHF was administered to 6 million patients out of an estimated total addressable market of 150 million patients.

Figure 2: Market Opportunity



Source: Fisher & Paykel Healthcare FY24 Results Presentation

Homecare

Homecare continues to perform strongly, led by the company's OSA mask portfolio. The success reflects management's decision in recent years to exit the CPAP machine market and direct its focus toward providing innovative mask solutions for OSA patients. During the year, Fisher & Paykel launched its new Solo mask across New Zealand, Australia and Canada, with U.S. approval expected in the first half of FY25. The mask offers a revolutionary automatic fitting for patients without requiring adjustments. Additionally, the company announced its smallest and lightest mask to date (Nova Micro Nasal Pillows mask), which is live in New Zealand and is expected to launch in Canada, Australia and Europe in the coming months.

Guidance

For full year 2025, Fisher & Paykel expects operating revenue between NZ$1.9b and NZ$2.0b, an increase of 9%-15% and net profit after tax of NZ$310m to NZ$360m.

Longer term, the company aspires to double constant currency revenue every 5-6 years, driven by ongoing product innovation across non-invasive ventilation in the hospital and homecare market.

Fisher & Paykel Healthcare has a market capitalisation of $16b.

James Hardie Industries (ASX:JHX)

James Hardie is the global leader in manufacturing high-performance fibre cement siding. The company dates to 1888 and employs circa 5,000 staff globally, with manufacturing and distribution presence across North America, Asia Pacific and Europe.

	FY24 (US$m)	FY23 (US$m)	Change
Revenue (Net Sales)	**3,936**	**3,777**	**4%**
North America	2,891	2,788	4%
Asia Pacific	856	787	9%
Europe	445	432	3%
Gross Profit Margin	**40.4%**	**34.7%**	
Adjusted EBITDA	**1,126**	**952**	**18%**
Group margin	28.6%	25.2%	
North America margin	*36.5%*	*32.1%*	
Asia Pacific margin	*32.5%*	*29.2%*	
Europe margin	*15.5%*	*12.1%*	
Adjusted Net Profit After Tax	**707.5**	**605.5**	**17%**
Net Debt	**758**	**946**	
Operating Cash Flow	**914**	**607**	**50%**
Capital Expenditure (CAPEX)	*(449)*	*(591)*	

James Hardie achieved record net sales and operating profits during financial year 2024. This was supported by market share gains across North America, with volume up 1% to 3,052 million standard feet, despite the market recording a 6% decline in new single-family home starts and an 11% fall in major remodelling projects.

As the dominant provider of fibre cement siding, the company regards its competitors as alternative siding solutions including brick, vinyl and cement render (stucco). To compete, James Hardie remains committed to increasing investment across product, marketing and support programs for builders and contractors. This approach aims to accelerate demand creation of fibre cement siding, even in challenging market conditions. Over the last decade, James Hardie has consistently taken market share from other siding alternatives, with the U.S. Census report revealing fibre cement share of primary cladding for new homes has increased from 16% in 2012 to 23% in 2022.

The company's differentiated product portfolio, alongside its Dream Builder and Contractor Alliance programs, has helped it become the primary hard siding choice for 24 of the top 25 large builders in the U.S., representing circa 47% of all new housing starts over the last 12 months. In addition, the enhanced lead-generation activities and co-branding via its Contractor Alliance program has seen contractors gain an incremental 12 leads and two additional jobs for every home completed.

Reinvestment

Globally, James Hardie operates 21 manufacturing facilities, with the U.S. footprint representing 72% of total capacity by volume. Underpinning the company’s growth has been its ongoing capital expenditure program, aimed at increasing volume capacity through new and existing site capacity expansion initiatives and incremental efficiency programs. Hardie Operating System (HOS) represents the company’s internal efficiency program. What began in 2019 with a sole focus on manufacturing (HMOS) has progressively expanded to other initiatives in R&D, procurement and working capital.

In financial year 2024 alone, the program delivered US$114m worth of savings comprising reduced unplanned machine downtime and defects, and initiatives aimed at simplifying the supply chain. It's projected the HOS will lower costs by $260m by the end of financial year 2026.

Guidance

Looking ahead, the company expects North American volumes to be 745 to 775 million standard feet, an EBIT margin in the range of 29%-31%, and a group adjusted net income of US$630 to US$700m for financial year 2025.

Post its results, James Hardie hosted a U.S. investor day and presented long-term aspirational targets for the North America region. These include more than doubling the number of homes sided with fibre cement to 25 million by 2035 and tripling adjusted EBITDA over the long term, through double-digit revenue growth and an improvement in the adjusted operating profit (EBITDA) margin to approximately 40%.

James Hardie has a market capitalisation of $20.6b. The company also repurchased US$74.9m of shares as part of its US$250m buyback program.

OFX Group (ASX:OFX)

OFX Group is an international payment services provider offering solutions for 50+ currencies across 170+ countries. The group was founded in 1998 and employs 700+ staff with offices in eight locations across North America, Europe, and Asia Pacific (APAC).

	FY24 ($m)	FY23 ($m)	Change
Turnover ($b)	**38.4**	**39.7**	**(3.3%)**
Net Operating Income Margin	**0.59%**	**0.54%**	
Revenue (fee and trading income)	**229.7**	**225.0**	**2.1%**
Business to Business (B2B)	*146.1*	*139.4*	*4.8%*
Business to Customer (B2C)	*68.4*	*71.6*	*(4.5%)*
Recurring Revenue	**83%**	**84%**	
Underlying EBITDA	**64.6**	**62.4**	**3.4%**
margin	*28.1%*	*27.7%*	
Underlying NPAT	**33.8**	**37.6**	**(10.1%)**
margin	*14.7%*	*16.7%*	
Operating Cash Flow	**60.6**	**47.0**	**1.3%**
Capitalised Expenditure (CAPEX)	*19.4*	*18.7*	**3.7%**
Net Cash	**26**	**3**	

OFX generates revenue from the net margin made on each foreign exchange (FX) transaction (net operating income) and associated income earned through the transaction process. For financial year 2024, net operating income grew 6.3% to $227.5m, driven by net operating income margin expanding from 0.54% to 0.59% through improved pricing arrangements and strong interest income of $8.9m, offset by lower turnover of $38.9b, down 3.3% on the prior corresponding period (pcp).

Business to Business (B2B) division

OFX's strategy to focus on the B2B market over the last five years has seen the segment grow from 46% in FY19 to 64% of total revenue. This segment, which includes Corporate, Enterprise and Online Sellers, is highly recurring at 86% of revenue, with corporate customers transacting an average of 24 times a year. By comparison, the High Value Consumer segment averages 4.3 transactions a year.

During the financial year, the Corporate segment reported a 26.5% increase in new revenue to $18.5m, reflecting recent investment into the customer onboarding platform.

In the Enterprise division, revenue increased 33% to $8.1m, supported by increased usage among existing clients. Three deals were signed in North America during the year with activation to begin shortly. Management remains confident in its ability to attract smaller enterprise opportunities, noting 10 new prospects recently added to the pipeline, bringing the total number of prospects to 77 customers.

In addition, OFX has found success in gaining traction internationally aided by the acquisition of Canadian-based FX business Firma in May 2022, with 65% of revenue now coming from outside Australia. The reason for a global pivot is multi-faceted. Firstly, it opens a vastly larger demand pool, leading to the second point of strengthened scale and a more diversified customer base.

OFX 2.0

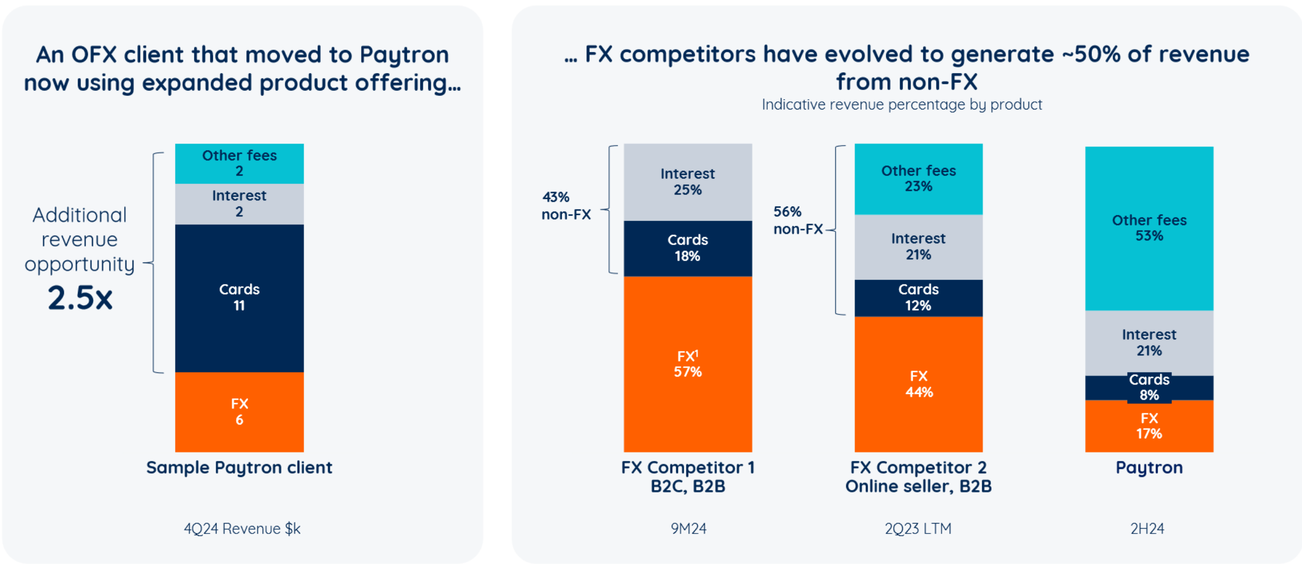
Since FY19, OFX has set out to become a more global and B2B-focused business. The transition aims to create a single global platform with higher recurring revenues and operating profit margins.

For management, this requires expanding its offering outside of spot transactions to create a higher valued service for its customers. The acquisition of Paytron in May 2023 marks the first step towards creating a more valuable solution, as the company introduces a modern platform and digital card capabilities with integrated backend automation of all transactions into the customer's accounts payable system. This end-to-end ecosystem is being integrated within OFX's existing ecosystem, comprising 24/7 human support and leading risk management. The new platform, "OFX 2.0", is expected to drive incremental revenue through more frequent customer transactions and an opportunity to introduce new revenue streams, such as subscription services.

Management announced that by the end of the first quarter of financial year 2025, all existing Paytron and new Australian corporate customers will be onboarded onto the OFX 2.0 platform. Global rollout is expected to begin in the fourth quarter of fiscal year 2025.

As a result of the additional investment into the platform, OFX recorded intangible investments of $19.4m for the year, representing 8.4% of revenue.

Figure 3: OFX 2.0 Revenue Opportunity Beyond FX



[1] This may include other fees and revenue streams that are derived from the customer's pay-in method. These are reported separately in FX Competitor 2 and Paytron.

Source: OFX Group FY24 Results Presentation

Guidance

Looking ahead, CEO Skander Malcolm expressed: *"We are very optimistic about our medium to long-term outlook. We expect to grow NOI by at least 10% per annum over the next three years, at underlying EBITDA margins of between 28%-30%. Longer-term, we expect to grow NOI by at least 15% per annum at approximately 30% underlying EBITDA margins. For financial year 2025, we feel confident in reaching this goal through organic growth returning to historic levels supported by the margin growth we delivered in financial year 2024, the momentum in new client revenue, the early contribution from new revenue streams, an additional three trading days in financial year 2025 and the positive start to trading overall."*

OFX has a market capitalisation of $528m.

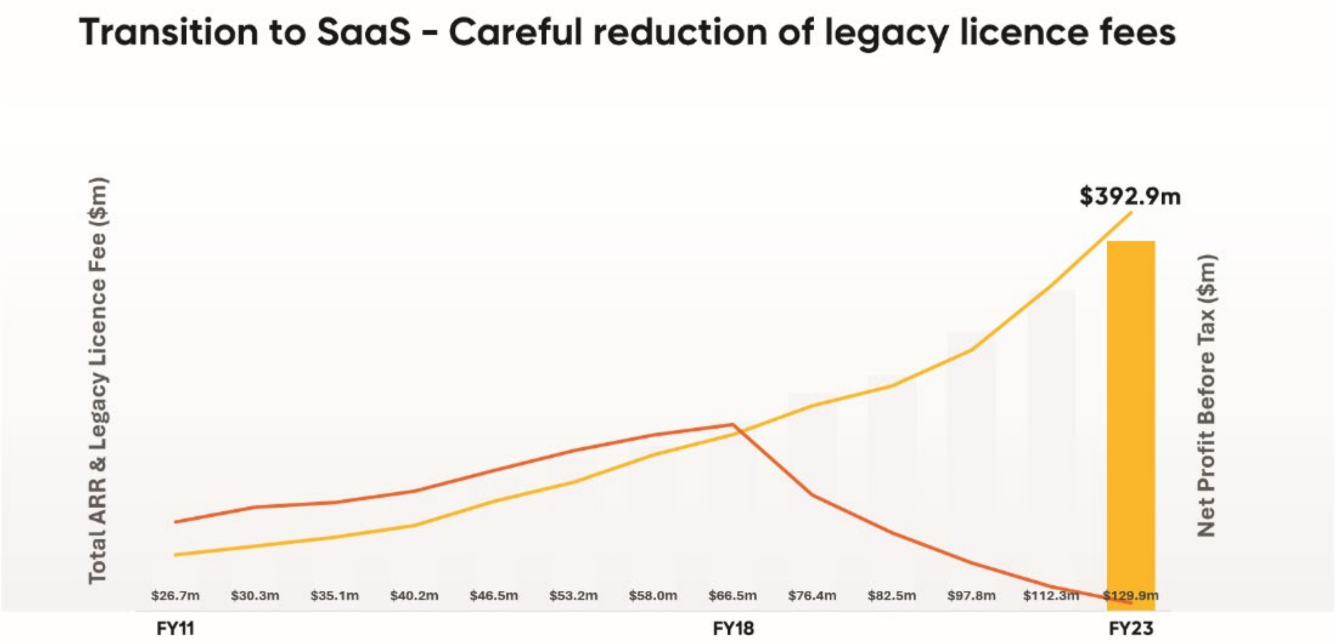
TechnologyOne (ASX:TNE)

TechnologyOne is a global provider of Software-as-a-Service (SaaS) Enterprise Resource Planning (ERP) provider. The company was founded in 1987 and serves six verticals, including Education, Government, Local Government, Health, Financial Services and Asset & Project Intensive industries. TechnologyOne employs over 1,100 staff with offices across six countries, including Australia and New Zealand, the U.K., and Malaysia.

	HY24 ($m)	HY23 ($m)	Change
Revenue	**245**	**210**	**16%**
SaaS & Recurring Revenue	*223*	*184*	*21%*
% recurring	*91.1%*	*87.4%*	
R&D Investment	**57**	**49**	
% revenue	*23.2%*	*23.4%*	
Net Profit After Tax	**48**	**41**	**16%**
Margin	*19.6%*	*19.6%*	
Operating Cash Flow	**36**	**37**	**(2.7%)**
Net Cash	**172**	**139**	

During the first half of financial year 2024, TechnologyOne reported a strong result with annual recurring revenue (ARR) growing 21% through new client wins and additional product uptake from existing customers. The company has successfully transitioned to a SaaS model with only a handful of licence fee customers left to transition. During the transition, TechnologyOne continued to expand its SaaS recurring revenue business base and consistently delivered increased annual earnings, as shown in Figure 4.

Figure 4: ARR & Legacy Licence Fees



Source: Technology One HY24 Results Presentation

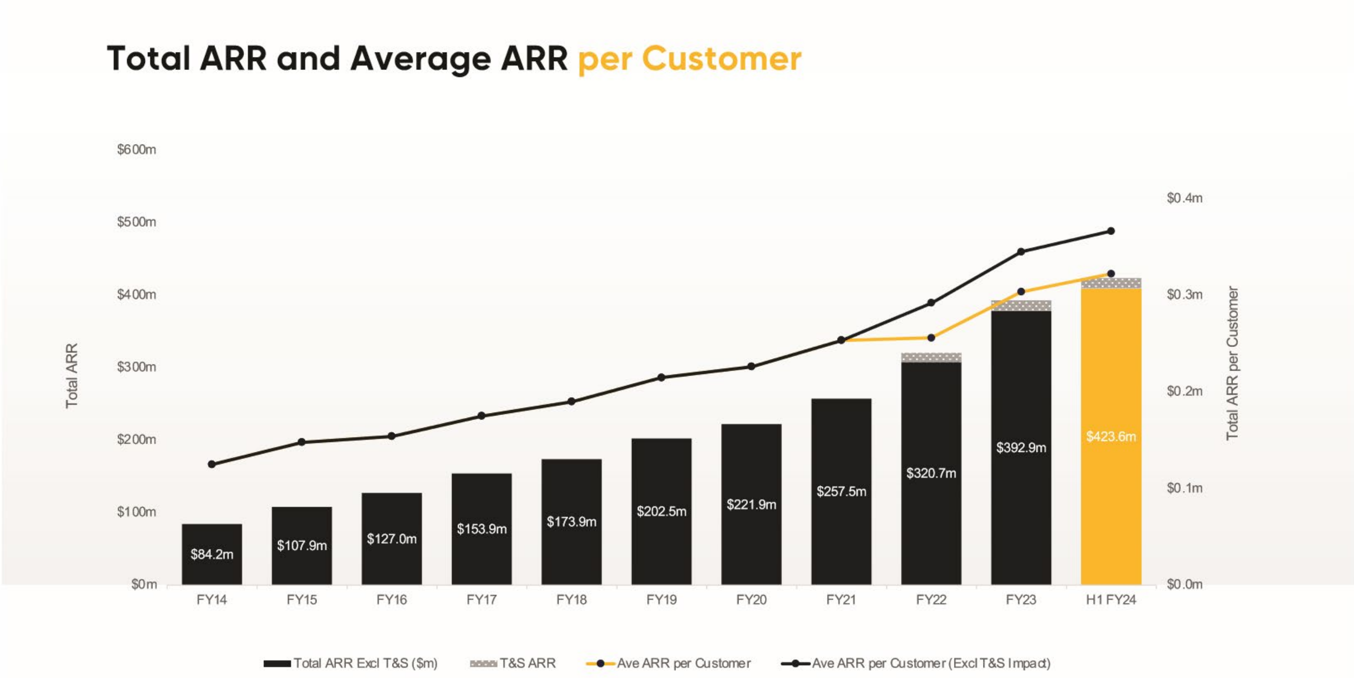
Continuous innovation

Since founding the business 38 years ago, TechnologyOne has re-written its codebase four times, a feat. no other enterprise software provider has achieved. This allows customers to benefit from biannual releases of new products and features whilst maintaining high levels of security. Additionally, customers have reported savings of over 30% on the total cost of ownership upon transitioning to TechnologyOne's SaaS offering. The introduction of its latest update, 24a, will see 440 new features deployed across the company's 16 products.

