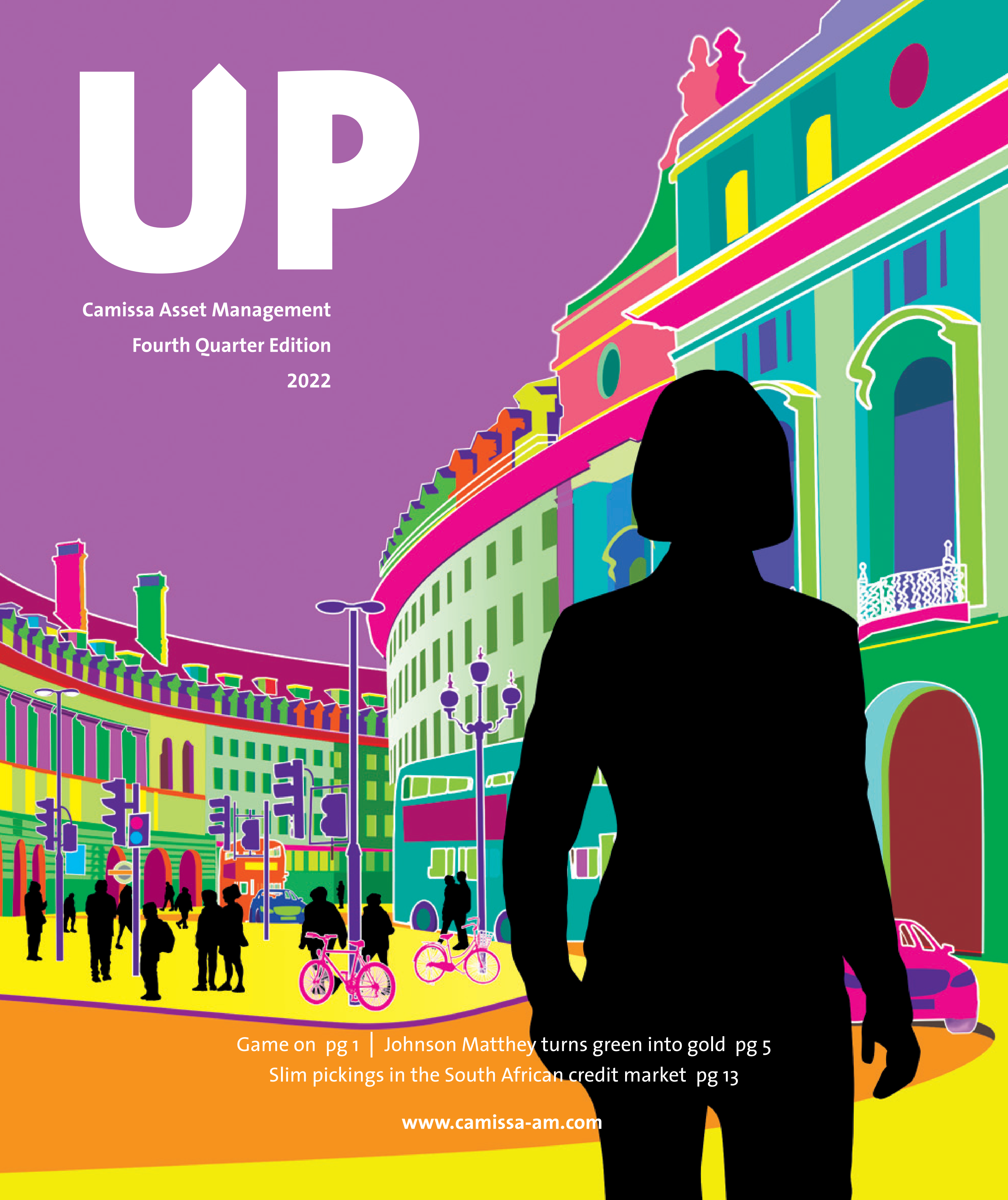

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2022

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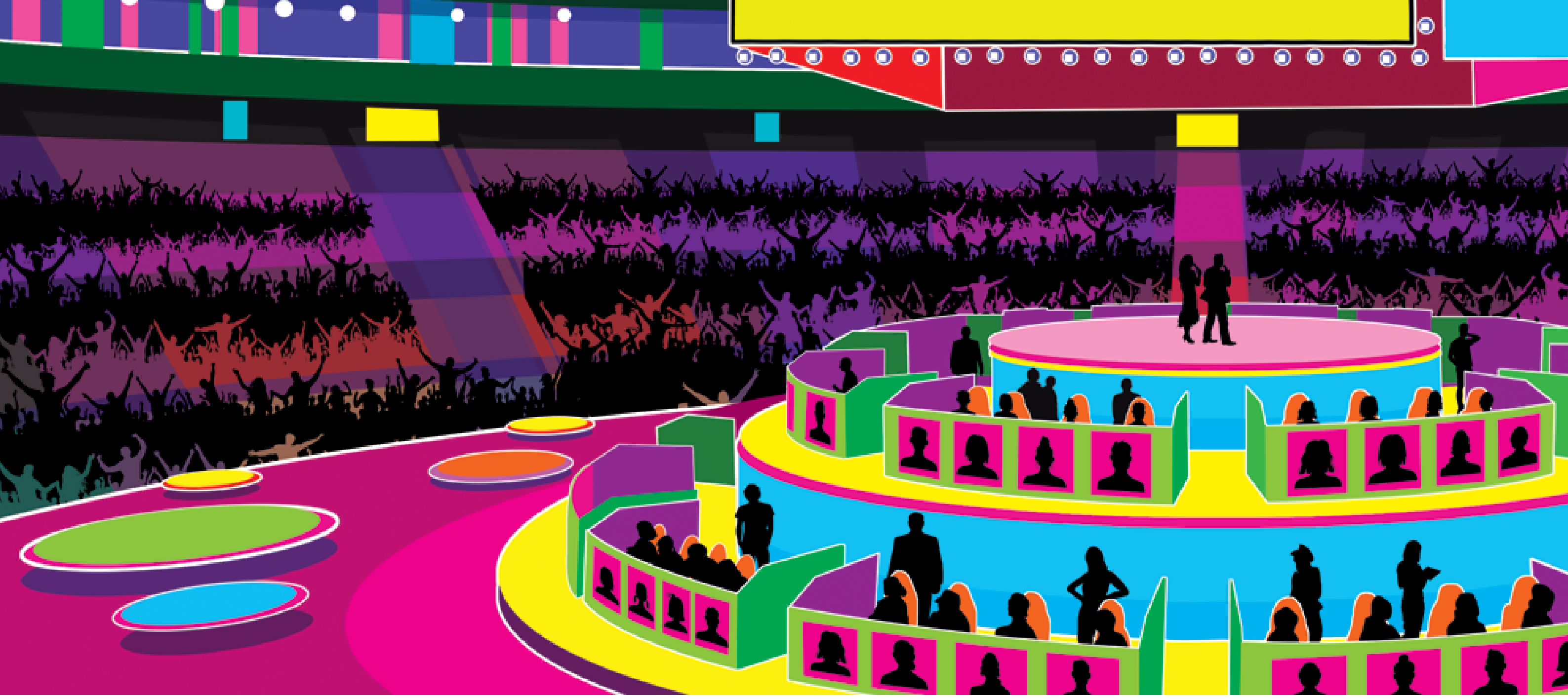