Net Revenue Retention (NRR), a key metric reflecting the net amount of new ARR won and retained from existing customers, was 117%. By maintaining an NRR above 115%, TechnologyOne expects the strength of its existing relationships to double its business size every five years. Customer churn, sitting at 1.8%, was higher than its historical average of 1%, following the company ending its on-premise offering.

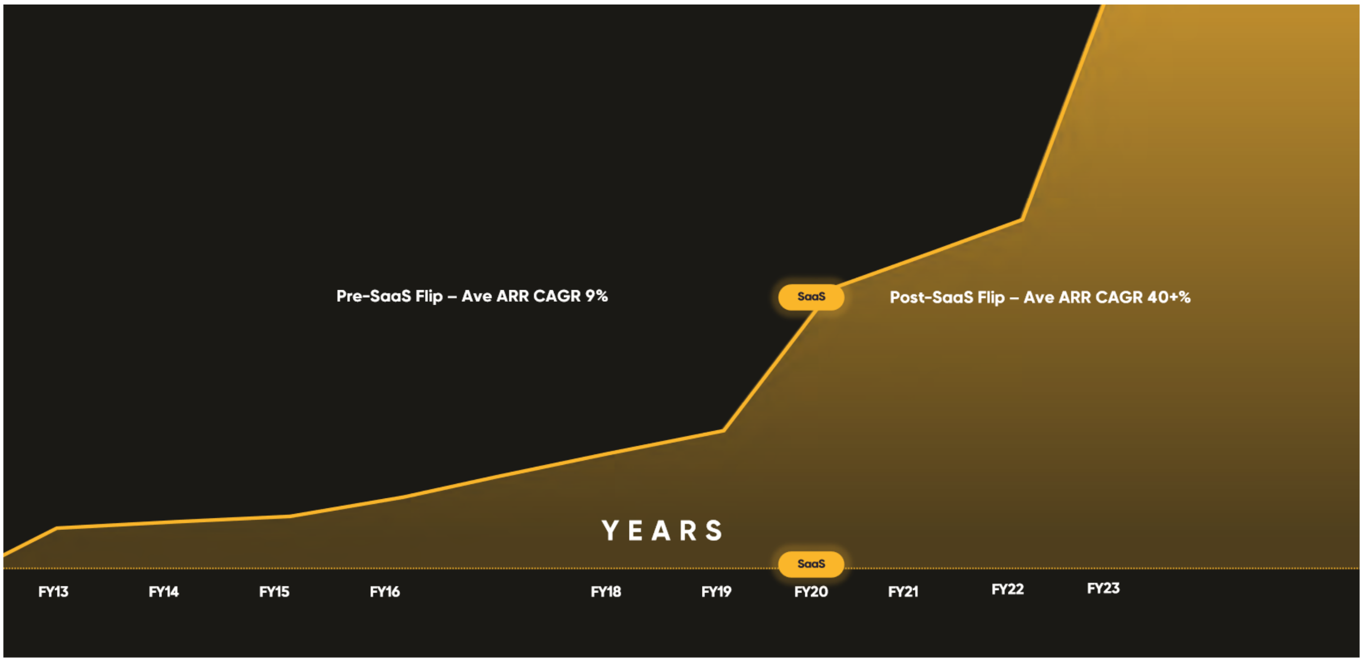
The business has adopted a strategic approach, initially landing customers with core products like Financials, Property and Rating, or Student Management, and expanding their engagement with additional products and modules over time. Continued investments to enhance functionality has accelerated product adoption among SaaS customers, resulting in significant growth in average ARR per customer as illustrated in Figure 5 and Figure 6.

Figure 5: Annual Recurring Revenue (ARR)



Source: TechnologyOne HY24 Results Presentation

Figure 6: Customer Journey – LG



Source: TechnologyOne HY24 Results Presentation

SaaS+, the company's next iteration, addresses the legacy problem of customers facing significant implementation costs to roll out enterprise software. This solution encompasses the entire service offering, including the ERP software and implementation, into a single annual fee. Described as a *"game changer*" by management, TechnologyOne will be able to offer a faster rollout timeframe at less risk versus its peers who traditionally outsource product implementation.

This achievement was made possible through TechnologyOne's full ownership of the service offering, from product design to implementation, and the industry-specific IP built over the last 37 years. To date, 56 customers are on SaaS+, with all sales in the U.K. falling under this model.

Guidance

For full year 2024, the company is guiding to ARR growth of 15% to 20% and net profit before tax growth of 12% to 16%. Management reiterated it will surpass $500m in ARR by financial year 2025, while continuing to double every five years.

Additionally, they announced an ambition to deliver a 30-day ERP implementation by 2028, remarkably lower than the current average of approximately 300 days.

TechnologyOne has a market capitalisation of $6b.

Widening The Gap

Years ago, it was common to talk about company attributes that stood out among the masses. Top of the list were businesses with an almost impenetrable market position, referred to as monopolies. Below these sat the duopolies or oligopolies. They possessed wonderful qualities, largely involving pricing power, few or no direct competitors and enviable financial metrics.

These days, we avoid using such terms because they attract the wrong attention, particularly with regulators and governments, who frown upon power concentrated in the hands of a few.

It's the same reason why groups like our major supermarket operators, Woolworths and Coles, are now forced to justify their current market standing.

This type of regulator response is inevitable and explains why companies shy away from being publicly identified as a monopoly or any other 'poly'. It just attracts the wrong crowd.

As investors, though, these are exactly the type of companies we seek.

Our preference is to identify and invest in businesses that can shift from contested or competitive markets to those that are largely uncontested. Why? Often these businesses possess powerful brands with strong intellectual property (IP), accompanied by excellent financial metrics.

However, these opportunities are scarce. Experience tells us that moving from contested to uncontested market environments requires uniqueness, consistent re-investment and duration.

What starts off as a marathon of runners, invariably whittles down to a few, and in some cases, a dominant performer.

Those fortunate in achieving that prize justly deserve their premium status.

The long game

The most interesting thing about businesses that come to dominate is how they got there.

Over the past quarter, several businesses held in the portfolio announced their financial results. Among them included

full year numbers from Fisher & Paykel Healthcare, and half year results from software-as-a-service (SaaS) operator, TechnologyOne and global gaming leader Aristocrat Leisure.

Fisher & Paykel Healthcare

In 1969, over five decades ago, Fisher & Paykel Healthcare began.

The problem at the time was medical patients were suffering from dry and infected tracheas. Mechanical breathing machines were used, but a better solution was needed.

Originally housed within the business operations of Fisher & Paykel Industries, it took three collaborators working independently within this business unit to find an innovative and effective solution. The result? What we now refer to as a heated respiratory humidification system.

The first unit was sold in 1970 and was marketed internationally. In 1990, the business divested its original appliances division, renaming itself Fisher & Paykel Healthcare. In that same year, the business reported revenues of NZ$29m.

In 2001, the company listed on the New Zealand and Australian Stock exchanges, and in 2024 celebrated 55 years in operation.

The full year results delivered in May provided ample evidence of a business widening the gap and extending its moat.

At a high level, group revenues came in at NZ$1.7b and gross profits at NZ$1.1b, with underlying net profits of NZ$264m. The group finished the year with minimum net debt of NZ$32m and an estimated recurring revenue base of 89%, consisting of medical consumables and accessories.

Originating with a mission to deliver a better patient experience, the company has become a global leader in hospital humification, starting with the original 850 humidification system for invasive ventilation devices, introduced in 1998.

The 850 system, now a leading global respiratory humidifier, is housed within the Hospital Division and sits alongside an expanded product portfolio spanning non-invasive ventilation solutions, including the flagship Airvo and Optiflow suite of nasal high flow medical devices. Figure 7 displays the products that drive this division.

Figure 7: Fisher & Paykel Hospital Division

Source: Fisher & Paykel FY24 investor presentation

In total, the Hospital Division delivered revenues NZ$1.1b over the 2024 reporting year.

In this setting, there are very few direct competitors, since the company has provided new solutions rather replacing existing hardware from competitors.

The challenge that exists is the operational status quo dominating hospital and medical settings. Changing clinical practices is a long and difficult road, ultimately relying on delivering a better patient outcome that both clinicians and regulatory medical authorities see merit in.

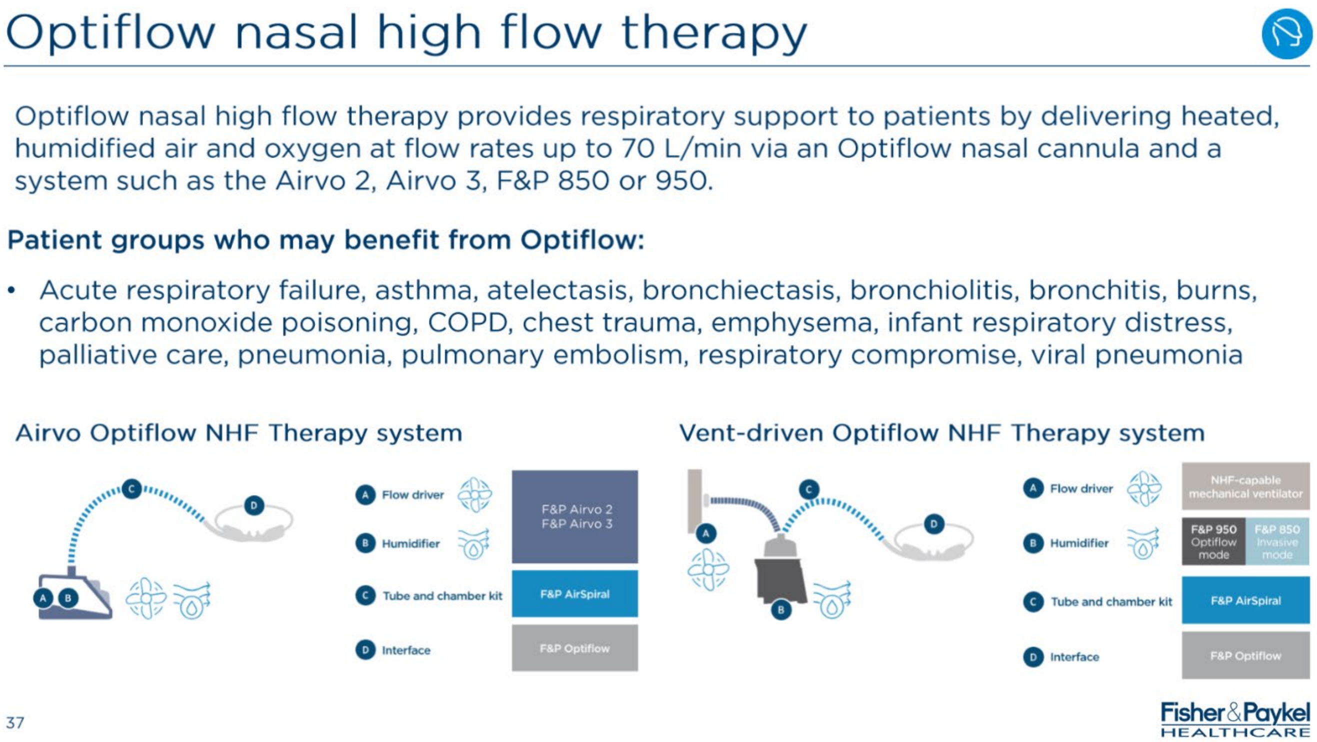
Even then, the need to provide ongoing real-world experience backed by on-the-ground marketing and technical support is necessary. The line, *"changing clinical practice one patient at a time"* is appropriate in describing the effort required.

The group's innovative suite of products covering both invasive and non-invasive therapy has made this possible.

Figure 8 explains the Optiflow nasal high flow therapy, which is designed to replace conventional oxygen therapy with the provision of heated humidified air and oxygen at various levels of flow rates.

A growing body of clinical evidence, reinforced by medical publications, supports the view that oxygen delivered at a body temperature of 37 degrees Celsius enhances patient wellbeing compared to conventional oxygen treatment.

Figure 8: Fisher & Paykel Optiflow Therapy

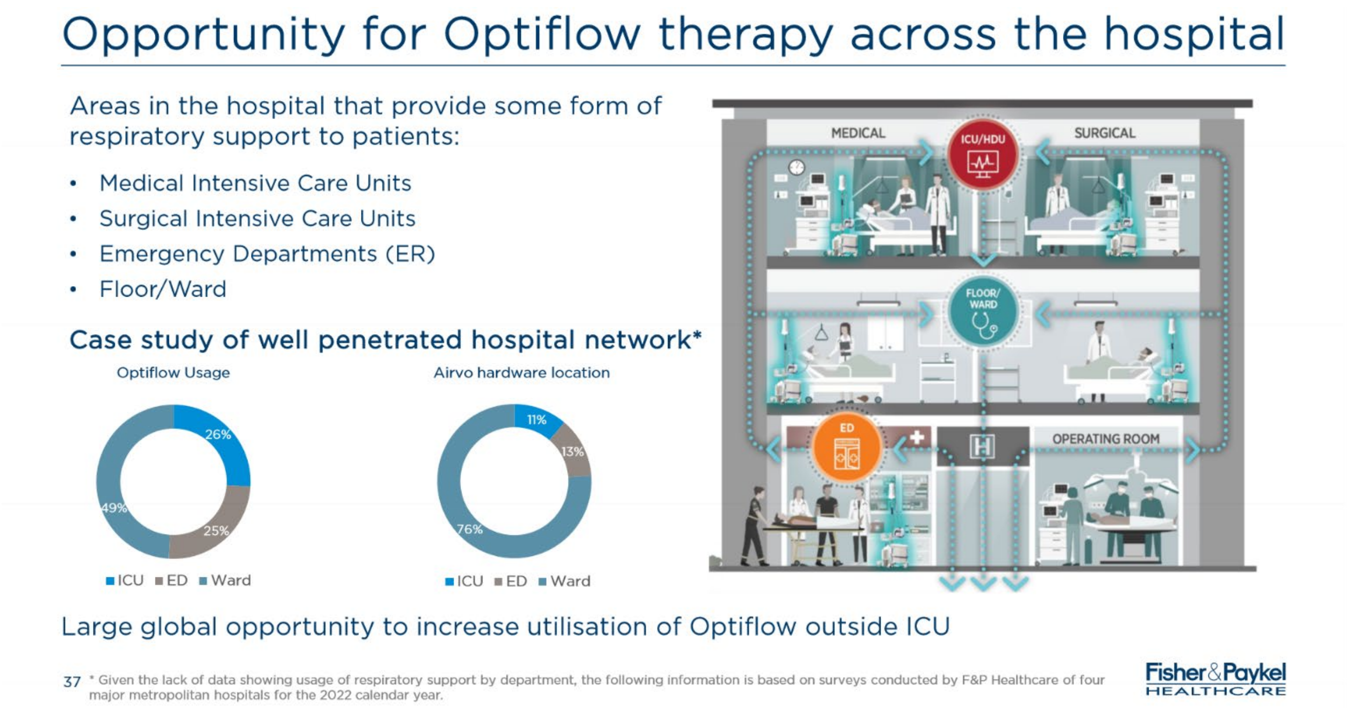


Source: Fisher & Paykel FY24 investor presentation

In the full year 2023 results pack, the company provided an insight into the 'latent' organic opportunity in changing clinical practice.

Figure 9 illustrates product demand usage within a hospital setting based on surveys undertaken by the company. Initially adopted in a hospital's Intensive Care Unit (ICU), the use of Optiflow therapy has migrated across hospital wards and the Emergency Department (ED). Surgical is yet to be explored, but the view and evidence remain consistent: if patient outcomes are improved, adoption is possible.

Figure 9: The hospital “opportunity”



Source: Fisher & Paykel FY23 investor presentation

The prize is significant; the company estimates a potential 150m patients globally could benefit from such a treatment, with an addressable market valued at more than NZ$25b, as highlighted in Figure 10.

Figure 10: Fisher & Paykel addressable market

Source: Fisher & Paykel FY24 investor presentation

To provide context, Optiflow therapy was administered to over 6 million patients in 2024, compared to the estimated annual addressable market of 150 million patients.

Outside the hospital setting, the company is playing to its core strengths to provide medical solutions that can deliver a competitive edge. This explains the deliberate focus on two offerings within its Homecare division.

The first logically extends from the Hospital segment, with Optiflow therapy given to discharged patients at home, often in partnership with hospitals.

The second area involves providing patented, medically approved masks to patients for treating Obstructive Sleep Apnea (OSA). Originally, the company also offered continuous positive airway pressure (CPAP) machines. However, in recent years management made the important decision to focus resources purely on the masks category as a core competency. As a result, the group has targeted this market with a reinvestment program, driving new product releases that compete against the two main traditional competitors, ResMed and Respironics, a division of Philips.

Figure 11 illustrates the group's mask portfolio. In 2024, the Homecare division's total consumables segment, including masks, recorded sales of NZ$652m.

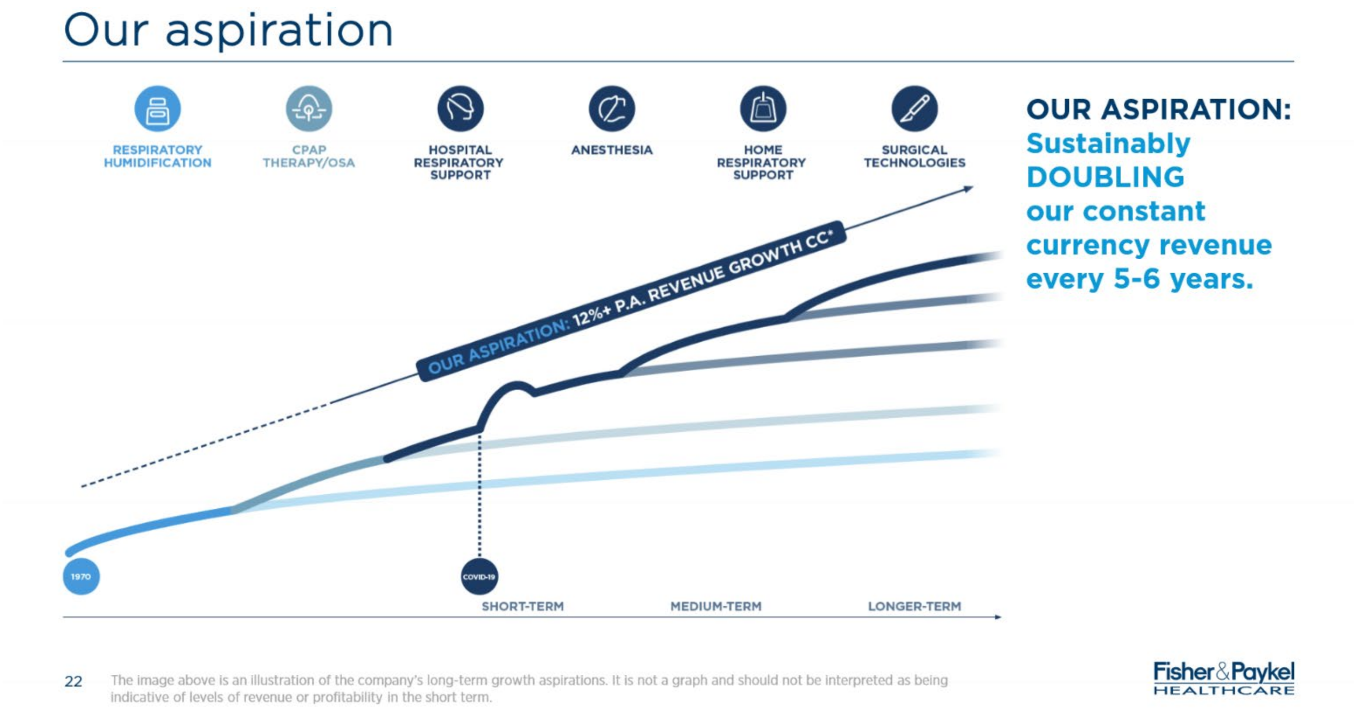
Figure 11: Fisher & Paykel mask portfolio

Source: Fisher & Paykel Healthcare 2024 financial year presentation

The heartbeat of the business is an unrelenting commitment to research and development. During FY24, the company invested NZ$198m, equivalent to 11% of revenue. While it's never easy to determine how productive the spend is, the position the group finds itself in today is testament to money well spent.

The group's unashamedly ambitious target to double revenues every five to six years further speaks to the inner belief that the investment spend and business direction to deliver on future milestones is indeed achievable, as Figure 12 demonstrates (noting the business inception date of 1970).

Figure 12: Fisher & Paykel business aspiration



Source: Fisher & Paykel FY24 financial year presentation

At the group's full year 2024 results release, CEO Lewis Gradon commented on the long-term outlook, *"After several years of changing demand patterns, we are pleased to have returned to a trajectory of growth. All the right foundations are in place for future success – we have an impressive portfolio of products, strong relationships with our customers and the right infrastructure to meet our future needs."*

Aristocrat Leisure

The company's gaming position in Australia has always been strong, reflected through its local heritage since the founding of the business by Len Ainsworth in 1953.

In 2001, the company entered the U.S. market after winning a license for the all-important Nevada territory. The leader at the time was International Game Technology (IGT), an offshoot of Aristocrat, with a 60% market share.

From that standing start, the company has now emerged as the dominant global gaming manufacturer in land-based gaming.

Aristocrat's key strengths lie in its advanced video game graphics and underlying gaming math, allowing the company to lead in both product development and player demand. In the U.S., the progressive shift from mechanical reel-based machines to electronic gaming technologies has enabled the company to secure significant market share.

The half year 2024 financial update announced in May reinforced this view, underpinned by the all-important gaming operations unit, also referred to as participation games.

The 67,212 installed gaming units covering the U.S. market across both Class 3 and Class 2 segments, as shown in Figure 13, serve as proof of this. Unlike an outright sale where the company receives a one-off payment, which in the half averaged US$21,082 per unit sold, with a 'participation' unit, Aristocrat earns a 'fee per day' (FPD) based on the game's performance.

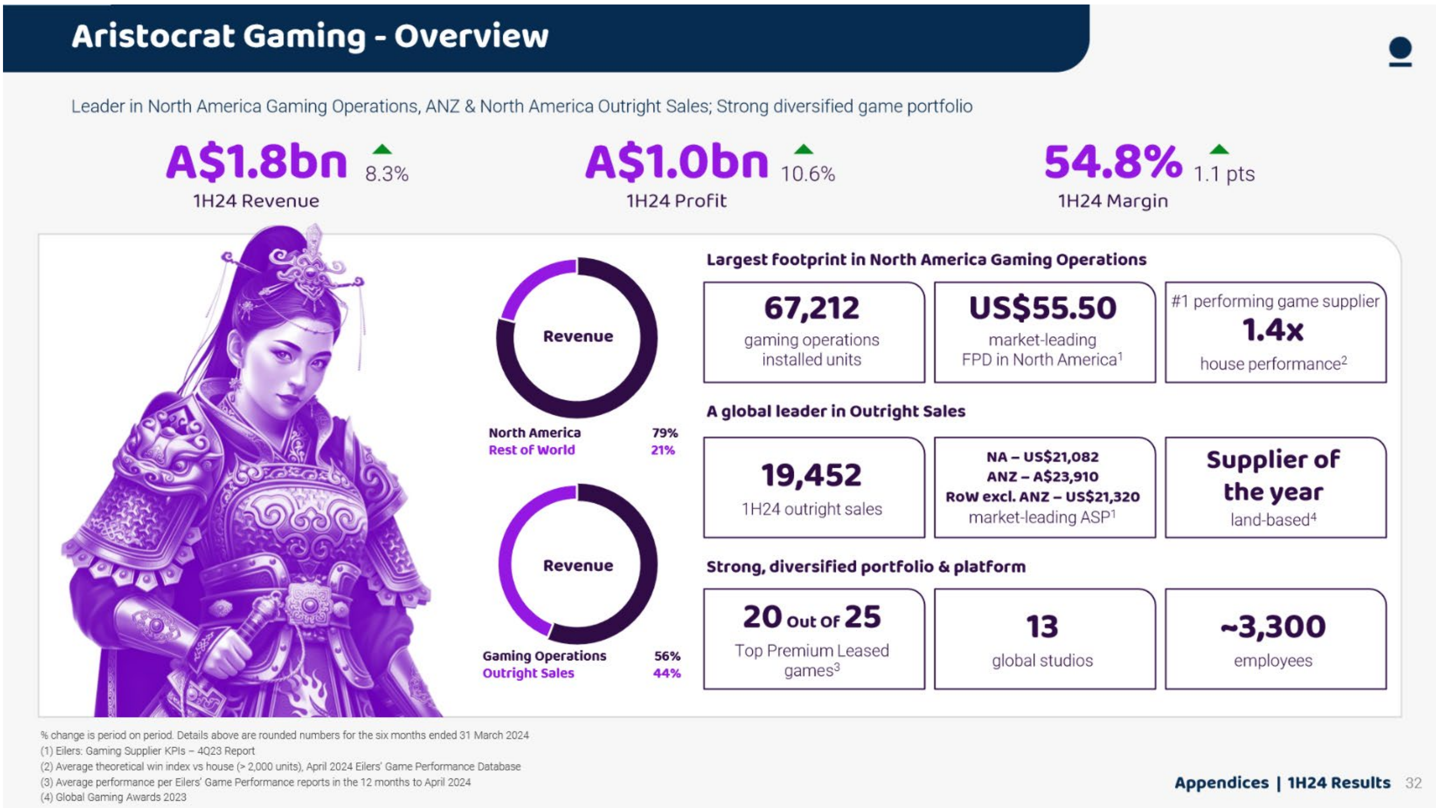
From the numbers provided during the half, if those 67,212 units remained installed for the full year, earning an average of US$55.50 per day, that would generate over US$1.36b in revenue, equivalent to US$20,257 per machine. The recurring nature of these earnings far surpasses the one-off revenues from outright machine sales.

However, not all games are created equal, and game performance determines how long a title remains on the casino floor. The additional metrics provided in Figure 13, including *'house performance of 1.4x'* and *'20 out of 25 top premium leased games'*, speak to this directly.

Importantly, Aristocrat's market share in this key segment continues to expand, exceeding 40% in the latest half. While market share numbers are difficult to obtain, industry analysts rank the top five players in gaming operations as:

1. Aristocrat Leisure - 41%
2. IGT - 20%
3. Light & Wonder - 18%
4. Everi - 11%
5. ASG - 9%

Figure 13: Aristocrat Leisure, 2024 Gaming Overview



Source: Aristocrat Leisure 2024 half year results presentation

Interestingly, the market is now consolidating. Among the major operators, Everi is set to merge with IGT and AGS has signed a definitive agreement to sell to private equity operator Brightstar Capital Partners for US$1.1b.

This level of consolidation will further entrench the three main players, while Aristocrat's leading position in this grouping is likely to generate additional gains.

The company, under the leadership of CEO Trevor Croker, is also undergoing change, which will see a renewed focus on core operations that are less contested and the shedding of businesses where there is greater competition.

As Figure 14 outlines, the company's intellectual property (IP) sits in the brands and gaming content created. This continues to be the highest priority, reflected in the annual design and development spend – in the recent half, this amounted to $425m, or 13% of group revenue.

This level of investment is being leveraged across a growing audience pool, reflecting multiple player channels and distribution options.

Figure 14: Aristocrat Leisure, group strategy

Source: Aristocrat Leisure half year 2024 results presentation

The benefits of operating in a less contested marketplace, offering superior games and working to develop deeper customer partnerships are enabling best in class financial outcomes.

These outcomes were clearly visible in the May numbers, with half year group revenues up 6% to $3.3b, operating profits (EBITA) up 15% to $1.0b and net profit rising 16% to $764m.

The financials reflect the improving efficiency and operating leverage enjoyed by the business, with net profit margins at 23.3%.

The company ended the half with net cash of $366m.

In December 2022, when the Aristocrat share was languishing near $30, we wrote a piece in our quarterly newsletter titled, *“Financial performance vs share price performance”*.

In it, we put forward the view that a share price is not the best barometer to judge a business. It certainly gets the bulk of attention from investors, but the true insights are gleaned from the other areas: the company financials, the margins, the balance sheet and the people.

When you focus on those metrics, a different view can emerge. Fifteen months on, and with a share price now nudging $50, Aristocrat’s financial performance is getting the appropriate due attention.

And as the industry consolidates further, a less contested playing field emerges.

TechnologyOne

In 2024, TechnologyOne celebrates 37 years in business. Perhaps the most obvious shift for the business since its inception is its transition from selling software to clients in a traditional on-premise setting to its current global SaaS enterprise solution, delivered via the cloud.

The consistency of financial performance over such a long period certainly earns the company credibility, but it should also pose the question: how?

If there is a secret sauce, it probably starts with its founder and recently retired Chairman, Adrian Di Marco.

Developing software is not a set and forget type of industry. It shifts with technology and anyone who started a business in 1987 has certainly seen a lot of change over the decades. Remaining at the forefront of such an industry has required something quite special.

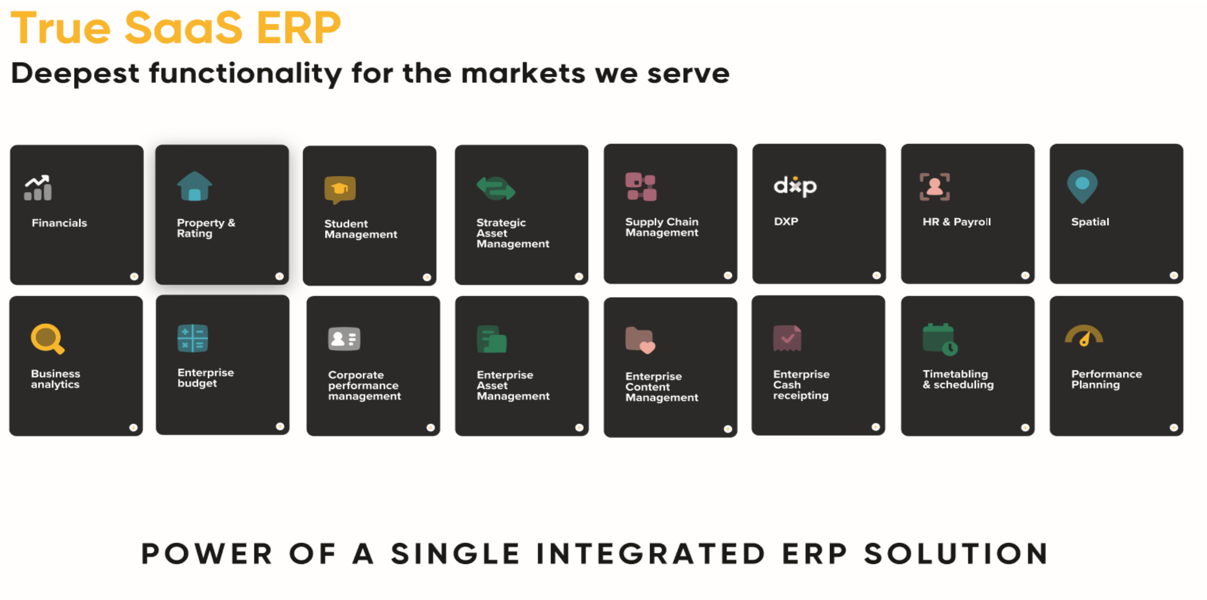
The company's 2023 annual report (page 32) outlines some of the reasons why Di Marco and his team have succeeded. What has always resonated with us is the team's logical approach to each task. The salient points include:

1. A clear focus on delivering the benefits of mass production and economies of scale to the Enterprise Resource Planning (ERP) software industry.
2. By providing the end user with leading edge solutions, without compromise.
3. By delivering TechnologyOne's ERP full functionality on any device, thus full mobility.
4. Running one global code line at enormous economies of scale, allowing continuous improvement.
5. Customers benefiting from the scale of investment undertaken and ongoing innovation.
6. Owning the platform end-to-end, from building, running, implementing and supporting the software.
7. A specialist approach focusing on a core set of ERP solutions, offering the deepest functionality for the markets selected, comprising 16 products and up to 30 modules per product, as set out in Figure 15.

And best summed up with the following:

"*Our global SaaS ERP surpasses best of breed products because we offer one partner, one integrated solution, one look and feel, one technology platform and integration out of the box. It's a single instance of software delivered globally, with a mass production line of servers running thousands of customers organisations that creates cost efficiencies that hosting providers cannot come close to, and a level of service security, reliability, scalability and future proofing that would not be possible otherwise*."

Figure 15: TechnologyOne product suite



Source: TechnologyOne investor presentation 2024

The business now finds itself replicating its local success in the U.K, a market it first entered in 2006. It has been a long road, with some missteps and distractions. In 2021, the company made its most significant international acquisition, purchasing education software company Scientia for £12m.

The opportunity is large and the playbook the same. Figure 16 outlines the progress, its 120 full time employees, a growing list of customers, 15 core products focused primarily on higher education and councils, and lastly, an increasing annual recurring revenue (ARR) line. In the most recent half year result to March 2024, ARR grew 36% to $28.8m.

Figure 16: The U.K. opportunity

Source: TechnologyOne investor presentation November 2023

The half year 2024 financial performance was consistent with past periods. This business enjoys qualities that reflect continuity rather than fluctuations. Delivering mission critical ERP software for over 1,200 customers, with a remarkably low propensity of losing them, best exemplified by a decade-long average churn rate of circa one percent, allows for more thoughtful long-term decisions.

Accompanied by a reinvestment commitment, which translated to a $57m spend in the first half, equivalent to $24% of revenue, points to future potential.

On this point, the company has called out products such as App Builder, DXP Local Government and DXP Student Management as future ERP applications that facilitate a centralised and seamless online customer interface.

The business of TechnologyOne is about constant iteration. SaaS+ was five years in the making and formally introduced to the market in 2023 to remove customer friction and product implementation risk by offering a single fee service solution.

The company's Chief Operating Officer Stuart MacDonald explained the thinking behind SaaS+:

"*The Traditional model of ERP implementation is flawed. Because the responsibility of a successful project is very unclear. This confusion arises from having one vendor providing software and another vendor such as KPMG, Deloitte, or Accenture handling the implementation. To address this significant flaw in the industry's ERP go-to-market strategy, our founder developed the concept of the Power of One more than 20 years ago.*

This approach makes every aspect of the engagement, our responsibility from R&D, sales, marketing, to support, but more importantly, the implementation of the project. As a result, we are solely responsible for the outcome. We believe this is why we've been so successful. We have a 99.2% retention of our customer base."

This industry-first approach is illustrative of building upon what already exists, widening the moat and moving further afield into areas less contested. In short, making it a more valuable business.

Observations

A business that remains increasingly relevant to its audience enjoys a wonderful advantage over others. That relevance is earned and only sustained through a propensity to question the status quo and understand that disrupting and being disrupted are closely intertwined.

The truly great businesses sustain the cumulative effect of doing, alongside a culture of discipline. These collective efforts are unlikely to surprise in the short term but potentially delight over the longer run.

Jim Collins, author of *Good to Great*, described it well, "*Never underestimate how far a great flywheel can go*." The following is an extract from Collins' book, which resonates with us in our discussions on the companies mentioned above.

Jim Collins – Good to Great

"Picture a huge, heavy flywheel—a massive metal disk mounted horizontally on an axle, about 30 feet in diameter, 2 feet thick, and weighing about 5,000 pounds.

Now imagine that your task is to get the flywheel rotating on the axle as fast and long as possible. Pushing with great effort, you get the flywheel to inch forward, moving almost imperceptibly at first. You keep pushing and, after two or three hours of persistent effort, you get the flywheel to complete one entire turn.

You keep pushing, and the flywheel begins to move a bit faster, and with continued great effort, you move it around a second rotation. You keep pushing in a consistent direction. Three turns ... four ... five ... six ... the flywheel builds up speed ... seven ... eight ... you keep pushing ... nine ... ten ... it builds momentum ... eleven ... twelve ... moving faster with each turn ... twenty ... thirty ... fifty ... a hundred.

Then, at some point—breakthrough! The momentum of the thing kicks in in your favor, hurling the flywheel forward, turn after turn ... whoosh! ... its own heavy weight working for you. You're pushing no harder than during the first rotation, but the flywheel goes faster and faster.

Each turn of the flywheel builds upon work done earlier, compounding your investment of effort. A thousand times faster, then ten thousand, then a hundred *thousand. The huge heavy disk flies forward, with almost unstoppable momentum.*

Now suppose someone came along and asked, "What was the one big push that caused this thing to go so fast?" You wouldn't be able to answer; it's just a nonsensical question.

Was it the first push? The second? The fifth? The hundredth? No! It was all of them added together in an overall accumulation of effort applied in a consistent direction. Some pushes may have been bigger than others, but any single heave—no matter how large—reflects a small fraction of the entire cumulative effect upon the flywheel. …

Here's what's important. We've allowed the way transitions look from the outside to drive our perception of what they must feel like to those going through them on the inside.

From the outside, they look like dramatic, almost revolutionary breakthroughs.

But from the inside, they feel completely different, more like an organic development process." ***SFM***

Founding to Flourishing

Owner-operator companies are businesses managed and run by their founders or executives with a significant portion of their wealth invested in the company. This alignment of incentives with shareholders often brings a wealth of experience and well-defined motivations, such as endearment for the business, far-sighted capital allocation, and thoughtful succession planning. Similar qualities can be found in family-run businesses, where there is a desire to grow, strengthen, and ensure the company's longevity for future generations.

We believe in investing in companies that treat their capital with the same care and diligence with which we manage ours. These attributes prompt us to seek them out because they tend to think and act like true founders.