Game on

Aslam Dalvi - Portfolio Manager

"Video gaming has evolved significantly over the last few decades, shifting from the simple arcade-style gameplay of the 80s to today's games that sport hyper-realistic graphics, captivating narratives and deeply embedded social features.

With over 2.5 billion gamers worldwide, gaming has emerged as a mainstream form of rich entertainment that allows friends to connect and share dynamic gaming experiences."

Game on

The economic fundamentals of the video game market are attractive, with growth expected to accelerate beyond 2023. We look into the current gaming industry, investigating recent developments and discussing how Asian game developers have grown their share of western gaming markets.

Global gaming

In 2022, the total gaming market was estimated at over $180 billion (*below left*), having grown at 12% per annum over the last decade (mobile gaming at 27% per annum and PC and console gaming at around 3% per annum). Geographically, Asia Pacific is the largest global gaming market with approximately 47% share. North America and Europe follow, with 27% and 18% market shares respectively. The US and China each account for around 25% of the market and Hong Kong-listed Tencent is the largest gaming company, with an estimated 17% share of the global gaming market (*below right*).

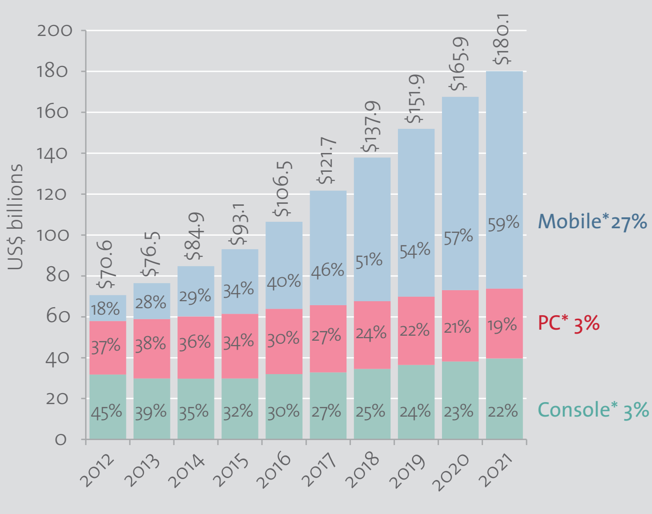
Historically, Asian game titles have been heavily influenced by Asian cultural characteristics, leading to content that is not easily transferable to western markets where there are clear preferences for higher quality, realistic graphics and more immersive western story content. Recognising the global gaming opportunity, Chinese developers like Tencent and NetEase have successfully built the necessary development and distribution related intellectual property to compete directly with western studios. The Chinese companies have been pioneers in mobile game development with global leadership in the development of high-quality AAA[1] mobile titles that appeal to audiences worldwide. Subsequently, western studios are increasingly looking to Chinese game studios to develop mobile versions of popular western franchises. Chinese developers have made significant inroads into markets outside China and are likely to build on this success, with an expected 18% market share of the global gaming market by 2025 (*charted on next page*).

A shifting landscape

Third party digital distribution enabled the success and growth of mobile gaming, which has fundamentally changed the industry. The proliferation of smaller studios targeting the mobile market has seen the market share of the top 10 largest gaming firms decline from around 90% in 2016 to below 60% today. In a fragmented market, we see a shift to the premiumisation of game content. Here, developers look to differentiate their content by shifting the focus towards developing high-quality AAA game franchises with realistic graphics and strong narratives.

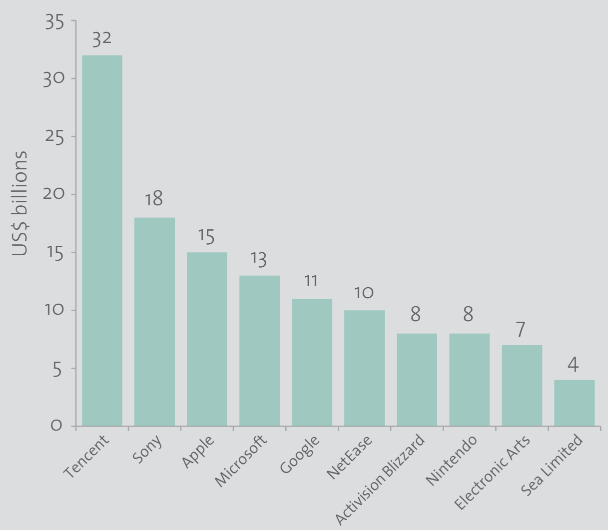
[1] Games published by larger studios with a higher development and marketing budget, where the development cycle is longer, due to complexity, and the title is often considered a leader in its genre.