Instead of engaging in the Wall Street spectacle of attempting to "beat" quarterly earnings estimates, owner-operators direct their energy towards the elements they can control to build quarter-century value. Their intensity and passion often go beyond monetary incentives, driven by a deep-seated commitment, reminiscent of the dedication seen in the likes of Jordan in basketball, Sinatra in music, and other magnates in their respective fields. As Richard Farmer, Founder of Cintas, stated:

"I had total passion for the business. I always had business on my mind 24 hours a day, seven days a week, whether I was on vacation with my family or whether I was home watching TV. I always had a pen and pencil in hand to jot down business ideas as they came to mind."

When operators are founders or think like founders, their company becomes their life's work, a temple not to be tarnished. Owner-operators also allocate their time more rationally. Unlike many CEOs who believe they must act as chief promoters of the company's stock, owner-operators often refrain from boasting about their company's greatness, trusting that results will ultimately speak for themselves. Peter Schutz, Porsche CEO (1981-1987), echoed this sentiment:

"It is not the activity that defines a job, but how someone sees their activity in the context of an organization's culture and style that matters. If people are working together to build a temple, the hammers are not as heavy, the rocks are not as hard, and the days are not as long. It is no longer the same task. It is not what people are doing, but how they view their collective effort as part of a mission that puts passion into the activity; passion that can lead to extraordinary results. To create and sustain a real driving force, people must build a temple together, not bust rocks for a living."

Studies have shown that S&P 500 companies led by founders consistently outperform their peers. Between 1990 and 2014, these companies achieved total shareholder returns 3.1 times greater than those of non-founder-led companies. Similarly, the Credit Suisse Family 1000 study found that family businesses have outperformed non-family businesses by an average of 3% per year since 2006.

Despite these time-tested qualities, the market often overlooks such businesses. Major indices like the S&P 500 and ASX 200 use a float-adjusted market cap weighting methodology, which excludes insider holdings from the market capitalization of constituent companies. Consequently, companies with significant insider ownership are systematically underweighted in major indices. As a result, the more shares insiders buy, the less exposure index investors have to these companies, creating another misalignment of incentives. To end, it is far better to have aligned owners as shareholders than leaders who succumb to the fleeting pressures of institutional imperatives. ***SFM***

Red Flag: Debt

There is a very simple reason why debt is classified as a liability on a company's balance sheet and cash is an asset.

Debt is borrowed, incurs interest and requires repayment. On the other hand, cash provides business optionality and an extra buffer to remain in control when things are out of control.

We think founder-led companies are generally very good at understanding the limiting factor of being hooked on debt. The same cannot be said of many businesses that follow a cookie-cutter approach that promotes conventional leverage ratios.

As we consider a world where governments continue to accumulate debt, the risk of economic volatility grows.

The International Monetary Fund (IMF) recently warned that huge fiscal deficits among major economies were exposing the global economy to "significant risk."

The Fund cited the U.S. with its record fiscal deficit of 7.1%, three times larger than similar advanced economies. It also raised concerns about China, with an expected record 7.6% fiscal deficit for 2025 – more than double the 3.7% of other emerging markets.

To that end, the U.S. and China alongside the UK and Italy were identified as the four countries by the Fund that "critically need to take policy action to address fundamental imbalances between spending and revenues."

The Global Financial Crisis (GFC), COVID-19, and current scenarios playing out across interest rate settings and inflation are constant reminders that every business needs a buffer.

All that to say, our tolerance for businesses carrying too much debt is low. The margin of safety we seek is knowing a company can transverse almost any economic or business pothole, without asking for more capital.

The events of the past decade have clearly shown that when these potholes appear, they can cause serious damage.

Businesses will inevitably be impacted, but what is not acceptable is a business that doesn't prepare for such outcomes. One that blissfully ignores the perils of holding optimum levels of debt, while maintaining unrealistic and ill-disciplined capital management policies

Boards and management teams feel the pressure to maintain high performance and deliver for shareholders, which can lead to unrealistic outcomes.

For instance, a company that retains a progressive dividend policy is one devoid of commercial reality. Unless it can also sustain an ever-increasing level of revenue and profit growth, it is naïve to think it can also realistically deliver on its dividend commitment.

When we encounter such philosophies, it is certainly a red flag, as is high dividend payout ratios or share buybacks funded by debt.

A real challenge is dealing with situations that can morph. For example, a company that starts with low debt levels and a conservative capital management policy that deteriorates over time.

In such circumstances, giving some leeway is our preferred course, especially if there has been a long track record of performance. However, it shouldn't mitigate the need to respond to the changing circumstances.

To quote renowned economist John Maynard Keynes, *"When the facts change, I change my mind. What do you do, Sir?"*

As things stand, the portfolio houses a collection of business holding a net cash position totalling 35%.

If we include all our investments with a leverage ratio of less than 1.0x, measured as net debt over operating profits (EBITDA), the percentage jumps to circa 77%.

We view this as a good starting point and an important discussion topic with boards and management teams of all our company investments.

We intend to engage at a meaningful level so that debt is not taken for granted. In other words, ensuring there is an appreciation of the opportunity cost of holding debt, the ongoing payment of annual interest expenses and the limitations it brings in building and supporting business growth.

Interesting: Howard Marks

In his latest memo, Howard Marks from Oaktree Capital Management spoke to this topic, 'The impact of debt'. In it he draws out some readings from others, specifically Morgan Housels from the Collaborative Fund. The following is a direct extract from the memo, discussing the issue of debt.

"Clearly, all else being equal, people and companies that are indebted are more likely to run into trouble than those that aren't. And it goes without saying that a home or car that hasn't been used as collateral for a loan can't be foreclosed on or repossessed. It's the presence of debt that creates the possibility of default, foreclosure, and bankruptcy.

Does that mean debt is a bad thing and should be avoided? Absolutely not. Rather, it's a matter of whether the amount of debt is appropriate relative to (a) the size of the overall enterprise and (b) the potential for fluctuations in the enterprise's profitability and asset value.

Housel frames the issue by introducing the idea of potential volatility over one's lifetime: "Not just market volatility, but . . . world and life volatility: recessions, wars, divorces, illness, moves, floods, changes of heart, etc." With no debt, he postulates, we're likely to survive all but the most infrequent, most volatile events. But in a succession of illustrations, Housel shows that as the level of one's indebtedness increases, the range of volatility that one can withstand narrows, until at a very high level of debt, only the tamest of environments are survivable. As Housel puts it, "as debt increase, you narrow the range of outcomes you can endure in life."

As to Housel's own article dated April 30 and titled, "How I think about debt", the following views resonate. Housel discusses the balancing act of debt on longevity with reference to how 140 businesses in Japan are still operating more than 500 years after they were founded.

"It's astounding to think that what these businesses have endured - dozens of wars, emperors, catastrophic earthquakes, tsunamis, depressions, on and on, endlessly. And yet they keep selling, generation after generation.

These ultra-durable businesses are called "shinise" and studies of them show they tend to share a common characteristic: they hold tons of cash, and no debt. That's part of how they endure centuries of constant calamities."

Comment

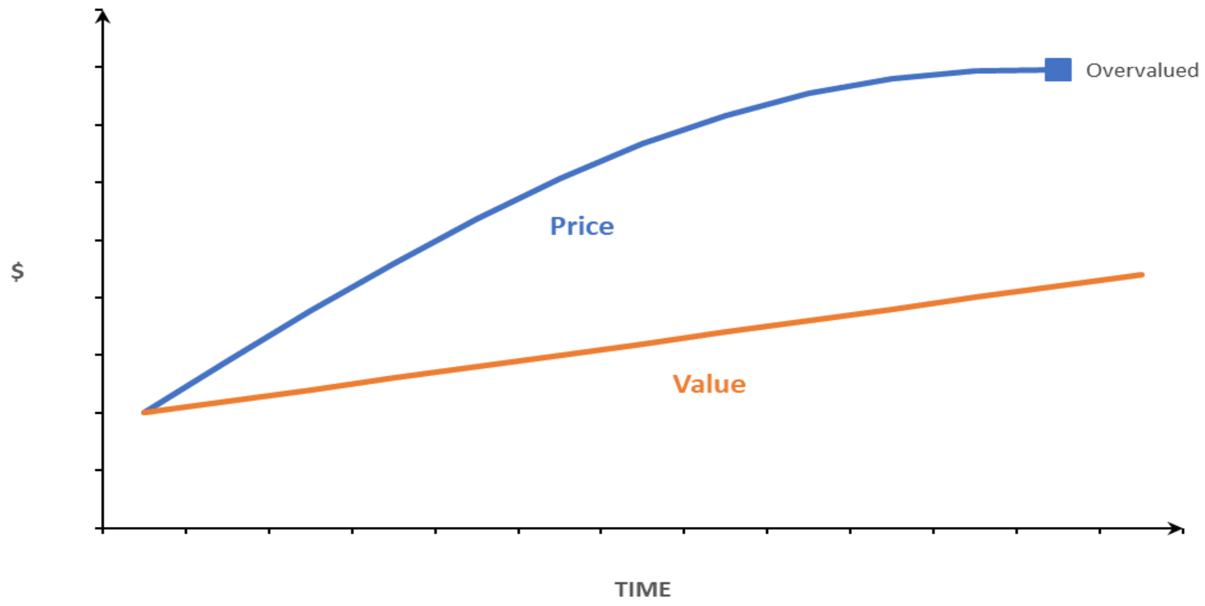
We are not anti-debt. However, in our eyes, a business living within its means, not dependent on debt and growing (largely organically) is a more valuable business and one more in control of its destiny. We trust that you agree. ***SFM***

The Art of Letting Them Run

When it comes to investing in businesses, a timeless yet often underappreciated piece of advice is to "let your winners run." This principal advocates for holding onto winning stocks even as they climb erratically, resisting the temptation to sell just because the price seems high or in market terms, overvalued. In this piece, we explore reasons why selling a stock simply because it appears optically expensive can often be a short-sighted decision.

Below is a graph that compares the underlying value of a business with its market price over time. The value appreciates, reflecting the growth in earnings per share, while the price fluctuates in cycles of exuberance (overvaluation) and pessimism (undervaluation).

Figure 17: Market cycles of a business



Source: SFML

When the stock runs above its true value, conventional wisdom suggest it is time to sell, hoping for a mean reversion and an opportunity to buy back at a lower price. While this strategy seems optimal, the reality often proves otherwise. Investors eager to time the market may try to catch moments when prices change direction, but there is no guaranteed signal for exiting or entering the market, and market bottoms are only determined in hindsight.

Independent research supports this cautionary tale. For instance, a study[1] examining the total returns of a $10,000 investment in the ASX200 from October 2003 to April 2024, revealed stark outcomes. Missing just the 10 best days during this period would have slashed the portfolio's gains by over 43%. Worse still, missing 40 of the best days would have resulted in a staggering 97% loss compared to staying fully invested.

The dangers and difficulties of market timing are well-documented. Moreover, relying on the assumption that share prices will mean revert elegantly is often misguided. More often than not, prices continue to climb, leaving market timers sidelined, never to see the stock reach their targeted buy level. This brings us to what we advocate as a much simpler strategy: patience.

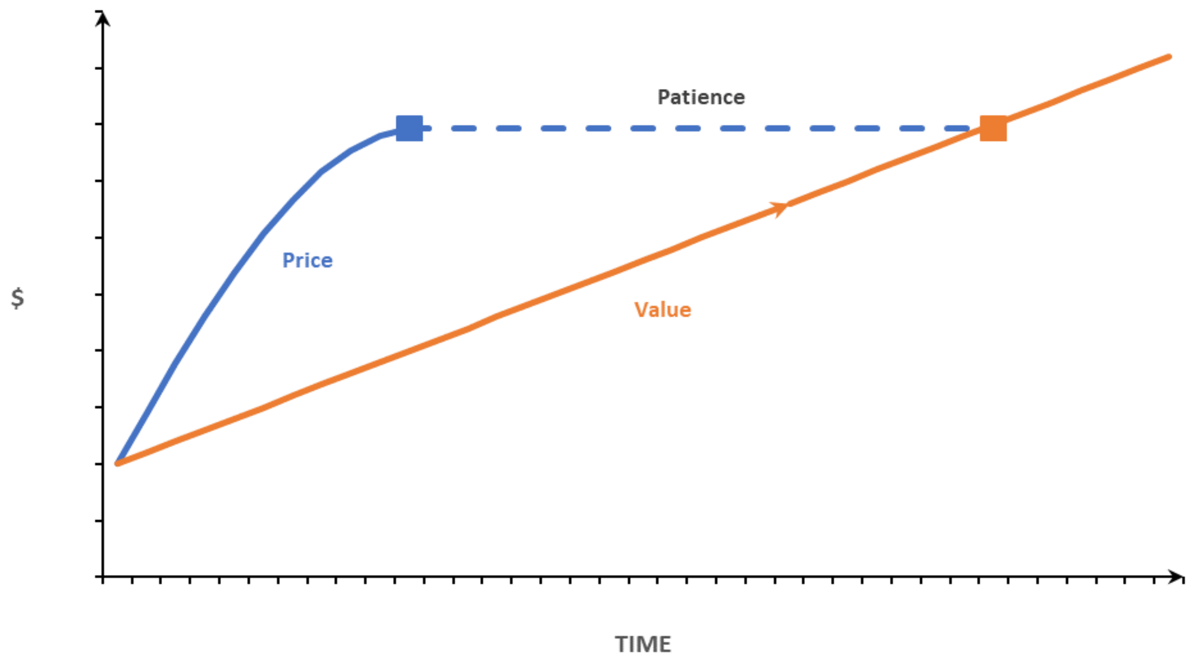
A business helmed by excellent operators, characterised by robust economics, a strong balance

[1]https://www.fidelity.com.au/learning-hub/understanding-markets/timing-the-market/

sheet, and focus on capital allocation, generally experience earnings per share growth. This metric, measured over long durations, is the key driver behind stock performance.

As illustrated below, even if the price remains lofty throughout the period, patience allows us to see the value eventually converge with the price. In other words, we see the stock become increasingly less overvalued until it ultimately reaches and surpasses the price. Conversely, an undervalued stock sees its value increasingly diverge from its price as the company continues to grow its earnings per share.

Figure 18: Market dynamics of a business



Source: SFML

It is important to note that this should not be misconstrued as overpaying for stocks; rather, the key to outperformance lies in an investor's willingness to allow successful investments to grow and become a larger part of their portfolio, truly riding those winners. As Thomas Phelps wrote,

"To make money in stocks, you must have the vision to see them, the courage to buy them, and the patience to hold them."

We believe the last to be the rarest of the three. One of the remarkable examples of this strategy comes from Robert Kirby's *"The Coffee Can Portfolio."* As he wrote in "The Journal Of Portfolio Management," Kirby first recognised the merits of this approach while advising a client in the investment advisory business:

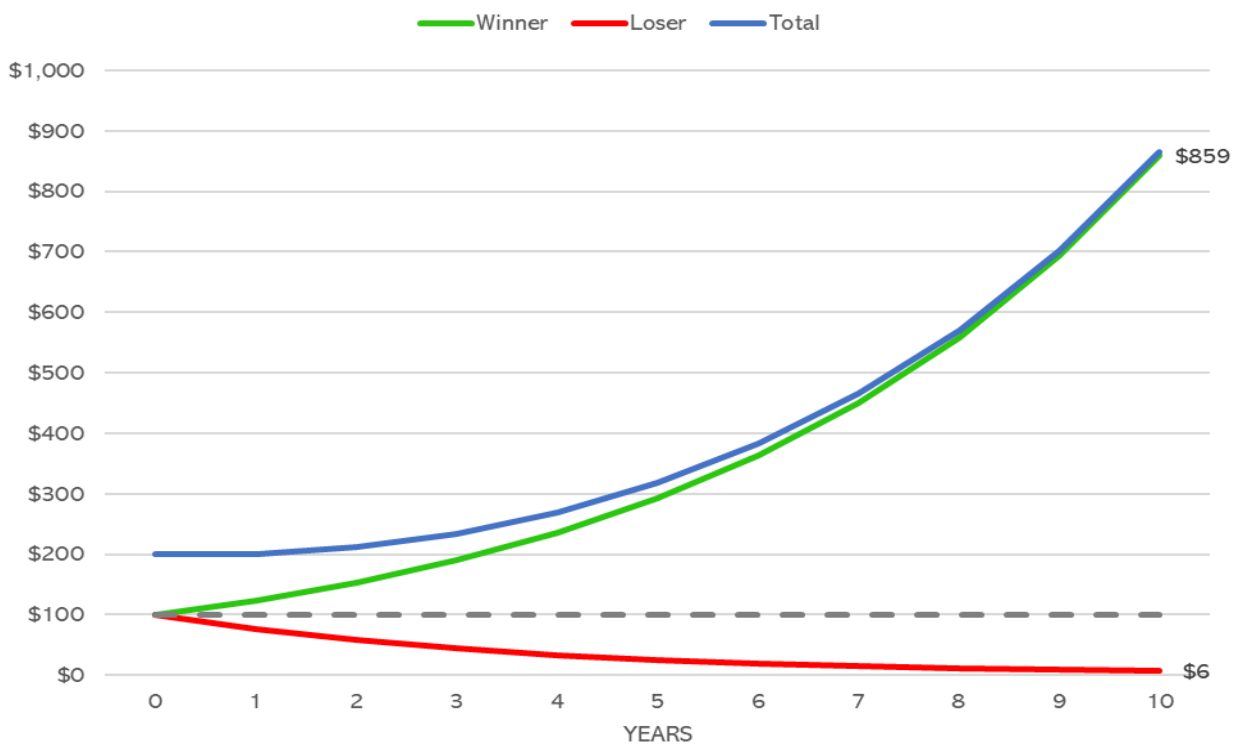
"The potential impact of this process was brought home to me dramatically as the result of an experience with one client. Her husband, a lawyer, handled her financial affairs and was our primary contact. I had worked with the client for about ten years when her husband suddenly died. She inherited his estate and called us to say that she would be adding his securities to the portfolio under our management.

When we received the list of assets, I was amused to find he had secretly been piggybacking our recommendations for his wife's portfolio. Then, when I looked at the total value of the estate, I was shocked. The husband had applied a small twist of his own to our advice: he paid no attention whatsoever to the sale recommendations. He simply put about $5,000 in every purchase recommendation, then tossed the certificate in his safe-deposit box and forgot about it.

Needless to say, he had an odd-looking portfolio. He owned a number of small holdings with values of less than $2,000, and several large holdings with values in excess of $100,000. There was one jumbo holding worth over $800,000 that exceeded the value of his wife's portfolio and came from a small commitment in *a company called Haloid; this later turned out to be a zillion shares of Xerox."*

To further illustrate the tremendous effect winners can have, consider a stock that compounded at 24% annually and another that compounded at negative 24% annually, both with equal initial weights. One might expect the result to be a breakeven, leaving us with the same amount of money we started with. However, after 10 years, your portfolio would have compounded at over 15%.