Global games market



*growth per annum since 2012
Source: ©Newzoo, Global games market report

Global games revenue (2021)



Source: ©Newzoo, Macquarie research (August 2022)

While the proliferation of smartphones has propelled growth over the last decade, innovations in game distribution, monetisation and technology are key to appreciating the continued excellent growth opportunities for the industry.

Digital distribution a gamechanger

Game distribution was previously dominated by the sale of hard discs at retail outlets. This was expensive and had limitations in terms of the sheer size of games and providing game updates (a critical element in maintaining long-term player engagement).

The shift to digital game distribution, where games are aggregated across developers and sold online, has grown rapidly and now accounts for over 85% of total game distribution. These gaming platforms offer compelling value to consumers by providing access to a wide variety of games and substantially reducing friction costs[2] through making games more affordable and easier to access.

Developers have also benefited from digital distribution. With no size limitation, they can deliver more immersive, high-quality titles, effectively target consumers and effortlessly sell new content. This helps to grow their addressable market, however, the cost to developers is steep, with average distribution fees as high as 30% of gaming revenue. It is even worse for smaller game studios that require publishing support, for which platforms often take another 15-20% of net revenue. Apple and Google are the largest mobile distribution platforms, while Steam, Microsoft and Sony are the largest PC and console distribution platforms.

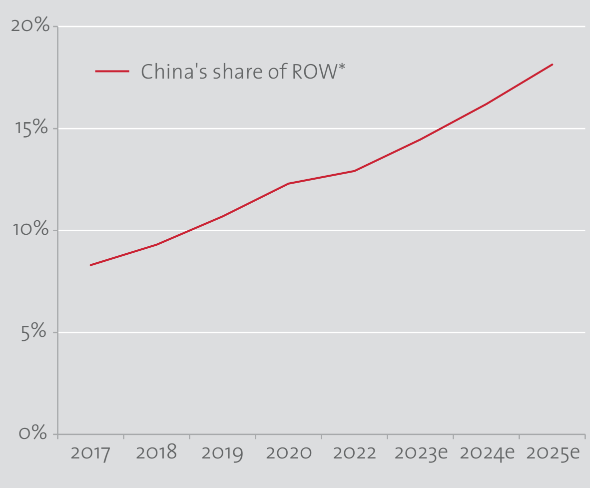
This lucrative digital distribution model has resulted in growing competition, with cheaper independent or developer-owned digital distribution platforms emerging. The trend is likely to continue and presents a very large profit opportunity for game developers, as lower distribution fees result in a large net revenue uplift, with little incremental cost.

Innovative monetisation

The pricing strategy for games was originally simple, with sales at a high fixed price, often resulting in gamers choosing to skip unfamiliar titles. The fixed price model did not adequately differentiate between different types of gamers. For example, casual gamers tended to play the main content only, enjoying the story before moving on, versus more hardcore gamers who invested significantly more time to unlock additional game modes and difficulty levels. This lack of sophistication in pricing invariably led to fewer gamers and a smaller addressable market.

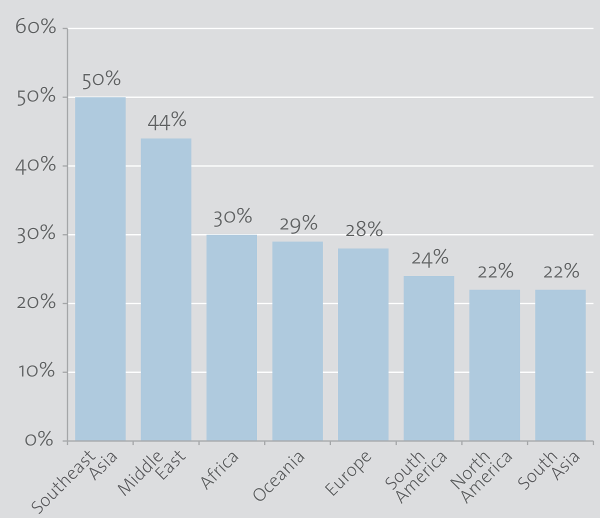
[2] These include cost and time to travel to a physical store, difficulty in accessing game expansions and add-on content, and lack of easy access to information on the game (including walkthroughs and reviews for example).

Expanding share in overseas market (2022)



*Rest of the world (global games market excl China)
Source: CNG, Macquarie research (August 2022)

Market share for Chinese game companies* (2021)



*within top 250 games in different markets
Source: GPC, iResearch, Macquarie research (August 2022)

Game on

Lately, monetisation methods have changed to better differentiate between gamers' preferences and address weaknesses in the fixed price model. The most widely adopted monetisation method is where gamers pay for in-game cosmetic or other items that improve their progress. Pure cosmetic items affect how the game character looks, serving as a means of self-expression and as social capital for gamers. Typical examples include skins (decoration of the character or weapon) and emotes (motions/dances to convey body language).

Games employing these models are usually free to play and attract a larger pool of players. Money is typically made from more hardcore gamers who are willing to pay to improve their gaming experience. While these new monetisation models have proven successful in growing sales, it is estimated that less than 10% of total gamers pay for items. This represents a particularly large opportunity for game developers who are increasingly using in-game systems such as targeted advertising to encourage spending during play.

Monetisation methods also continue to evolve with a visible shift to "gaming as a service" models, whereby gamers pay a monthly fee for access to a catalogue of games and new releases (similar to streaming video services like Netflix). To date, this model has resulted in improving paying ratios, with the added benefit of limiting in-game monetisation, therefore substantially reducing fees paid to third party distributors.