Figure 19: Compounding in action



Source: SFML

Over time, we see the winning stock gradually occupy a larger portion of the portfolio, driving its performance and ultimately becoming the primary force behind its growth. In contrast, the losing stock becomes less and less impactful, eventually becoming negligible, almost as if it had never been there to begin with. This dynamic highlight the asymmetrical nature of holding onto winners. As Gautam Baid, author of "The Joys of Compounding", puts it,

"Compounding is convex on the upside and concave on the downside. Few understand this, but the day you do, it will change your investing perspective forever." **SFM**

A Company’s Soul Lies in Its Culture

A relatively new addition to our investment team shared some reading insights that resonated with what we most value in a business: its culture. The readings were from a capital management firm, Greenlea Lane Capital Management, which delved into the layers that exist within a business.

The notion of what constitutes a worthy investment has been discussed by many great investors, each with individual biases. However, at the heart of a sustainable and continually advancing business lies a unique soul and deep-seated culture that resonates.

This is where the leverage sits in a business.

Not in the balance sheet, loaded with debt, but in the people who enact meaningful change over a duration. When you succeed at that level, the outcome is a cascading impact throughout the organisation, with an exponential effect that becomes all too apparent the further one travels.

What is certain is people can make an impact. The compounding effect when a business enjoys financial success can be largely attributed to the cultural setting within an organisation.

To that end, we travel and meet the people behind the names and titles to gauge whether a company soul does in fact exist.

April in Europe

Travelling takes effort, yet amidst the long distances and many early morning flights, there’s a gratifying reward: the privilege of connecting with owners and employees of businesses, rather than purely associating them to a share price or a company name.

In April, we did just that. We travelled to Europe and met with a host of businesses across multiple countries. Despite technology advances and the prominence of video conferencing, nothing comes close to direct on-the-ground engagement and walking the halls of a business.

Reliance Worldwide Group

The company’s organised U.K. investor tour of wholly owned plumbing group John Guest was the main reason for our Europe trip.

Following its acquisition in 2018, the business is now going through a reset. Liken it to a back-to-basics approach, setting the company up for future success.

Inflation and economic slowdown have muted demand, resulting in lower profits. Having previously prioritised acquisitions to bolster growth and deliver scale, this strategy is no longer the immediate focus.

Management that steered the business in recent years has transitioned to a new team, a group deeply entrenched in the Reliance culture.

The appointment of Dixon Thuston as the EMEA regional head in December 2023, relocating from the U.S. where he has been with the business since 2009, signifies an important milestone. Thuston brings the ethos of Reliance, a culture embodied by Group CEO Heath Sharp, who has been with the company since 1990, and CFO Andrew Johnson, since 2010.

Thuston’s skill set is deep, spanning engineering, product development, sales and importantly, supply and logistics operations. The big advantage Thuston enjoys though is leading a highly experienced and engaged team. Combine that with his people first approach and the potential to make a material difference is large

What becomes all too apparent as you enter reception, tour the site and engage with staff and executives is twofold: tenure and pride. Whether it’s the product design team led by Glen Ansell of 27 years, or the production team led by Richard Horn of 26 years, the John Guest employee brand resonates.

The operations site consists of multiple manufacturing hubs. It’s hard not to be impressed with the operational efficiency, cleanliness and manufacturing robotics to deliver world-class product output.

Further, the site operates 24/7 and the output of its main plumbing products, the plastic JG Speedfit push-to connect straight and elbow fittings, are manufactured in the millions. To demonstrate the operational performance, Horn (production leader) proudly points out each plumbing unit is now manufactured every 0.89 seconds, a significant improvement from the previous rate of just under two seconds when older processes and machinery were used.

When we meet up with Horn later in the tour and naively mention the 0.9 seconds sounded impressive, he corrects us, noting it was 0.89 seconds. In his eyes, the 0.01-second difference was equivalent to either winning gold or silver. It was an important moment, highlighting the significance of incremental improvements in achieving the final outcome, measured in volumes, scale, margins and profits. The more efficient, the more likely profits will grow, leading to the flywheel of further reinvestment.

Figure 20: John Guest Speedfit push-to-connect plumbing fittings

Source: Reliance Worldwide John Guest investor day 16 April 2024, West Drayton, London

The tool room, housing the company's product extrusion tool kits, is where the magic happens. Group CFO Johnson labels this as the company's 'secret sauce' – a combination of deep local experience with U.S. input to deliver high levels of automation, consistent product output and strong margins.

Reliance Worldwide's public listing took place in 2016. Since then, the business has undertaken several acquisitions and moulded a team of executives to lead its 2,400 workforce in 13 countries.

The SharkBite and John Guest brands are what many associate with the company. But in truth, the real asset lies within the people that enact change and drive a cultural setting throughout the organisation.

Our visit reinforced the values and behaviours that are the lifeblood of any organisation shine brightly in the Reliance people.

Other meetings

In London, we took the opportunity to meet with other executives across our investment holdings, namely Harry Mitchell, CEO Wealth Management at Iress, Chris Galanty, CEO Corporate at Flight Centre Travel Group and Richard Langman, Managing Director of Truckman, a subsidiary of ARB Group.

Each brings a different offering to their respective organisation, but all are leaders that are engaging with the clear purpose of sustaining and driving positive change.

Iress

Mitchell, while relatively new to the company, has hit the ground running in lifting the Iress Wealth Management business, with particular emphasis on the U.K. offering. This has required a reassessment and common-sense reset on the core functions of the business, coupled with an executive team that is clear in its purpose.

It's early days, but our open and candid discussion with Mitchell leaves us with little doubt that he knows what good looks like and can deliver on driving cultural change from the ground up. Backed by a team considered excellent, what is left now are the results to justify such confidence.

Flight Centre Travel Group

Having not wanted to waste the crisis that was COVID-19, Galanty is forging a new and better business model within the travel group's corporate customer offering. The move to a single-operating model is in its infancy, with another 18 months to play out.

At its end, this top three global corporate travel provider will have transformed itself via robotics, artificial intelligence and uptake of the most modern software platforms to drive customer change. This will allow for customer self-service, where appropriate, and better online access to deeper travel content, while delivering big productivity gains across the group's employee and consultant base.

Galanty acknowledges the significant task at hand, but has an energised management team that, having now survived COVID-19, is putting digital investments at the forefront to deliver meaningful change. In short, it is an opportunity not to be wasted.

Led by co-founder and CEO Graham Turner, the Flight Centre culture was never the issue. Embodied by a goal to build a better business model, the team is working hard to let the results speak for themselves.

Truckman

Acquired in March 2021, ARB is early in its ownership of the U.K.'s largest hardtop canopy truck manufacturer. The business has heritage and brand loyalty. What ARB offers is an even deeper cultural setting that puts the product and customer first.

Our site visit meeting with Managing Director Richard Langman quickly illustrated why Truckman and ARB are a natural fit, reflected in the core values that management, led by Langman, first established in 2010:

1. The customer
2. Honour
3. Pride
4. Respect
5. Team
6. Accountability
7. Future | Invest in the future

Figure 21: ARB subsidiary, Truckman

Source: SFM site visit 9 April 2024, Narrowboat Way, Dudley, West Midlands, London

The long-term tenure of many in the Truckman ranks speaks to the cultural footprint present and why ARB would have been drawn to the business in the first place. Having spent the best part of the morning with Langman, it is easy to see why this business will prosper under ARB's ownership.

Comment

During our trip, we met with other investment company executives, spanning Dublin, Amsterdam and Germany. Suffice to say, what consistently resonates in all our meetings are the people. Beyond the business or the financial standings, we strive to uncover insights on the most intangible essence, that a company's soul is ever present.

The way to transform a company is to align human behaviour from the top to the bottom, a cascading influence delivering an exponential effect. The further we travel, the clearer it becomes that what matters most in delivering enduring success is a combination of fundamental beliefs, behaviours and values, often referred to as culture. ***SFM***

GLP-1 101

Timeline GLP-1

**Definitions provided at the end of the article.*

Date	Description
1960's	• Discovery of the first of the two main incretins known today, gastric inhibitory polypeptide (GIP).
1983	• The sequence of vertebrate GLP-1 was discovered by Graham Bell in Chicago, who cloned hamster preproglucagon and found it to harbour potentially two more hormones named GLP-1 and GLP-2.
1987	• Kreymann et al. showed GLP-1 was an incretin in man.
1990's	• Academic research into type 2 diabetes found that insulin production is disrupted by a hormone called glucagon-like peptide 1, or GLP-1. • Novo Nordisk scientist Lotte Bjerre Knudsen initiates research to extend the half-life of GLP-1.
1992	• Gutniak et al. demonstrated a clear antidiabetogenic potential of GLP-1 not only in patients with type 2 diabetes, but also in patients with type 1 diabetes.
1993	• Michael Nauck in Germany, and Jens Juul Holst and Sten Madsbad in Denmark, published studies on the clinical potential of GLP-1. • Importantly GLP-1 did not induce hypoglycaemia, as its effect on insulin secretion was glucose-dependent. • GLP-1's incretin effect is preserved in patients with type 2 diabetes. • GIP is the most important incretin in people without diabetes, whereas in type 2 diabetes the effect of GIP is greatly diminished.
1996	• Break-through Liraglutide molecule is developed, a GLP-1 analogue. • Includes a fatty acid grafted onto molecule, via recombinant DNA splicing. • 13-hour half-life, compared to native GLP-1 with 2.5 minutes life in the body.
1997	• Liraglutide was advanced for clinical development by Novo Nordisk.
2001	• The Novo Nordisk team published the first GLP-1 study focused on the weight loss effect in both normal and obese rodents.
2002	• The first paper published indicating GLP-1 could be more broadly relevant for neurodegenerative diseases, like Alzheimer's and Parkinson's disease.

2003	• U.S. Medicare Part D was passed into law and took effect in 2006.
	    o It allowed Medicare to cover drugs.
	    o Note: Part A is just hospital and Part B is doctor visits.
	    o Part D today legally prohibits Medicare from paying for weight loss.

2005	• Eli Lilly drug, Byetta (a GLP-1 analogue licensed from Novo Nordisk) is the world's first GLP-1 analogue to enter the market.
2007	• Novo Nordisk enters a higher dose version of Liraglutide into phase 3 human trials for weight loss.
2010	• Novo Nordisk gets final approval for Victoza, the diabetes version of Liraglutide.

2013	• Novo Nordisk submits Saxenda, the weight loss version of Liraglutide, to the FDA and EU for approval.
2014	• Novo Nordisk obtained FDA approval to market Liraglutide for obesity. • Novo Nordisk published a paper documenting that Liraglutide was able to access the brain in a GLP-1R-dependent manner. It does not cross the blood–brain barrier, as that does not make sense for a peptide or a protein, but it has access to circumventricular organs like the median eminence below the third ventricle and the area postrema in the hindbrain, as well as some others.
2015	• Record US$16 billion in revenues for Novo Nordisk, a pure-play diabetes & related obesity company.
2016	• LEADER study published, showing GLP-1 cardiovascular benefits. • Within the space of hours—after the LEADER publication – Dan Drucker published a review citing over 100 primarily animal scientific papers about GLP-1 and cardiovascular effects.
2018	• Novo Nordisk launches Semaglutide branded Ozempic for diabetes.
2019	• Novo Nordisk revenue of US$18.2 billion +6% • Nature Medicine publishes a paper that suggests a new mechanism, whereby activation of GLP-1Rs on microglia can prevent conversion to toxic astrocyte phenotypes, which can lead to neuronal death. This mechanism appears very relevant for current thinking in the Parkinson's disease field and may be potentially relevant in Alzheimer's and other neurodegenerative disorders, like depression and stroke.
2020	• As Ozempic was coming online, Novo Nordisk has a US$100 billion market capitalisation, with revenue of US$20.8b +14% • Total annual obesity drug sales were only US$744 million, including Liraglutide.
2021	• Novo Nordisk has a US$250 billion market capitalisation, revenue of US$21.3b +2.5% • Wegovy launches in the U.S., an FDA-sanctioned weight loss version of Semaglutide.
2022	• Novo Nordisk has a US$300 billion market capitalisation, revenue of US$25b +19%
2023	• Novo Nordisk has a US$400 billion market capitalisation, revenue of US$34.4b +35%
2024	• Novo Nordisk has half a trillion-dollar market capitalisation. • Semaglutide patent extends to 2032. • Novo Nordisk's next generation product is CagriSema. • On 24 June, Novo Nordisk announced plans to invest US$4.1 billion to build a second fill and finishing manufacturing facility in Clayton, North Carolina, and grow its ability to produce current and future injectable treatments for people with obesity and other serious chronic diseases. Marking one of the largest manufacturing investments in Novo Nordisk's history, the expansion will add 1.4 million square feet of production space for aseptic manufacturing and finished production processes, doubling the combined square footage of all three of the company's existing facilities in North Carolina.

Figure 22: The big guy Santa in on the action

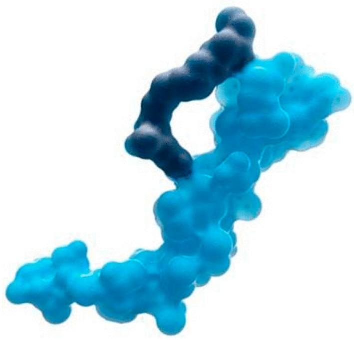
Source: smerconish.com

Surmount Trial

In June, Eli Lilly released additional trial data from its Surmount-OSA trial, with the eye-catching headline "*Disease Resolution*". As you might expect, ResMed dropped 10%, as experts delivered their verdicts.

However, the devil is in the detail of definitions and the subsets of patients. As generalists, understanding some of the science behind GLP-1 helps. In this article, we aim to take a balanced view amidst the negative conversation surrounding these medicines, which are developing daily.

Figure 23: Glucagon-like peptide-1 (GLP-1), The American Chemical Society



Source: The American Chemical Society

Obesity and Obstructive Sleep Apnea (OSA) are individually very large markets that overlap, and not all patients will be captured or treatable. GLP-1 treatment can be overly expensive, and adherence rates after one year reportedly lag other drugs.

For these reasons, positioning GLP-1 against continuous positive airway pressure (CPAP) is unlikely. Our takeaway is GLP-1s are here to stay. Evolving science hypothesises that GLP-1 has important effects on atherosclerosis, relevant for the cardiovascular benefit seen in the treatment of diabetes and obesity. Additionally, GLP-1 may be relevant in neurodegenerative diseases.

Considering these developments, our view is that ResMed will benefit from the rise of GLP-1 on two fronts.

Firstly, as awareness of obesity treatment pathways skyrockets, more new patients will seek treatment. However, this isn't just patient-driven; it's also the medical physicians who see the opportunity for change and profits. Until recently, clinical weight loss has been a somewhat unattainable holy grail. Now multiple treatment pathways exist, including GLP-1 and CPAP.

Secondly, this cohort of patients actively seeking treatment also tend to be more committed to the result, driving better adherence to CPAP. This collectively improves health outcomes, which spins the flywheel. Finally, let's also keep in mind that ResMed stands alone in delivering CPAP solutions in the U.S.

The result

The GLP-1 + PAP arm of Eli Lilly's Surmount-OSA trial saw patients take Tirzepatide (Zepbound) drug and use (CPAP) machine that treats OSA for one year, yielding the following outcomes:

- 52% of patients experienced no or mild obstructive sleep apnea after 52 weeks.
- 40% continued to experience moderate or severe disease.
- Severe cases reduced from 71% at the start of the study to 18% after 52 weeks.

Definitions

Apnea refers to when an OSA patient stops breathing for at least 10 seconds. Hypopnea is when the OSA patient has a partial blockage or obstruction of their airway and the subsequent breath is shallower than normal. The Apnea-Hypopnea Index (AHI) measures the average occurrence of apnea and hypopnea per hour while sleeping. For example, an AHI of 2 is approximately two incidents of hypopnea or apnea per hour for every hour of sleep.

The Eli Lilly definition of "*disease resolution*" is:

- AHI < 5; or
- AHI 5-14 and an Epworth Sleepiness Score (ESS) ≤ 10.

The Obstructive Sleep Apnea (OSA) severity definition is:

- Mild: AHI 5-15.
- Moderate: AHI 15-30
- Severe: AHI > 30.

Reimbursement for continuous positive airway pressure (CPAP) treatment by The US Centers for Medicare & Medicaid Services (CMS) is driven by the following criteria:

- AHI ≥ 15 (minimum of 30 events in a sleep test).
- AHI 5-14 (minimum of 10 events) and
    - Documentation of excessive daytime sleepiness, impaired cognition, mood disorders, or insomnia; or
    - Hypertension, ischemic heart disease, or history of stroke.

Making sense of it

While the headline "*Disease Resolution*" and the 52% result are perfect fodder for a Twitter (X) feed, there are always more outstanding pieces to this puzzle. We highlight two below.

Firstly, the breakdown of the 52% – the number of patients with disease resolution (an AHI < 5) versus those that remain in the subset of patients considered Mild with an AHI of 5-15 is unknown.

The second reality check here is that trial data often diverges from real-world data. GLP-1 like artificial intelligence (AI) are both very early in their respective lifecycles. It's worth understanding how a GLP-1 works and actual patient outcomes to start the journey of building out balanced insights.

Dr. Shyamsunder Subramanian, Division Chief for Pulmonary Critical Care at Sutter Gould Medical, a large California sleep clinic, treats approximately 100 new cases weekly, with two thirds being obese (a BMI of more than 35). He believes the headline-grabbing disease resolution of > 50% is an overreach.

"Unless the standard deviation is extremely significantly broad for the mean to be just going from 50 to 25 and yet half of that entire cohort is below an AHI of 15. I think that is one thing. And the second thing is I think, the number of patients who are even below 15 an hour (AHI), let's say they are 12 or 13 and who don't meet any of the other criteria for continued treatment, daytime sleepiness or disturbed sleep at night or comorbid high blood pressure, or cardiac comorbidities, that is that is a very, very tiny fraction. So very rarely do we have patients who are just borderline maybe between AHIs of five and seven who otherwise are perfectly healthy and completely asymptomatic where we truly say that these patients do not merit any other therapy. So, I would say that seems to be a bit of an overreach if they're headlining with, with something like that."

Dr. Shyamsunder Subramanian's biggest issue is that he can't grow his obesity program fast enough, with the main barrier being the need to onboard trained providers who understand prescriptions required by patients.

The products

Our timeline exposes how new these medicines are in the weight loss category. It's not surprising that medical practitioners are scrambling to build programs. This is a learning curve for nearly all involved.

Semaglutide is Novo Nordisk's second-generation GLP-1 analogue following on from Liraglutide.

Semaglutide is an antidiabetic medication used for the treatment of type 2 diabetes and an anti-obesity medication used for long-term weight management. It is a peptide, similar to the hormone glucagon-like peptide-1 (GLP-1), modified with a side chain and can be administered by subcutaneous injection or taken orally. It is sold by Novo Nordisk under the brand names Ozempic and Rybelsus for diabetes, and as Wegovy for weight loss.

Eli Lilly sells Tirzepatide, a GIP receptor, and also a glucagon-like peptide-1 agonist, which is administered via subcutaneous. Similar to Semaglutide, Tirzepatide acts as a GLP-1 receptor agonist. However, it is also a GIP, which is basically bundling two hormones together to drive more effective weight loss, based on early trial data, but also to better help the body produce insulin. It was approved in the U.S. for diabetes treatment in May 2022 under the brand Mounjaro and gained FDA approval in November 2023 for weight loss under the name Zepbound.