Unreal Engine 5 in action

Source: https://www.youtube.com/watch?v=Ee7Wba4SfOw

Technology as an enabler

The rollout of low latency 5G mobile networks is a boon for the gaming industry as this enables on-demand gaming services, streamed live from a datacentre to players' devices. It avoids the need for expensive hardware and allows developers to bypass the hardware limitations of today's smartphones that struggle to run high-quality AAA titles.

Another recent area of advancement has been around the software tools that game developers use to code video games. These tools include technologically advanced software that provide an easy way to: create realistic visuals, implement real world physics and destruction systems and add connectivity and cross-platform play to games. Gaming development often sits at the forefront of innovation and these tools are extensively used in non-gaming pursuits such as filmmaking, architecture and automotive design.

The two most popular gaming engines, Unity and Unreal, command over 65% of the market and the recent release of Unreal Engine 5 is a massive technological step forward in delivering hyper-realistic gaming experiences. Armed with a new generation of development tools, we expect a further shift to premiumisation. This will help larger studios to better differentiate, grow market share in a competitive market and increase revenue per title. Scan the *QR code* using your mobile device to view a recent Alpha Romeo advert created in Unreal Engine 5.

Poised for progress

We expect that the growth of the gaming market should accelerate beyond 2023, supported by innovations in distribution and monetisation models. The shift to premiumisation, aided by new technology, is another sizable growth opportunity that could see larger studios gaining market share in a relatively fragmented gaming market. Chinese developers are global leaders in the development of mobile games and are well positioned to continue increasing their share of the burgeoning global gaming market.

Johnson Matthey turns green into gold

Edward Mtsweni - Investment Analyst

Johnson Matthey (JMat) is a chemicals, refining and manufacturing company that was founded by Percival Johnson two centuries ago. It now specialises in innovative technologies that assist in cleaning up vehicle and industrial emissions, recycle metals and form components of energy alternatives to carbon-based sources. We discuss these technologies and opportunities.

Johnson Matthey turns green into gold

Early success prompts valuable research

JMat opened its doors as an assayer and mineralogist, responsible for testing the purity of precious metals[1]. The value of gold was assessed by applying chemical tests to ascertain the exact quantity of gold in a sample. JMat rapidly gained prominence in the London bullion market by offering to buy back the gold that had been tested - becoming the official assayer and refiner to the Bank of England.

In the 1850s, it launched a unique initiative (later called the Johnson Matthey Loan Scheme), whereby compounds of precious metals were given to researchers free of charge so that the properties could be investigated and applications identified. Sir Geoffrey Wilkinson's[2] comprehensive findings on synthesis and homogenous catalysis by precious metals, which would not have been possible without this scheme, greatly aided the development of JMat's catalysis business. Over the next century, the company continued to build on its successes by expanding into North America and Asia.

Following the passing of the Clean Air Acts of 1956, 1968 and 1970, JMat produced the first emission control catalyst, enabling automobile manufacturing companies to significantly cut exhaust emissions. This technology formed the basis of their extensive innovation over the next few decades. The present product line ranges from vehicle catalysts to hydrogen fuel cells. They also provide services such as precious metal refining and recycling.

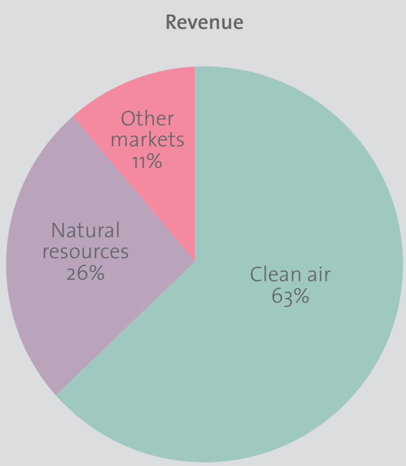
[1] Gold, silver, platinum and palladium specifically.
[2] English chemist and Nobel Prize laureate who pioneered inorganic chemistry and homogeneous catalysis.

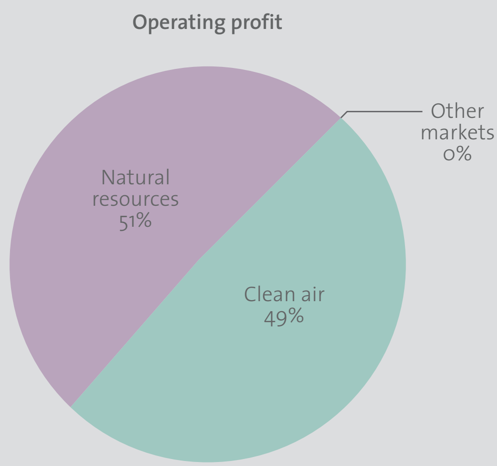
JMat's current business

Europe, the Middle East and Africa constitute the bulk of JMat's business, contributing 49% of sales in the 2022 financial year. Asia Pacific (including China) and the Americas contributed 30% and 21% of sales respectively. The company focuses on **three core categories** (*charted below*) that are synergistic, sharing common customers, technology capabilities and a platinum group metals (PGM) ecosystem that enables reliable supply and circularity.

- The **clean air** division produces catalysts for emission control to remove harmful emissions from vehicles and non-road equipment powered by diesel and gasoline.
- The **natural resources** division provides products and processing services for the efficient use and transformation of critical natural resources including oil, gas, biomass and PGMs to enable the decarbonisation of chemical value chains and provide circular economy solutions (recycling).
- **Other markets** is a portfolio of businesses (battery systems, hydrogen fuel cells, diagnostic services and green hydrogen) focused on potential future growth areas and value realisation opportunities.