While the Surmount trial results were delivered by Eli Lilly's Tirzepatide, this note focuses on Novo Nordisk's Liraglutide and Semaglutide. Both are GLP-1 peptides and represent a good proxy for the history and rapid growth of this category.

Fatty acid is the platform

Lotte Bjerre Knudsen, Novo Nordisk's Chief Scientific Advisor, has spent more than 25 years working with GLP-1. Knudsen led the research group in the early 1990s that first invented the molecule Liraglutide, the precursor to Semaglutide. In a recent interview, Lotte explained both the platform and the mechanisms of action of a GLP-1.

Figure 24: Liraglutide Inventor Lotte Bjerre Knudsen claims to be lucky. "*I was in the right place at the right time*".

Source: The American Chemical Society

"It's the fatty acid technology that I would call a platform technology today. That was what we started working with in the 1990s. The principle is that the fatty acids bind to albumin, and albumin is this big molecule that we have in our blood that transports lots of things in the body. It's a natural principle that these fatty acids, which we get from the food we eat, are also poorly soluble in blood, so they bind to albumin and then they get transported around.

We piggyback on nature's principle of the fat that can bind to the albumin, to make medicines that could last for a week. We can plug other things into that fatty acid too to be carried around and be long-lasting. We *worked on that for many years to prove both that it worked and that it was safe.*

They engineered the fatty acids to bind harder to this albumin molecule so that when it was in the body, it would stay on albumin longer. We note that fat is sticky, Semaglutide however was engineered to be a little less sticky a fatty acid, compared to Liraglutide to make it long acting.

Liraglutide lasts 12 hours, whereas Semaglutide lasts 160 hours. To achieve that, I think they looked at 4000 different molecules and ended up choosing Semaglutide.

It turns out that when you make that change, you also get more weight loss and it's likely that it's because of the stickiness, so you get a little bit more to go to some areas of the brain that are important for the weight loss."

Science behind Semaglutide

Some confusion exists as to how Semaglutide works (in diabetes v weight loss) and what it was designed for. Weight loss is neither a side effect of the action of mechanism, nor was it a surprise outcome. Different mechanisms are at work in different parts of the body. As Knudsen points out above, weight loss involves GLP-1 in the brain, whereas insulin production occurs in the pancreas and the islets of Langerhans.

Diabetes is when blood sugar levels become too high. Normally, the body produces GLP-1, a hormone that helps regulate insulin. In type 2 diabetes, this process doesn't work properly as beta cells become dysfunctional or die off, leading to decreased insulin production and elevated blood sugar levels. People with type 2 diabetes have a reduced incretin effect, meaning they don't respond to GLP-1 as intended. Several factors are at play here. Namely, the very short half-life of native GLP-1, at 2.5 minutes in the body, and the fact that native GLP-1 rapidly degrades by the DPP-4 enzyme and is cleared quickly by the kidneys.

However, high doses of GLP-1 analogues can help restore insulin production in response to glucose.

Researchers have suggested since the 1970s that reducing glucagon could help treat type 2 diabetes. The natural form of GLP-1 breaks down too quickly to be effective, but modified versions, like Semaglutide, last much longer in the body and can be used for treatment.

Below we compare GLP-1 mechanisms of action on type 2 diabetes and weight loss. There are three mechanisms at play in treating diabetes with GLP-1:

1. GLP-1 works by increasing insulin levels, which then helps reduce the blood glucose.
2. It lowers the level of glucagon, which is the opposite to insulin. This action stops working when glucose is normalised, serving as a built-in safety mechanism to prevent an individual getting too much.
3. It also influences the intestines, slowing down food absorption. This helps to stabilise blood glucose levels after meals, minimising sharp fluctuations in blood sugar.

In weight loss, it's a different mechanism of action:

1. Reduction in appetite and energy intake: Liraglutide, the original peptide, can reduce energy intake by around 15%. It slows gastric emptying, meaning food stays in the stomach longer, leading to a feeling of fullness. Semaglutide: This is more potent than Liraglutide, leading to about a 30% reduction in energy intake. It also works by slowing gastric emptying and promoting satiety, but with greater efficacy.
2. Effects on the brain: GLP-1 receptors are found in several areas of the brain involved in appetite regulation, including the hypothalamus and brainstem. These receptors influence hunger, satiety (feeling of fullness) and the reward system (how much pleasure we derive from eating). By acting on these brain regions, GLP-1 agonists reduce the desire to eat and enhance feelings of fullness after meals.
3. Peripheral effects: GLP-1 agonists also have peripheral effects, such as slowing gastric emptying, which delays nutrient absorption and prolongs satiety.

Aside: We have already noted above that native GLP-1 is made in the body. Novo Nordisk first tried to develop a sustained release formulation of native GLP-1, after acquiring intellectual property rights related to native GLP-1 from Massachusetts General Hospital (Joel Habener et al.) Novo Nordisk worked through a couple of collaborations with other companies on this. Technically, they believed it was possible, but they never went into clinical trials because the formulation caused severe skin reactions. Lilly had the same experience and Roche went all the way through phase 3 with taspoglutide, with a similar concept, but never filed for approval. This was due to 25 cases of allergic reactions, including some cases of anaphylactic shock.

Research and understanding

In animal models, researchers can isolate the effects of GLP-1 agonists on different parts of the body and brain to better understand their mechanisms. These studies help identify which receptors are responsible for the different effects observed with GLP-1 agonists.

While animal studies provide valuable insights, translating these findings to humans is highly complex. The occurrence of natural GLP-1 in the brain is not well understood, according to Knudsen.

"Those studies are really difficult to do because it's gone so quickly, but I would just argue that since we know how the target receptor for GLP-1 works, then there has to be some GLP-1 that gets to the brain. There's also some local production of native GLP-1 in the hindbrain and the back of the head where the spinal cord comes up. There are a lot of nerves coming up towards the brain, and there's also some native GLP-1 being produced there."

The key areas of uncertainty remain the exact pathways and the relative contribution of different brain regions in mediating the effects of GLP-1 agonists. The interplay between the various systems (hunger, satiety, reward) and how they collectively contribute to reduced caloric intake and weight loss are also not fully understood.

We know that clinical trials to date have consistently shown that GLP-1 agonists effectively reduce appetite and promote weight loss in humans. However, there is a significant gap between average trial results, which we see in headlines, on billboards and across social media platforms, and the actual performance in a myriad of different metabolisms, which are impacted by diverse societal influences.

Hefty expectations and real world collide

"Everyone expects these medications to be magic," says Hans Schmidt, Director of the Centre for Weight Loss & Metabolic Health, and Chief of Bariatric Surgery at Hackensack University Medical Centre in New Jersey. In fact, people have a wide range of responses to anti-obesity medicines.

While many people respond remarkably well, a subset lose little to no weight on new GLP-1 drugs, which mimic the naturally occurring hormone in the body (GLP-1) involved in regulating blood sugar, appetite and digestion.

In a trial of Semaglutide, about a third of people lost less than 10 percent of their weight; in a study for Tirzepatide, 16 percent of people on the highest dose lost less than 10 percent of their weight. In the same trials, about 14 percent of participants on Semaglutide lost less than five percent of body weight; for those on the highest dose of Tirzepatide, that figure was nine percent.

This reflects what Schmidt is seeing at his practice. He says around 15 percent of his patients don't respond well to GLP-1s. Of course, part of it comes down to whether patients can stay on the medications and remember to take them weekly. Some people also can't tolerate the side effects. As Schmidt states, *"If you're not seeing the result and you're getting the side effects, there's no reason to be on the medication."*

It's not clear why some experience the benefit of weight loss, while others don't. *"We still don't understand most of the variation in response,"* says Ewan Pearson, Professor of Diabetic Medicine at the University of Dundee in Scotland. There are a few known predictors of how patients will fare. For instance, women tend to lose more weight than men on GLP-1 drugs, possibly because they have a different fat distribution compared to men, or because their smaller average size could mean higher exposure to the drug.

Despite GLP-1 drugs first being approved as a diabetes treatment to improve blood sugar levels, they're less likely to produce significant weight loss in people with type 2 diabetes. Researchers have suggested genetics, altered microbiomes and other medications that promote weight gain are possible reasons for this. *"A lot depends on a person's physiology and biology. We can't expect that a drug will be a one-size-fits-all for everyone,"* says Amy Rothberg, an Endocrinologist at the University of Michigan.

GLP-1 drugs lead to weight loss by slowing the movement of food in the stomach and by interacting with receptors in the brain to promote a feeling of fullness. Some people taking them report less "*food noise*"—they no longer have cravings or think about food all the time. As a result, they eat less. Patients start on a low dose, which is gradually increased each week. Schmidt says some people may not respond to the lower doses but do eventually see weight loss as the medication is increased.

Without lifestyle changes, these medications are likely to be less effective for weight loss. Novo Nordisk, which makes Ozempic and Wegovy, and Eli Lilly, which makes Mounjaro and Zepbound, stress the drugs are meant to be used alongside a healthy diet and exercise. In trials of Semaglutide and Tirzepatide, the medications were paired with a reduced-calorie diet and increased physical activity. Clinical trials are often the best-case scenario when it comes to a drug's efficacy because they involve careful tracking of participants and many follow-up visits with providers. In real life, patients may not follow their weight-loss plan as diligently or see their doctor as regularly.

And while these drugs help curb appetite, they don't magically eliminate all temptations. After all, there is a major social component to eating food. *"We may eat because it looks good, tastes good, we're in the company of others, or because it's available,"* Rothberg says. A person who has those environmental pushes or stimuli competing with the drug won't lose as much weight compared to the person who doesn't have to deal with those factors, she argues.

Differences in metabolism, or how people break down food and convert it into energy, could also be at play. A person's age and hormone function, as well as the amount of physical activity they get, can influence their metabolism.

Researchers are also looking into whether genetic factors may explain some of the variability in response. In 2022, Pearson and his colleagues published a paper that identified a gene called *ARRB1* that seems to be involved in glucose control. Studying genetic data from more than 4,500 adults, they found that people with certain variants in this gene have lower blood sugar levels while taking GLP-1 drugs.

The *ARRB1* gene is involved in recycling the GLP-1 receptor within the cell and returning it to the cell's surface. It's likely, Pearson says, that people with these variants—about 2 to 3 percent of the white population and 11 percent of Hispanics—have more of these receptors on their insulin-making pancreatic cells. Because GLP-1 drugs work by binding to these receptors, the bigger reduction in blood sugar may be explained by greater binding activity, spurring more insulin production.

But in Pearson's study, the genetic alterations weren't connected with weight loss, meaning the effect was probably limited to the pancreas. Even so, it means there are likely to be genetic factors that account for some of the weight loss response. And it may be that variants in multiple genes, rather than just one, drive people's different responses. Pearson's group is now working with researchers at the University of Montreal to study genetic factors and weight loss in people on GLP-1 drugs.

For some GLP-1 non-responders, it could be that another mechanism is involved in their obesity, says Rehka Kumar, an Endocrinologist and Chief Medical Officer of Found, a company that provides personalised weight loss plans. *"It's possible that whatever drove them to gain weight isn't necessarily related to the GLP-1 pathway,"* she says. *"They may do better on a medicine that works differently."*

Researchers at the Mayo Clinic are trying to categorise people based on their obesity "*phenotype*," or the behavioural components behind the disease. Andres Acosta, Mayo Gastroenterologist, and his colleagues have used machine-learning methods to describe four major types of obesity: "*hungry brain*," in which people never feel full; "*hungry gut*," where people eat until they are full but feel hungry again soon after; "*emotional hungry,*" which are people who eat to cope with emotional issues or to reward themselves, regardless of whether they're hungry; and "*slow burn,*" people who don't burn calories fast enough. Research by Acosta has shown that people with the hungry-gut type lose more weight on GLP-1 drugs versus the other types.

Non-responders may not have to wait long for other options as GLP-1 drugs only seem to be getting more effective. While Semaglutide only targets the GLP-1 receptor, the newer Tirzepatide targets both GLP-1 and another receptor, GIP. Drugmakers are now studying whether new drugs targeting more than one receptor involved in obesity could boost weight loss. *"As we get more sophisticated with these gut hormone combinations, I think we'll be able to see more responsiveness in the population,"* Kumar says.

Negative conversations

The GLP-1 antagonists drive at three key points:

1. Cost
2. Side effects
3. Availability of product patient subsets

Cost differential

President Biden and Sen. Bernie Sanders (I-Vermont.) continued their calls for lowered drug pricing in an op-ed published on Wednesday 3 July 2024, citing the high cost of the weight loss products manufactured by Novo Nordisk and Eli Lilly. In the op-ed, published in USA Today, Biden and Sanders echoed the common criticism of drug companies charging the U.S. significantly more for prescription drugs compared to peer nations.

The price in the U.S. is expensive, but it's best to consider the out-of-pocket costs. According to reports the price of Ozempic to treat diabetes is north of US$1,000 and Wegovy for weight loss is north of US$1,300 per month before insurance. This is a uniquely U.S. problem that is too complex to consider here.

In Canada, by contrast, Ozempic is $147 a month. In the UK, it's $93 a month. In Denmark it's significantly cheaper again, as Novo Nordisk, which is 77% owned by a foundation, was set up to benefit the domestic population and is prohibited from making profits at home. Instead, it derives all its profits from exports.

There are reports of people paying somewhere in the vicinity of US$300 a month after insurance as their actual cost. It is common for most employers to put a copay (the amount a patient is required to pay upfront for covered services) of between a 20%-50% on these drugs. At US$1,000, that's US$200-$500. This is still very expensive, at US$3,000-$4,000 out of pocket per year, when 63% of the U.S. population can't meet an emergency cash expense of US$500.[13]

This high out-of-pocket cost, combined with the side effects reviewed below, combine to drive higher non-adherence with these medicines than many other drugs. Research released by the Blue Cross Blue Shield Association (BCBSA) and conducted by Blue Health Intelligence® (BHI), based on data from nearly 170,000 commercial health plan members since the first FDA approval for a weight-loss GLP-1 in 2014, suggests that as many as 58% of people roll off it after a year. Part of this is related to price, while other factors may include changing jobs to an insurer that doesn't cover it, supply constraints, and potential side effects that are not being effectively managed.

Side effects

Side effects are part and parcel of all drug regimens and with multiple mechanisms at play, including interaction with pancreatic cells and brain receptors, GLP-1 will have causal factors. Antagonists argue that harmful side effects remain poorly understood, including the increase of suicidal thought when on the drug.

Eye Health

A study by Mass Eye and Ear, a Boston-based Harvard teaching hospital, published Wednesday 3 July 2024 in the journal JAMA Ophthalmology, showed diabetic patients prescribed Semaglutide were four times more likely to be diagnosed with non-arteritic anterior ischemic optic neuropathy (NAION). People with obesity were seven times more likely to develop NAION, which restricts blood flow to the optic nerve and can cause permanent blindness.

Bone Health
On 25 June 2024, JAMA (Journal American Medical Association) published a study on bone health looking at Liraglutide alone versus a combination of drug and exercise.

Weight loss reduces obesity-related comorbidities. However, concomitant bone loss typically occurs with weight loss, seen as decreased bone mineral density (BMD) and increased bone turnover. Low BMD is associated with increased risk of fractures, and mortality rates rise following any fractures, particularly hip and vertebral fractures.

Weight loss–induced bone loss is a particular concern in older adults. However, bone loss following weight loss has been shown not only in older adults, but also after gastric bypass and after long-term calorie restriction in younger adults with and without obesity.

Weight loss–induced bone loss likely carries a risk across the lifespan, and identifying treatments that induce clinically relevant weight loss while minimising bone loss is essential in long-term obesity management.

In this randomised clinical trial, the combination of exercise and GLP-1RA (Liraglutide) was the most effective weight loss strategy while preserving bone health. Liraglutide treatment alone reduced BMD at clinically relevant sites more than exercise alone, despite similar weight loss.

Early studies, such as STEP 1 and SUSTAIN 8[10] have indicated patients lose more lean muscle mass when on a GLP-1 than if relying on diet and exercise alone. When losing weight, normally you lose 25% lean muscle. GLP's are showing 40% lean muscle mass loss. A 2023 Chinese study concluded differently. This is an area to watch.

Mental Health
European health authorities, including the European Medicines Agency (EMA) and the UK Medicines and Healthcare Products Regulatory Agency (MHRA), have been actively reviewing the potential link between GLP-1 receptor agonists (such as Liraglutide and Semaglutide) and suicidal thoughts or self-harm. This review was initiated following reports of these adverse effects among users of these medications.

The EMA's Pharmacovigilance Risk Assessment Committee (PRAC) examined data from clinical trials, post-marketing surveillance and published literature.

The PRAC concluded the available evidence does not support a causal association between the Glucagon-Like Peptide-1 receptor agonists (GLP-1) – Dulaglutide, Exenatide, Liraglutide, Lixisenatide and Semaglutide – and suicidal and self-injury-related thoughts and actions.

GLP-1 receptor agonists are used to treat type 2 diabetes, and some are also authorised for weight management under certain conditions in adults who are obese or overweight. The review started in July 2023, following case reports of suicidal thoughts and thoughts of self-injury from people using Liraglutide and Semaglutide medicines. In November 2023, the committee requested additional data from the marketing authorisation holders for these medicines, namely Ozempic, Rybelsus, Wegovy, Victoza, Saxenda, Xultophy, Byetta, Bydureon, Lyxumia, Suliqua and Trulicity.

Additionally, the committee analysed the results of a recent study[10], based on a large database of electronic health records, which investigated the incidence of suicidal thoughts in patients with overweight and type 2 diabetes mellitus treated with Semaglutide or other non-GLP-1 receptor agonist medicines for diabetes or overweight. The study found no causal association between the use of Semaglutide and suicidal thoughts.

Another study was conducted by EMA[11], based on electronic health records, which examined the risk of suicide-related and self-injury-related events in people with type 2 diabetes mellitus. The results did not support a causal association between the use of GLP-1 receptor agonists and this risk.

Gut Health
Common gut-related side effects are extensive. They include:

1. Nausea: This is the most frequently reported side effect, often occurring when starting the medication or increasing the dose. Nausea tends to decrease over time as the body adjusts to the drug.

2. Vomiting: Along with nausea, some individuals may experience vomiting, especially during the initial phase of treatment.
3. Diarrhea: Many patients report experiencing diarrhea, which can vary in severity and may persist as long as the medication is taken.
4. Constipation: A reported side effect, although it tends to be less common than diarrhea.
5. Abdominal pain: Some users experience abdominal discomfort or pain, which can be a result of changes in gastric motility and slower gastric emptying induced by the medication.
6. Indigestion: Indigestion, or dyspepsia, is another side effect, causing discomfort and bloating.
7. Decreased appetite: While this can be a beneficial effect for those looking to lose weight, it can also lead to a reduction in food intake that might be uncomfortable for some.

Availability – Not your normal TGA Warning

On 2 July 2024, the Therapeutic Goods Administration (TGA) website stated the following: the pharmaceutical company that supplies Ozempic, Novo Nordisk, has recently advised the TGA and the Ozempic Medicine Shortage Action Group (MSAG) that supply will remain limited for the rest of 2024.

Novo Nordisk advised that demand had accelerated in recent months, particularly for the low-dose (0.25/0.5 mg) version, driven mainly by a rapid increase in prescribing for 'off-label' use (prescriptions to treat conditions other than those approved by the TGA).

The TGA consulted clinical and patient groups represented on the Medicine Shortage Action Group (MSAG). The advice of the action group to prescribers is:

- Do not initiate new patients on Ozempic unless there are no suitable alternatives or there is a compelling clinical reason to do so.
- For patients who are already prescribed Ozempic, consider if they can be changed to an alternative as continuous supply cannot be guaranteed.
- Supplies should be conserved for patients who are stabilised on Ozempic who have no other treatment options.
- It is not known when the medicine will be available in sufficient quantities to meet the ongoing high demand. Novo Nordisk advised that very limited new supplies of Ozempic 0.25/0.5 mg would be available before the end of 2023 and there would be intermittent supply of all strengths of Ozempic throughout 2024.

Significant TGA resources have been devoted to the shortages of Semaglutide, likely adding fuel to demand. The TGA largely points the finger at social media, with the following insight.

Social media's effect on the shortage and TGA's response

"When videos about achieving rapid weight loss with Ozempic went viral on TikTok, the trend was also reported online and across other media. This triggered a huge demand for the product that the manufacturer was not prepared for, and it quickly developed into a worldwide shortage.

Many people who were then unable to get Ozempic to treat their type 2 diabetes in Australia wanted to know what we were doing about the medicine's social media exposure.

As well as regulating medicines, the TGA also regulates the advertising of therapeutic goods to the public in Australia. Prescription-only medicines such as Ozempic can't be advertised to the public in Australia. The reason these laws are in place is to support consumers making informed health care decisions in consultation with their health practitioner and not based on, for example, social media advertising.

We are actively investigating alleged unlawful advertising of Ozempic and is meeting with social media platforms including TikTok to reinforce Australian therapeutic goods advertising laws. The TGA is also investigating how the offending posts can be removed and how to stop similar videos from being posted in the future.

In addition, the TGA has written to media broadcasters about their obligations concerning the promotion of the use or supply of therapeutic goods when publishing news stories. We encourage people to report any concerns about material such as the TikTok videos to the TGA."

Manufacturing capacity will remain an issue for years to come, as indicated by Novo Nordisk's US$4.1B capacity expansion plans announced on 24 June 2024, as outlined in our timeline.

Awareness

With the three negative conversations in hand, we attempt to gauge public perception.

Growing up in the late 70's in Australia was all about colour TV. We all knew about Kerry Packer's World Series Cricket and WeightWatchers 1-2-3 Success plan whether we needed it or not. Fast forward to today, and the intensity of the renewed media interest in the weight loss category is clearly social media driven. Mainstream media is now a follower.

We are all aware of Ozempic, Mounjaro and Wegovy from TikTok (thanks to the TGA, if you haven't accessed your kids TikTok account) to Hollywood and Wall Street, and from the names associated with GLP-1, including Elon Musk, television host Chelsea Handler and Oprah Winfrey.

Most famously, Winfrey announced she would leave the board of WeightWatchers after nearly a decade, following her revelation about using a weight-loss drug. Winfrey informed the company she would not stand for re-election at the annual meeting of shareholders scheduled for May 2024. She has been a member of the board since 2015, when she acquired a 10% stake in the company.

Wall Street has focused on the rise of Eli Lilly and Novo Nordisk's share price, the latter whose earnings have been compared to the total GDP of motherland Denmark.

Figure 25: World Series Cricket Gear Magazine Panel

Source: 1979 Rugby League Week

Financial fortunes aside, the media storm is an outcome of the fact that this is very relatable to the individual person. Knudsen comments *"You don't feel so much if your blood glucose is better. You don't feel so much if you have less risk of getting a cardiovascular attack or a stroke, but you feel that you're hungry every day and all the time."*

Acquired notes, *"When I lose weight, I immediately notice. If I lose, six pounds in the first month, there is a super tight feedback loop there. In the same way that Zynga created these feedback loops for mobile gaming, and that psychology has been used in all tech consumer products now to create these gratification loops, that totally exists with Ozempic."* This drives incredible word of mouth, you become a walking billboard. There's a little bit of taboo around saying, 'I'm taking Ozempic', but people know you lost weight. It is almost like a shareable Ozempic can go viral in a different way than most pharma companies describe going viral.

We believe this heightened awareness is a positive driver for ResMed who have a large overlapping and highly underpenetrated patient population.

Sleep

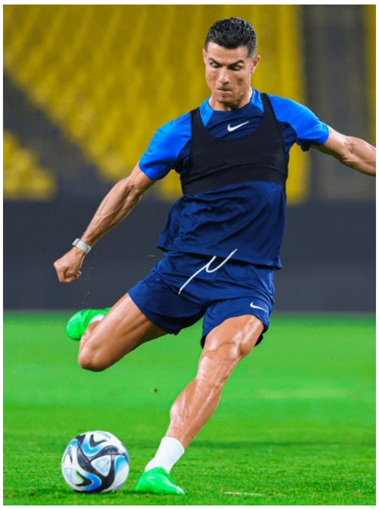
The categories of weight loss and sleep go hand in glove. They are both large markets. Some 424m people suffer moderate to severe OSA (2019 Lancet) and this jumps to one billion when mild OSA is included. It is estimated approximately 20% of moderate to severe cases have been diagnosed and treated to date. More than one billion adults and children are obese, encompassing 880 million adults and 159 million children worldwide, including 40 percent of the U.S. population. If you expand that from obesity to overweight, 75% of Americans are technically overweight. It is hard to imagine a bigger market to go after.

Obesity is strongly linked to OSA, with studies indicating about 70% of adults with OSA are also obese. Furthermore, approximately 45% of individuals with obesity have OSA. The high prevalence of OSA among obese individuals is due to fat deposits around the upper airway and in the thoracic region, which can cause airway obstruction and reduced lung function.

Both categories are major beneficiaries of a flood of new products that work. If you're on an obesity drug, you are now more likely to have OSA diagnosed. The reverse is now also the case.

In the sleep category, new products include the likes of WHOOP, and the FDA approvals for WatchPAT One, a disposable home sleep apnea device and a new sleep apnea detection feature for Samsung's Galaxy smartwatch. These products have powerful marketing and are desired by consumers.

Figure 26: Cristiano Ronaldo wears WHOOP to perform at his best, on and off the field.



Source: AL ARABIYA

The Galaxy smartwatch feature allows users to monitor signs of moderate to severe obstructive sleep apnea (OSA). The approval marks the first time a smartwatch feature for sleep apnea detection has been authorised in the U.S. The Samsung Galaxy Watch uses its BioActive Sensor to track blood oxygen levels during sleep, helping to identify episodes of apnea and hypopnea by monitoring blood oxygen drops. To use this feature, individuals aged 22 and older need to track their sleep for at least four hours over two nights within a ten-day period. The data is analysed to estimate the Apnea-Hypopnea Index (AHI). The array of data generates sleep patterns, sleep score, sleep stage, snore detection, blood oxygen during sleep and sleep consistency.

If a sample of N=4 in our office matters, the evidence is tracking your sleep health daily becomes addictive.

ResMed

The evidence that ResMed has presented to date is compelling.

- GLP-1 obesity patients have a 10% higher rate of starting Positive Airway Pressure treatment (PAP).
- In N=660,000, participants on both GLP-1 & PAP patients demonstrate superior resupply rates. This represents materially better compliance or treatment adherence.
    - Resupply rate is +3% at 12 months.
    - Resupply rate is +5% higher at 24 months.

We see GLP-1 as a potential significant tailwind for ResMed based on increased awareness of the obesity category and the new treatment pathways detailed above.

Importantly, compliance data from treated cohorts and patient outcomes are positive. The former being a key requirement for reimbursement, while the latter clearly drives this compliance outcome. ***SFM***

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Definitions that did not appear in our note

Atherosclerosis: Atherosclerosis is the buildup of fats, cholesterol, and other substances in and on the artery walls. This buildup is called plaque. The plaque can cause arteries to narrow, blocking blood flow.

Gastric inhibitory polypeptide (GIP): Also known as glucose-dependent insulinotropic polypeptide, is an incretin hormone produced in the small intestine. GIP stimulates insulin secretion. It is released after eating, particularly in response to glucose and fat. It stimulates the pancreas to release insulin, which helps lower blood glucose levels. GIP reduces the secretion of gastric acid in the stomach, hence its name. GIP also influences lipid metabolism and may play a role in fat storage. There is emerging evidence that GIP may have a role in bone metabolism, potentially influencing bone formation.

GIP receptor: Glucose-dependent Insulinotropic Polypeptide receptor is a protein found on the surface of certain cells in the body that binds to the hormone GIP. This receptor is part of the G-protein coupled receptor (GPCR) family and plays a crucial role in glucose metabolism and insulin secretion.

Hypoglycemia: Also known as low blood sugar, occurs when the level of glucose in the blood drops below normal levels. This condition is especially common among people with diabetes.

Islets of Langerhans: These are small clusters of cells scattered throughout the pancreas. They contain different types of cells, including alpha cells (which produce glucagon), beta cells (which produce insulin), delta cells (which produce somatostatin), and other cell types.

Microbiome: Refers to the community of microorganisms (including bacteria, fungi, viruses and other microbes) that inhabit a particular environment. In the context of human health, the term usually refers to the collection of these microorganisms living in and on the human body.

Pancreas: The pancreas is a gland located behind the stomach and plays a crucial role in both digestive and endocrine functions.

Peptide: A peptide is a short chain of amino acids linked together by peptide bonds. Amino acids are the building blocks of proteins, and when they are connected in specific sequences, they form peptides. Many hormones are peptides, such as insulin, glucagon, and oxytocin. GLP-1 is a peptide (Glucagon-Like Peptide-1).

CORIS to the rescue?

The introduction of a scientific paper, accepted for publication in the Journal of Hospital Infection on 25 May 2024, is enough to make you rethink your next hospital appointment or at least start asking questions about the standards of care.

The paper states that, *"Flexible endoscopes are associated with the greatest number of patient infections reported in the literature (widely reported) compared with any other reusable medical device. Studies have demonstrated repeated transmission of the same strain from contaminated endoscopes to patients over time, highlighting that the endoscope can be a long-term reservoir for infectious organisms despite reprocessing."*

This issue applies to most of us. Standard medical guidelines recommend both men and women aged over 45 years begin regular colonoscopy screenings.

The three most common uses of a flexible endoscope are for diagnostic and therapeutic procedures within the gastrointestinal (GI) tract. These procedures include:

1. Upper GI Endoscopy (Esophagogastroduodenoscopy or EGD): Used to examine the oesophagus, stomach, and the first part of the small intestine (duodenum).
2. Colonoscopy: Used to examine the entire colon and rectum.
3. Sigmoidoscopy: Used to examine the sigmoid colon and rectum.

Biofilm

The key issue is biofilm. Biofilm is a structured community of microorganisms that adhere to the surfaces of the endoscope and produce a protective extracellular matrix. Despite current disinfection efforts, this biofilm matrix is hard to clean and harbours pathogens, acting as a protective barrier for fungi and bacteria, thus facilitating the transmission of infection.

The paper states, *"Biofilms have been identified in endoscope channels despite compliant cleaning and disinfection per instructions for use and clinical practice guidelines found biofilm accumulated in new gastroscope channels within 30-60 days of clinical use and reprocessing, most frequently in air/water channels*."

You might be surprised to learn that biofilm removal has historically not been a requirement for cleaning validation of endoscopes. There is a good reason for this.

Typically, a hospital will re-use an endoscope via a manual cleaning (MC) process with detergent. Per the endoscope's instructions for use, brushing is not utilised in air, water and auxiliary channels due to their small size, making access difficult.

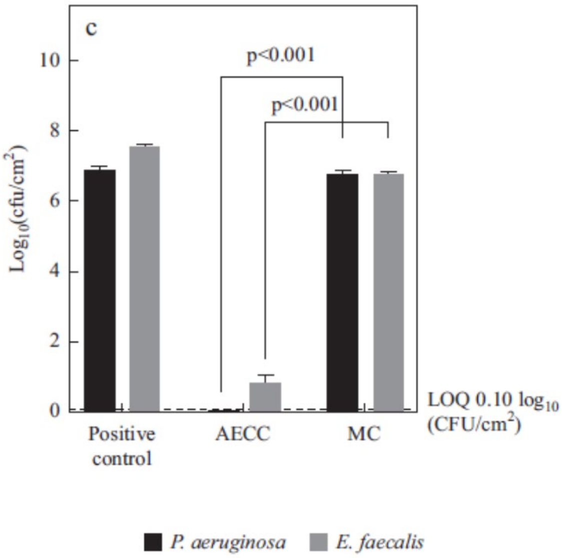
Following this procedure, High-Level Disinfection (HLD) is undertaken.

Study

The scientific paper referenced compared MC with CORIS, two endoscope channel cleaning approaches.

CORIS, made by Nanosonics, is an automated endoscope channel cleaner (AECC) currently seeking FDA clearance. CORIS AECC uses a specially formulated cleaning agent and delivery mechanism to physically clean all endoscope channels. The cleaning agent is mixed with water inside the device to create a saturated solution of liquid and solid. Small quantities of this mixture are pushed through the endoscope at high speed to clean the channels. The channels are then flushed with water to remove the non-toxic, water-soluble cleaning agent. Finally, an air purge removes any residual water.

Figure 27: Cyclic build-up biofilm removal using the automated endoscope channel cleaner (AECC) or manual cleaning (MC) in simulated air/water and auxiliary channels (1.4 mm inner diameter)



Source: L. Moshkanbaryans et al. / Journal of Hospital Infection 150 (2024)

Results

The results of the study are compelling.

AECC significantly outperformed MC, removing cyclic build-up biofilm (CBB) across all markers and reduced both protein and Pseudomonas aeruginosa (P. aeruginosa, bacteria) to below the detected levels, and total organic carbon (TOC) to below the alert thresholds.

By comparison, MC failed to remove CBB in air, water and auxiliary channels, with residuals remaining >10 times (protein) and >3 times (TOC) the alert levels. Additionally, more than 106 colony-forming units per square centimetre (cfu/cm²) of each organism remained after manual cleaning.

Why cleaning matters?

Pseudomonas aeruginosa can cause a variety of infections. For instance, Urinary Tract Infections (UTIs) are often associated with catheter use, and bloodstream infections, such as Bacteraemia, can lead to sepsis.

Sepsis acquired in hospitals, also known as hospital-acquired or healthcare-associated sepsis, can cause widespread inflammation, leading to tissue damage, organ failure and death if not promptly treated. Hospital-acquired sepsis often involves antibiotic-resistant bacteria, making treatment more challenging.

In the United States, sepsis is a leading cause of mortality, with estimates suggesting it contributes to one in three hospital deaths.

HLD compromised

These findings suggest that current manual cleaning (MC) methods leave significant bacterial residue (colony-forming units) on endoscopes. The biofilm compromises the effectiveness of high-level disinfection (HLD), potentially leading to insufficient sterilisation.

The inadequate cleaning of narrow channels before HLD, which cannot be brushed effectively, is likely a contributing factor to the well-documented endoscope-related infections.

Real-world situation

It is also important to note this data represents optimal manual cleaning performed in laboratory conditions and does not account for errors that may occur in clinical practice settings.

SFML has toured cleaning room facilities, typically a windowless box in the bowels of a hospital, which are not conducive to consistently high-quality outcomes. Typically, absenteeism on cleaning teams is high, as is turnover.

Statistical analysis

Two measures were implemented to ensure a fair comparison of cleaning methods:

1. Avoiding data manipulation to prevent the differences between methods seem larger than they were.
2. Repeating the analysis 1,000 times to assess the consistency of the outcomes. The reported results are a summary of these 1,000 analyses.

CORIS status

On 1 May 2024, Nanosonics announced the De Novo submission of its latest innovation, CORIS®, to the U.S. Food and Drug Administration (FDA).

The FDA aims to issue a decision on the De Novo request within 150 review days under the MDUFA (Medical Device User Fee Amendments) program. "Review days" are based on the calendar year minus the number of days the submission is on hold due to an Additional Information (AI) request from the FDA. ***SFM***

"CORIS to the rescue" References

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Strategy with Shvets

Viktor Shvets is a global strategist at Macquarie Bank. In his almost four-decades-long investment banking career, he has worked in Sydney, Melbourne, Hong Kong, London, New York, and Moscow at several global investment banks, including Baring Securities, Deutsche Bank, DLJ, Lehman Brothers and Credit Suisse.

Viktor was a highly rated analyst across various disciplines and head of research. Today he is recognised as one of the more innovative global market strategists, working at the intersection between finance, technology, politics, and history.

He is a prolific writer on key global trends and is a frequent commentator on CNBC, Bloomberg, and other media outlets. In June 2020, Viktor published his first book – '*The Great Rupture*[2]' – distilling decades of investment and academic experience into a deep perspective of the future, and the role that people, technology and capital are likely to play, as societies continue to come under pressure from the self-reinforcing merger of the Information Age and deep Financialisation. The book learns from the past and projects into the future.

Will it be capitalism or communism, feudalism, or despotism? This was one of the key underlying themes of our discussion with Viktor in New York on June 24. Viktor's in-depth answers to our pre prepared topics, are only limited by the time that is allocated to our meeting. Viktor is an unconstrained analyst truly worth listening to.

Viktor was born in Kyiv, which at the time was the capital of the Soviet Ukraine. He attended Kyiv University of Trade before immigrating to Australia, where he completed a Bachelor of Economics degree from the University of Sydney and a Master of Commerce degree from the University of New South Wales.

His second book titled "*The Twilight Before the Storm – How to Avoid a World on Fire*", will be released later this year.

[2] Previously reviewed in our December 2022 newsletter article *"Turning point"*

"The world is ending."

In September 2008 when Lehman Brothers fell over, Nomura acquired the rump of the assets from bankruptcy. Shvets initially shocked Nomura with his "new" macro approach. Apparently, they thought they had hired Shvets for the bottom-up approach he was known for, as an esteemed equities analyst.

By 2009 Shvets could see the core ingredients for the collapse of market economics falling into place. This included extreme and rapid-fire market interventions by the Federal Reserve which were then mimicked by other Global Central Banks (GCB). He noted faster and faster interventions on "*Sundays to prevent global institutions from failing on Mondays"* and causing systemic ructions.

Shvets used the *"pendulum analogy"* to characterise the swings in interest rate policy and liquidity required to remove systemic risks, such as bank failures, from breaking financial systems. This was effectively removing the natural market response cycles of crash, followed by recession, recovery, and growth. In summary, this removed the natural boom and bust mechanism. Once enacted it was an unstoppable process, whereby the macro came to dominate.