JMat revenue and operating profit (2021)





Source: Johnson Matthey annual report

Catalysing on the zero emissions movement

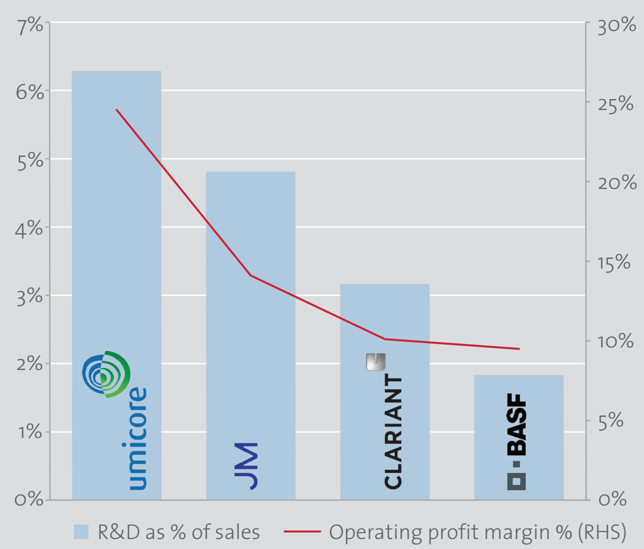
In the 1950s, scientists at JMat identified that PGM catalytic technology could reduce emissions from combustion and related processes. The company has pioneered technological innovation in this regard for over 60 years, being the market leader in the manufacture and supply of catalytic components that reduce emissions from engines, boilers and industrial processes. JMat produces catalysts predominantly for the automobile market (autocat) alongside Umicore and BASF, the other largest players. While JMat commands the number one market share (65%) position in diesel-related autocats, it lags in gasoline catalysts due to its lower historic investment focus in this area.

As *indicated below*, the clean air market segment is characterised by the high research and development (R&D) spend that is required to continue to meet changing global emissions regulations.

Automobile sales are currently the largest demand source and, with vehicle demand expected to grow in the next few years and the continuing tightening of emissions standards, sizeable expansion is expected. However, given that this will entail high complexity growth, JMat will need to increase capital investment to remain competitive. The business is well positioned to benefit from this, with strong structural demand and limited competition.

[3] JMat provides a flow sheet of how the plant should work to make it more efficient and show where catalysts need to be positioned.

Speciality chemicals sector: R&D spend and margins



Source: Johnson Matthey annual reports, Camissa Asset Management research

Key differentiators

JMat is the world's largest refiner and recycler of secondary PGMs - around twice the size of their closest competitor. These PGM services provide the flexible metal sourcing and price risk management required to run the rest of the company. Around 80% of the PGMs that are used in their products are refined within the group. This integration provides many advantages, including superior insights into PGM market supply and demand dynamics.

JMat's catalyst technologies supply directly into the chemical and energy sectors. The business model is based on three key revenue streams: licensing[3], first-fill and refill catalysts. The outlook for first-fills is strengthening as customers become more carbon sensitive. JMat's intention is to increase the contribution of the licensing component in the medium term as this business has higher profit margins and lower capital requirements.

Another key contributor to growth is JMat's newly developed sustainable solutions business that has opened the door to the energy sector (far larger than the chemicals sector). The recent licensing wins in this market demonstrate the growth potential of the segment as customers move towards more sustainable sources of fuels.

Fuel of the future

Hydrogen fuel cells convert chemical energy into electrical energy by transforming hydrogen gas and oxygen into electricity and water, with no carbon emissions (*left chart on next page*). Central to the technology is the catalyst coated membrane[4] (CCM), a single component that determines the efficiency of the entire application. Hydrogen fuel cells can be used in a wide range of applications including transportation, materials handling and portable and emergency backup power production and storage.

The increased production of fuel cell electric vehicles (FCEV), in particular heavy-duty vehicles, represents the key growth

[4] Like an A4 piece of paper that gets printed with "ink" on both sides. The "ink" contains catalysts based on PGM chemistry. Placing these "inked" sheets of paper together creates a fuel cell stack.

Johnson Matthey turns green into gold

opportunity for this division. The long-haul journeys undertaken by heavy-duty vehicles and their hefty loads, make fuel cells the more practical solution relative to battery electric equivalent vehicles. FCEVs have longer ranges and the fuel cells take up less space and are far lighter than battery-driven solutions - key considerations for transport applications.

FCEVs are an integral part of a low carbon future and many global automotive companies have invested extensively to bring these vehicles to market. With more than 20 years' experience in this area and the resulting extensive intellectual property, JMat is the leading global fuel cell provider and therefore favourably positioned to benefit from this opportunity into the future.

Green hydrogen is gold

Green hydrogen is produced through electrolysis (*below right*) by splitting water into hydrogen and oxygen using renewable energy. This is essentially the reverse chemical process of that used in a FCEV to produce electricity. However, the high energy costs from renewable sources (essential for making the electrolysis green) make it expensive to produce. The World Hydrogen Council has predicted that hydrogen production costs will fall by 30% come 2030 due to the declining cost of renewable energy and the scaling-up of hydrogen production.

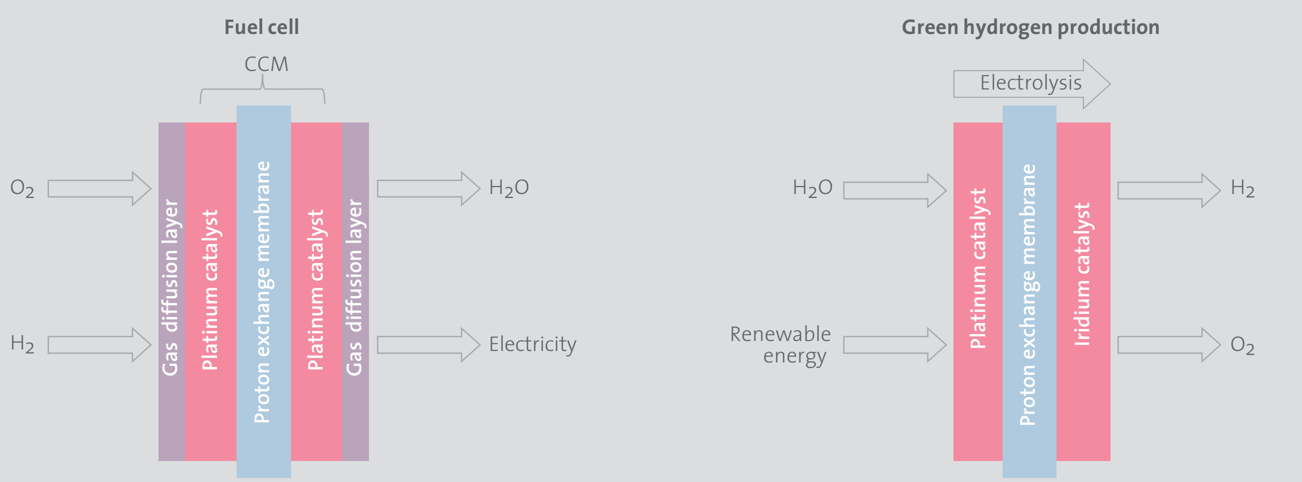
As noted by the International Energy Agency, the global demand for hydrogen as a fuel source has tripled since 1975, reaching 70 million tonnes a year by 2018. In addition to serving as a successor to certain internal combustion engine transport applications, hydrogen is now valued as critical to balancing out energy sources for the future. The technology is likely to be used as a storage-based solution to the supply fluctuations of renewable energy.

Decarbonisation will springboard an increased focus on the production of hydrogen, tying in with JMat's strategic focus on hydrogen technology as a sustainable energy source and the development of their green hydrogen capabilities.

Catalysts for future growth

JMat has invested substantially in expanding their capabilities in supplying the producers of green hydrogen. The ability to meet emissions legislation will be based on the technical capability of suppliers and JMat stands out as a leader in this regard, with their extensive experience in catalysis and decades of R&D. This, coupled with industry leading market shares (resulting in strong competitive advantages) and material capital expenditure in autocatalysis, should manifest in increased returns on a higher capital base as utilisation is optimised. In the long term, substantial value will be delivered to JMat shareholders.

Similar technologies



Source: Johnson Matthey Capital Markets Day presentation, Camissa Asset Management research

Famous Brands - growing fast food

Mandi Dungwa - Portfolio Manager

"Leading food services franchisor, Famous Brands, has a global footprint spanning 17 countries that includes more than 2 800 restaurants and 3 900 employees. Their vast success story began modestly with the founding of a family business in the early 1960s, consisting then of only one brand, Steers."

Famous Brands - growing fast food

Through franchising and acquisitions, the company has grown considerably and now has an extensive, vertically integrated business model that includes many established brands (such as Wimpy, Milky Lane, Mugg & Bean and Debonairs Pizza). We explore the outlook for Famous Brands given the impending maturation of South Africa's competitive fast-food industry.

Franchising fuels growth

Famous Brands was among the first to introduce the concept of franchising to the South African restaurant industry. In contrast to a traditional company-owned restaurant model where company capital is used for set-up costs and to fund day-to-day operations, the franchise model relies on a third-party franchisee, who owns the restaurant, to invest the capital for these purposes. The franchisor (Famous Brands) supplies the established brand, products, marketing, operational training and quality control support. In return, it takes a percentage of revenue from operations.

The predominantly fast-food Famous Brands restaurant portfolio has grown exponentially due to franchising in a capital-light, low risk manner. This is generating significantly higher returns for the group than a company-owned model would have done. *Indicated below*, consistent operating profits have been generated over the past 20 years and the groups' return on equity has averaged 30% from 2001 to 2020. 2021 outcomes were a global industry trend resulting from the COVID pandemic and subsequent restrictions on social mixing and restaurant trade.

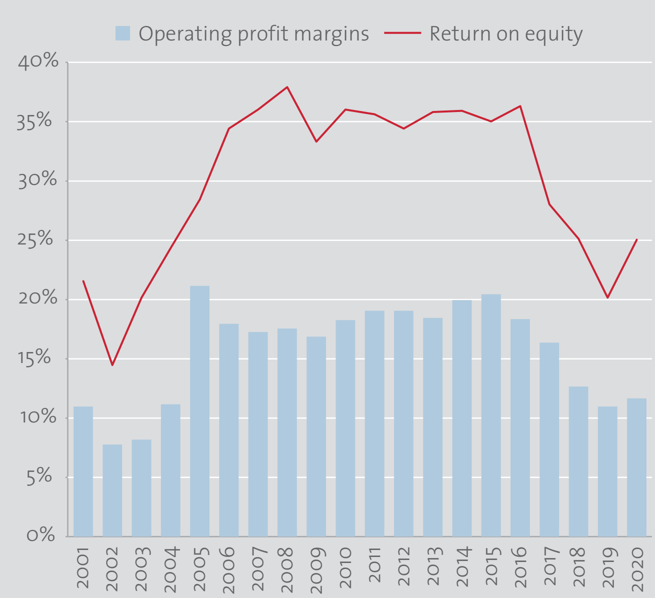
The restaurant brands are the company's most valuable assets, with the portfolio divided into quick service (prioritising take away) and casual dining (full service, sit-down) offerings. Retail (associated brand products sold via retailers), manufacturing and logistics complete the pillars of the business model.

Famous Brands sets the benchmark for brand standards and develops sustainable business models for future franchisees through company-owned restaurants. As the franchisor, they remain responsible for growing brand equity, preserving brand value and maintaining consumer expectations. Franchisees pay a portion of their revenue towards brand marketing to ensure that brands remain competitive with enduring value. To date, the group has managed this very well across all their brands - restaurant growth, from approximately 450 in 2001 to over 2 800 today, is an indication of their success.