Outcome for markets

To some this might sound great. But the outcomes run deep including a massive inability to determine risk-free rate or *"r star"*.

The risk-free rate is the theoretical rate of return of an investment with zero risk, meaning it represents the interest an investor would expect from a risk-free investment over a specified period. In practice, the risk-free rate is often represented by the yield on government Treasury securities, such as U.S. Treasury bills, notes, and bonds, which are free of default risk. The Central Bank policy being applied was clearly distorting this rate.

R* or the Equilibrium Rate is the real interest rate where the economy is neither overheating (causing inflation) nor underperforming (leading to unemployment and recession). It balances savings and investment and aligns with the economy's long-term growth rate.

If the risk-free rate is distorted and R* can't be determined there is no real weighted average cost of capital. This in turn renders the Discounted Cash flow (DCF) approach to valuation redundant.

According to Shvets if DCF approach is futile it naturally gives way to what existed prior. "*In the 1950's they did valuation by gut feel*". This is not acceptable, so investment banks continue with a DCF approach although a DCF outcome is meaningless if cost of capital is distorted, or faked, by intervention.

Investment style is gone

It follows that GCB intervention and cycle distortion eliminate most "*styles of investing*" including traditional value and growth styles. "*Style is determined by the cycle and if the cycle is removed so too is style*". Shvets suggests the rise of two alternative styles being "*quality compounding*" or the rapid-fire trader who is quick enough (or lucky enough) to take advantage of market timing.

How to handle this market

Shvets leans in here, "*if risk is everywhere then risk is nowhere*". Due to this GCB pendulum approach to risk control, both macro and micro controls exist for everything and if they don't, they can be developed on Saturday and enacted Sunday night. Hence you needed worry about commercial property. You can still of course lose all your money as an investor in this asset, but Mum and Pop in a different asset class, won't get swept under when you do. In fact, you don't have to worry about any asset because you are protected from systemic risk.

Encouraging speculation

This is a goldilocks asset environment. Rates will move from high to low fast, but no recession or disaster is forthcoming. So, every asset is good. Based on this we should all potentially lever up? The rise of Private Credit is likely a banner example.

Viktor what's the #1 macro piece on your mind? Medium, long term?

In short, the answer to this question is the source of Viktor Shvets next book, and it is not a particularly happy title… "*The Twilight before the Storm - How to Avoid a world on fire*".

Shvets key threat to the macro are global political outcomes.

"*Only Americans can destroy America – and they can have a good go under Trump*". According to Shvets the U.S. is unlikely to be derailed by rising leverage with projections that the federal deficit will reach nearly US$2 trillion this year. Shvets maintains that "*states with absolute monetary sovereignty, that issue and use their own currency, do not borrow money, they create money*".

The real risk increasing social polarisation. This drives division and accelerates the "*pull apart cycles*" witnessed in history which we address below.

Shvets also offers up an example of U.S. self-destruction tailored to the Australian experience, being a comparison of Melbourne and Detroit's car manufacturing industry collapses. When an industry pulls out of a state or territory, a compounding gap is created. If society is to recovery it requires:

1. A funded pension plan,
2. Funded Healthcare and
3. Free education.

In Australia all three were taken care of via government support and social security nets, and society rebounded accordingly. In Detroit, it was a different story. Support mechanisms did not exist – and societal breakdown resulted.

The city's population plummeted from its peak of 1.8 million in the 1950s to around 670,000 by 2020. This exodus further weakened the local economy and the tax base. Urban decay was evident, crime rates soared as did drug addiction, while schools and public services deteriorated. The decline of the auto industry also exacerbated racial segregation and inequality.

Aside

On June 24 Shvets' view was that Biden could prevail in November, a second term for Biden rather than Trump would lower self-implosion potential of the U.S. Post the June 28 Presidential debate and the impending fallout as we write, SFML see this as a less likely outcome.

Problem of Federal Legitimacy

Worryingly, from an outsider perspective, Shvets argues that the U.S. Federal Government is not secure in a constitutional sense and could be separated. The outcomes of a state-based split could be enormous.

Shvets argues that the U.S. is a purely democratic and state-based system. States retain significant powers and sovereignty. The Tenth Amendment to the Constitution reserves powers not delegated to the federal government to the states or the people, allowing states to govern in areas such as education, transportation, and public safety.

In December 1860 secession of Southern states and the ensuing Civil War was a profound challenge to the legitimacy of the federal government.

Really, is secession a risk in 2024?

In 2024, discussions of state secession in the U.S. have become more pronounced amid increasing political polarisation and division. Several states, particularly Texas and California, have seen significant movements advocating for secession.

Texas Secession

Texas has a long history of secessionist sentiment, and recent events have reignited these discussions. Governor Greg Abbott's aggressive stance on border security and the rhetoric around an "*invasion*" of migrants have bolstered calls for Texas to secede. This movement is supported by some local officials and activists who argue that the federal government has failed to uphold its constitutional duties, thus breaking the compact between the states and the federal government (Brookings & The Texas Tribune).

California Secession

In California, the idea of secession is also gaining traction, although from a different perspective. Many Californians feel that the state could better address its liberal policies and priorities, such as environmental regulations and social justice, independently from the federal government. This sentiment is part of broader discussions around the state's cultural and political differences from much of the rest of the country (Brookings).

Broader Implications of Secession

Support for secession is not limited to these states. Surveys indicate that a significant portion of Americans across various states express willingness to entertain the idea of secession if political conditions worsen. This support spans both conservative and liberal regions, reflecting deep divisions within the country on issues such as healthcare, immigration, and federal governance (Brookings).

The concept of secession, while historically contentious and legally dubious, reflects the intense polarisation and regional disparities that characterise contemporary American politics. While actual secession remains unlikely due to constitutional constraints and the potential for significant economic and social upheaval, the discussions themselves highlight the challenges of maintaining a cohesive national identity in a deeply divided political landscape.

The risk of secession, which may seem a long bow to many, political polarisation, inequality and cultural despair drive what Shvets has labelled the "*pull apart cycles*".

The pull apart cycles when society divides.

- 1840 - 1860s Division
    - Resulted in US Civil war.
- 1930-40 Division
    - Resulted in World War II.
- 1960 Divisions
    - Vietnam / black power
- 2009 Division
    - Starts with GFC

This pull apart cycle started in 2009 & could last out to 2030.

Shvets is not alone in the view that the U.S. is already polarised. His view is that it started with the GFC and vilification of Wall Street. Movies were made about its financial contagion and society was disgusted. Interestingly, Shvets calls out the rise of mega tech companies' social media, as a catalyst around the same time. While inequality also became more apparent across U.S. and the Trump era polarised the country politically and culturally. The seeds of division had been sown and grown. A new pull apart division was underway.

How would this era be resolved?

Shvets Grim Choices

Looking out, if we continue to witness the failure of market economics and if democracy is in decline, the choices Shvets offers are relatively grim. Choices include a form of constrained democracy at one end and communism at radical end. Creeping socialism is already apparent across the globe from India to France and the UK.

Shvets' new book addresses this current period, it's scary in that history suggests we may need a world war to resolve a pull apart cycle.

Shvets Grim outcome of current pull apart cycle is Global War

The catalysts that could lead to such an outcome are real. Remember nobody thought Russia was about to invade Ukraine even as it massed troops on the boarder. Clear global flash points include:

1. U.S. self-destruction – as addressed above.
2. China - attacks Taiwan.
3. Russia - escalates Ukraine offensive into Europe.
4. Iran escalates - Middle East combustion.

Secondly all three of these rogue states have same belief systems which include:

1. Sovereignty above all else, at expense of others.
2. No respect for sovereignty of others, seeking boarders that rectify past losses.
3. All three want an alternative to U.S. global authority and currency supremacy.

Bringing it back to today

If you're a glass half full, Shvets outcomes will be difficult to process and accept. That's why its great to participate in face-to-face meetings. Shvets take is delivered clinically with the evidence of a well-researched historian who has an exceptional grasp of the real world, courtesy of years of bottom-up analysis.

Following Shvets detailed discussion on his "*World ending thesis*" we posed the following questions that had been on our minds.

Is data dependency a responsible policy in the world's #1 economy?

This is an inevitable outcome and the only HONEST policy the Federal Reserve can follow. Continuous interventions have driven distortions in the cost of capital, the risk-free rates and R*. If Chairman J Powell and the Fed don't know the way forward, you can only rely on the past performance of the incoming data. The real danger of policy error is too great for the Fed to look out with a false confidence.

How much of your time spend thinking about R star?

"*My time is spent thinking about productivity. Productivity, in terms of, can it grow faster? If productivity grows, we don't need fiscal or monetary intervention. If productivity falls, r star naturally falls, and government needs to step in and provide support*".

Shvets technology view encompassing, quantum compute, Artificial Intelligence and alike, is that we are a decade away from technology transformation of everything through increased productivity.

U curve of tech transformation

In the U curve of technology transformation, productivity falls first as collectively we don't know how to use technology. Ai will not change workflows until we know how to embrace it. Shvets is in the bad camp for humans, where first up jobs are lost as the curve works to a bottom. Then a massive uplift follows as the U curve swings up as productivity is delivered and we change.

Is a 20% and 15% tax rate sustainable if Republican win senate and then house?

U.S. is not collecting enough tax today at the current rate of 31%. In contrast other developed nations collect ~40%.

Additional cuts will reduce this intake further. Shvets believes Trumps proposed tax cuts, including 2025 extension of personal cuts and election promises of business cuts (to 15-20%) are unsustainable for society.

The U.S. just won't collect enough. This drives the inequality and societal division further. In the U.S. the richest pay nothing and the poor pay nothing while the upper middle class pay 90% of the tax collected.

The outcome of lower tax collections are attacks on institutional pillars, which the US has experienced

which Shvets calls out as real as evidenced by the lake of any real New York winters.

Is the Fed Put stronger than ever now that we have positive real rates?

This question has been answered. It's a Yes.

Is NATO expansion a significant provocation of Russia or necessary?

Russia is not and has not been provoked by NATO or the U.S. Russia simple does not and can't accept the loss of former boarders. This syndrome developed from the collapse of the USSR but also goes all way back to Peter the Great. None of this makes sense to the West, but that's not important, this does make sense in Russia.

These global actions of the West make no difference, Russia is unhinged, the State is the same as the Church. National sovereignty above all is an extreme belief. This includes a different world map to what we see today. Russia has no respect of any other sovereignty, and they have the same view of private enterprise. No independence exists. Russia has no independent central bank; Russia has no commercial institutions.

As addressed above we note, China, Iran and Russia all share exact same ideals of state.

Have your views changed since your 2020 writing of the "The great rupture", Shvets first book?

Yes, Shvets has sharper views and see's the future rupture bigger and deeper. Shvets refers to "*The Gathering Storm*" by Winston Churchill published in 1948. "*The world had choices back then and made the wrong choices*". Four years on it has gotten much worse and history has a habit of repeating.

What of the power of BRICS?

This is an economic combination of Brazil, Russia, Italy, China, and South Africa. The BRIC grouping was originally formed in 2006 with the first formal summit held in 2009. South Africa joined the group in 2010, making it BRICS.

The Economic Influence of BRICS countries collectively represent a significant portion of the world's population, GDP, and global trade.

while spending is consequently driven up. In addition, the U.S. is facing new challenges such as climate issues

This grouping makes no sense to Shvets – "*they are just travellers on a road. Saudi Arabia is a fellow traveller*."

Shvets notes "*the Marshall plan was designed for travellers on the road*". The Marshall Plan, also known as the European Recovery Program (ERP), was an American initiative to provide economic assistance to Western Europe after World War II. Named after U.S. Secretary of State George C. Marshall, who proposed the idea in a speech at Harvard University on June 5, 1947, the plan aimed to rebuild war-torn regions, remove trade barriers, modernise industry, improve European prosperity, and importantly prevent the spread of communism.

What role will two different US Presidents take?

"*A President is the Commander in Chief. If an alien force attacks, the President defends the U.S. on horse. In fact, he is the acting CEO of a complex organisation*".

"*All bureaucrats have no power other than that delegated by President. A good CEO's actions are to choose the right people, incentivise and encourage low attrition and delegate power to act*."

Biden has achieved this as CEO.

In terms of Russia the last thing Biden wants is for Russia to disintegrate. Biden will provide support for them to stay on map.

Trump, according to Shvets could be frightening. Shvets sees an unsustainable policy of tax collection driving increasing social division. Shvets view on the U.S. Federal system, which is hard to reconcile, is that it's constitutionally illegal to have a U.S. Federal Government and that Trump could be the catalyst for the demise of this system, with untold consequence.

In terms of Russia, Shvets notes that Democrats support for Ukraine is 70% and Republicans support is 40% -50% in favour of funding Ukraine. Trump will not pull out of financing Ukraine's war effort while it has U.S. popular support of 70%. Trump could however unleash Ukraine which may see ballistic missiles flying at Moscow. This would be the type of global catalyst described above.

The U.S. is currently its own enemy and Trump action could exacerbate this. The nuclear threats of Russia are however not real. They would get blown away. But ballistic weapons hitting in Russia are a risk under Trump.

China would prefer Biden. The Anti-China stance of the U.S. now has a bipartisan guarantee under both Trump and Biden. Biden is more predictable and as a result is the preferred candidate for China.

We spent one hour and twenty minutes with Shvets. ***SFM***

COMPANY ENGAGEMENTS – JUNE 2024 QUARTER

Date	Company	Description
4-Apr	FLT	Flight Centre Travel Group Management Meeting
8-Apr	DMP	Domino's Pizza Enterprises Barrenjoey Management Meeting
9-Apr	DOM.LON	Domino's Pizza Group PLC U.K. Management Meeting
9-Apr	ARB	ARB Corporation U.K. Site Visit
11-Apr	DMP	Domino's Pizza Enterprises EU Management Meeting
11-Apr	SN	Sharkninja Macquarie Management Meeting
11-Apr	CSL	CSL Site Visit
12-Apr	DMP	Domino's Pizza Enterprises Investor Day
12-Apr	AUTO.LON	Auto Trader Group PLC U.K. Site Visit
15-Apr	RWC	Reliance Worldwide U.K. Investor Day
15-Apr	FCL	FINEOS Corporation Holdings EU Site Visit
16-Apr	OPT	Opthea MST Management Meeting
16-Apr	RWC	Reliance Worldwide U.K. Investor Day
16-Apr	DMP	Domino's Pizza Enterprises EU Site Visit
17-Apr	DMP	Domino's Pizza Enterprises EU Site Visit
17-Apr	RMD	ResMed Barrenjoey Insights Call
17-Apr	IFM	Infomedia Barrenjoey Management Meeting
24-Apr	RMD	ResMed Macquarie Insights Call
26-Apr	RMD	ResMed 3Q24 Results Call
29-Apr	MVP	Medical Developments International 3Q24 Results Call
1-May	MVP	Medical Developments International Management Meeting
2-May	IRE	Iress Annual General Meeting
2-May	RWC	Reliance Worldwide Management Meeting
3-May	IRE	Iress Trading & Market Data Webinar
6-May	RMD	ResMed Barrenjoey Insights Call
7-May	LNW	Light & Wonder Macquarie Conference
7-May	JLG	John Lyng Group Macquarie Conference
7-May	CSL	CSL Macquarie Conference
7-May	WTC	WiseTech Global Macquarie Conference
7-May	BRG	Breville Macquarie Conference
7-May	HUB	HUB24 Macquarie Conference
7-May	HMC	HMC Capital Macquarie Conference
7-May	RWC	Reliance Worldwide Macquarie Conference
7-May	IRE	Iress Macquarie Conference
7-May	LOV	Lovisa Holdings Macquarie Conference
8-May	ARB	ARB Corporation Macquarie Conference
8-May	NXT	NEXT DC Macquarie Conference
8-May	PME	Pro Medicus Macquarie Conference
8-May	PNV	PolyNovo Macquarie Conference
8-May	JIN	Jumbo Interactive Macquarie Conference
8-May	FLT	Flight Centre Travel Group Macquarie Conference
8-May	PNI	Pinnacle Investment Macquarie Conference

Date	Company	Description
8-May	NHF	nib holdings Macquarie Conference
8-May	ALL	Aristocrat Leisure Investor Webinar
9-May	JBH	JB Hi-Fi Macquarie Conference
9-May	MP1	Megaport Macquarie Conference
9-May	TPW	Temple & Webster Macquarie Conference
9-May	SUL	Super Retail Group Macquarie Conference
9-May	REA	REA Group 3Q24 Results Call
14-May	CAR	CAR Group Barrenjoey Insights Call
15-May	RMD	ResMed RBC Healthcare Conference
15-May	ALL	Aristocrat Leisure UBS Insights Call
15-May	IFM	Infomedia Management Meeting
16-May	ALL	Aristocrat Leisure HY24 Results Call
16-May	REA	REA Group Property Market Update Briefing
16-May	MP1	Megaport Management Meeting
17-May	ALL	Aristocrat Leisure JPM Management Meeting
21-May	JHX	James Hardie Industries FY24 Results Call
21-May	OFX	OFX Group FY24 Results Call
21-May	TNE	TechnologyOne HY24 Results Call
21-May	ALL	Aristocrat Leisure Management Meeting
22-May	JHX	James Hardie Industries Management Roundtable
22-May	OFX	OFX Group Management Meeting
22-May	OFX	OFX Group Barrenjoey Management Meeting
22-May	CU6	Clarity Pharmaceutical Management Meeting
23-May	JHX	James Hardie Industries Barrenjoey Management Meeting
23-May	TNE	TechnologyOne GS Management Meeting
23-May	TNE	TechnologyOne Management Meeting
24-May	TNE	TechnologyOne Barrenjoey Management Meeting
27-May	OFX	OFX Group Management Meeting
29-May	FPH	Fisher & Paykel Healthcare FY24 Results Call
31-May	IFM	Infomedia America's Update Investor Call
3-Jun	CAR	CAR Group Barrenjoey Management Meeting
3-Jun	GYG	Guzman Y Gomez Barrenjoey Roadshow
4-Jun	FPH	Fisher & Paykel Healthcare Management Meeting
4-Jun	DLG.MI	De'Longhi Macquarie Management Meeting
6-Jun	PME	Pro Medicus Barrenjoey Management Meeting
17-Jun	REA	REA Group Citi Management Meeting
19-Jun	PME	Pro Medicus Management Meeting
20-Jun	NAN	Nanosonics U.S. Site Visit
21-Jun	CPU	Computershare J.P. Morgan Management Meeting
21-Jun	JHX	James Hardie Industries US Investor Day
24-Jun	JHX	James Hardie Industries US Investor Day
25-Jun	PNV	PolyNovo U.S. Site Visit
25-Jun	CAR	CAR Group Citi Management Meeting
25-Jun	FCL	FINEOS Corporation Holdings Citi Management Meeting

Date	Company	Description
26-Jun	ALL	Aristocrat Leisure Investor Day

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