With over 80% of restaurants based in South Africa, this represents the key market for the group. Their continuous annual restaurant growth rate has hovered around the 9% mark since 2001, but with a noticeable slowing down over the past decade to just over 3% of late. This may be indicating that their existing brands are mature and reaching saturation point across the country.

To offset what appears to be a maturing market in South Africa, the group has sought expansion opportunities across the African continent and internationally. Currently, they have 294 restaurants (company-owned and franchise) in the rest of Africa and the Middle East. They are looking to expand their company-owned restaurants in other markets where they intend introducing new brands, thereby encouraging faster scalability. The eating out trend (as a proportion of total food spend) is at low levels throughout the rest of Africa at present. This presents a growth opportunity, supported by rapidly rising income levels (food convenience becomes attractive and more affordable) as economies develop.

Return on equity and operating profit margins



Source: Famous Brands

In the UK, the group currently has 67 Wimpy restaurants. While Brexit and the COVID pandemic added significant pressure to the operating environment, this segment of the business remains profitable, with room for footprint expansion.

Supply chain strength

Famous Brands' supply chain division now supplies and delivers the raw materials and required inputs to all their brand outlets. It also manufactures many of them too. This vertical integration ensures consistency in customer food experience across all restaurants and has been hugely successful. Competitively priced, high-quality products include bakery items, sauces, patties, dairy products, juices, napkins and other branded merchandise.

As the restaurant footprint grows and the number of franchisees increase, the supply chain adapts and delivers to the growing base. This is a strategic advantage, particularly against smaller scale franchisors - further entrenching the success of their brands. Additionally, the supply chain is very lucrative, making up 70% of group revenue and almost half of the profits (*charted below*). It also sells branded products to the retail market (eg condiments, frozen meat products, coffee, frozen chips etc). This represents another avenue for growth off a low base.

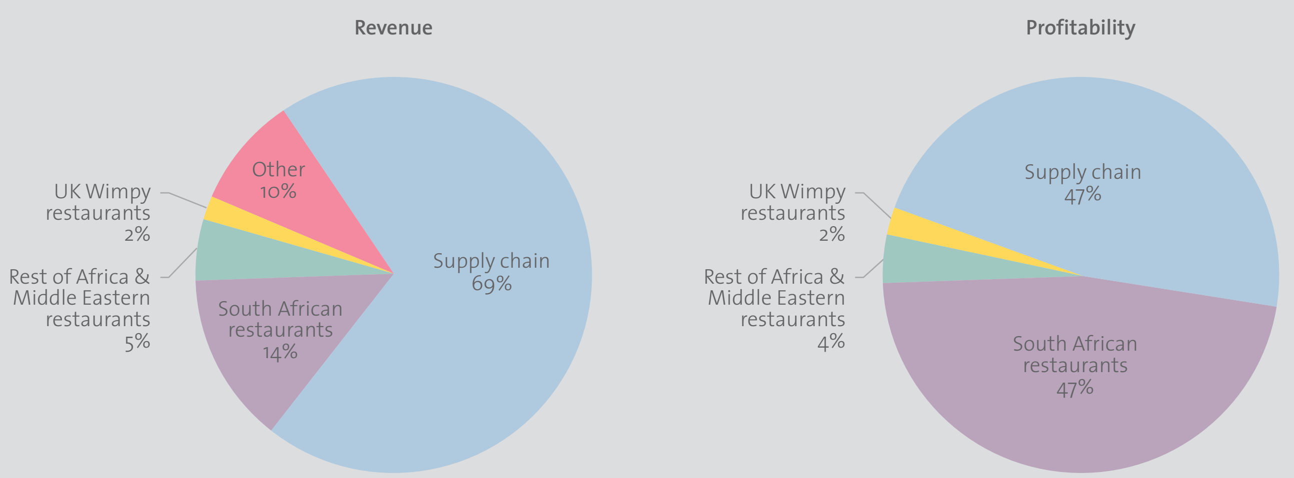
Emerging trends

Direct delivery: COVID-related lockdown restrictions very negatively affected the restaurant industry globally. With only delivery or drive-through options allowed at times, third-party online food delivery platforms materially gained market share. Famous Brands was initially reluctant to use these platforms, given the severe hit to franchisee profitability that the large platform commissions cause.

While most restaurant brands have now embraced third-party food delivery platforms, profitability is diluted as some consumers choose to order online rather than dine out. To combat this and to protect franchisee margins, Famous Brands is developing its own direct delivery service platform, focused on additionally enticing customers to dine out (incentivising through promotions and loyalty discount offerings).

Faster-growing economies: Encouraging greater company-owned restaurant growth in certain developing economy regions is another area of focus. The South African restaurant market has continued to grow (albeit at lower rates) and is well represented by Famous Brands' quick service restaurants in major metropolitan areas across the country. Of the approximately 2 480 Famous Brands restaurants in South Africa, 159 fall under its Signature Brands portfolio, which comprises

Famous Brands revenue and profits



Source: Famous Brands

Famous Brands - growing fast food

casual dining, luxury restaurant and captive restaurant (ie NetCafé in Netcare hospitals) segments. These were the hardest hit by the pandemic due to the enforced capacity and alcohol restrictions. These hostile conditions were also unfavourable for attracting new franchisees. While the current positive outlook for this division is buoyed by the relatively low brand penetration in their market, the growth opportunity is lower than that of the quick service brands, given the relatively small upper income target market in South Africa.

Attracting new franchisees: The ability to attract new franchisees in a competitive environment where growth rates are declining is a key challenge for future growth. As *shown below*, more than 70% of franchisees have been with Famous Brands for over five years (many owning more than one franchise), indicating that the group continues to attract new franchisees and is investing appropriately in support of their restaurant brands.

Check out the chicken

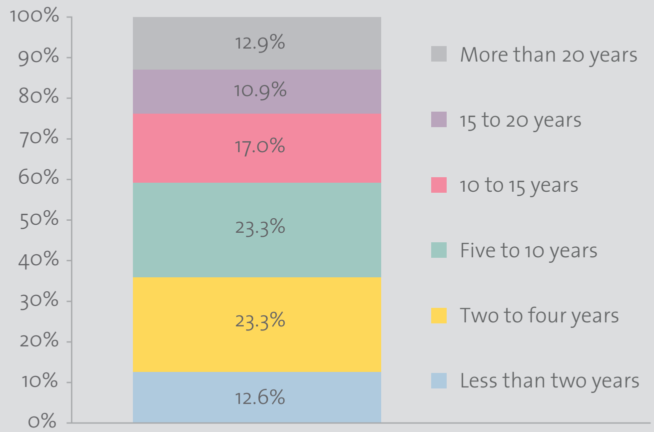
Currently, the Famous Brands portfolio is lacking a chicken brand offering, which represents the largest fast-food category in South Africa and many other African markets. While the high market demand for chicken has been somewhat serviced through the addition of chicken-based menu options across existing brands, a material opportunity remains to incorporate a strong chicken brand into the group's portfolio.

Additionally, with plant-based meals being a global food trend, Famous Brands has included relevant options on menus and invested in a plant-based restaurant brand. Plant-based foods are expected to constitute 7.7% of the global protein market by 2030 - a potential growth opportunity for the group.

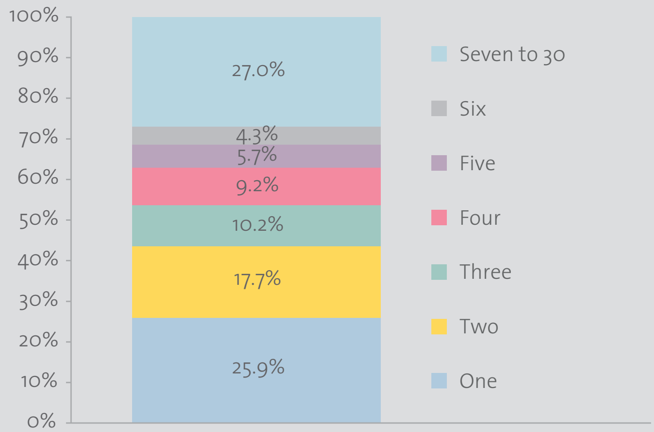
Excellent economics with growth

Famous Brands have grown enormously in South Africa, with representation across multiple segments and exposure to growth opportunities in niche areas like casual dining and healthier food options. They are also exposed to developing nations with fast-growing income levels and an increasing demand for convenience. This, underpinned by a vertically integrated supply chain that will continue to benefit from restaurant growth in a capital-light, low risk and high return manner, supports our view that Famous Brands has strong prospects. UP

Average tenure of SA franchisee



Number of restaurants per franchisee in SA



Source: Famous Brands

Slim pickings in the South African credit market

Satish Gosai - Head of Fixed Income and Derivatives

"The South African market for listed (non-bank) corporate credit is very small and illiquid. Over the past few years, credit risk premiums have trended materially lower despite a weakening economy. We explore the structure of the South African credit market and the factors that are currently causing the high pricing of credit instruments."

Slim pickings in the South African credit market

Corporate credit

Companies typically finance themselves via debt or equity. Servicing the interest on debt and debt capital repayment is done out of the company's cash flows before equity is entitled to receive anything. Equity holders have a right to the uncapped residual cash flows a company generates, but only after the fixed commitments to its debtholders are met. Therefore, investors that provide companies with capital, face very different risk and return profiles in buying debt or equity securities, with equity returns potentially varying widely and credit returns being very certain and predictable unless there is a default.

Credit risk assessment

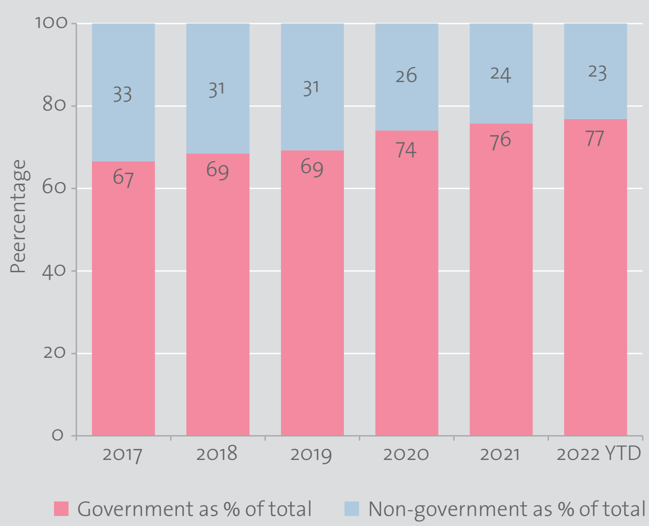
Debt securities expose investors to the risk of their fixed repayment commitments not being paid by the issuing company, ie default risk (credit risk). In default situations, investors may wait for an extended period before they receive a partial payout from the company, or they may lose everything. The higher the default risk, the higher the extra return compensation (risk premium) that will be sought by investors to attract them to supply this debt capital.

Corporate bonds typically pay a regular interest consideration and pay back the principal debt at bond maturity. When valuing a bond, it is critical to consider the borrower's risk profile, which relates to the uncertainty surrounding the borrower's potential ability to meet the obligatory payments. Very importantly, listed credit generally is not backed by specific collateral security and investors must be keenly aware of the seniority of the specific credit in the company's debt structure.

Credit risk is estimated through in-depth analysis of a company's financial statements, its industry and competitive position along with the consequent assessment of its ability to pay off debt through different future economic and business conditions. Key fundamental considerations include: the potential variability and future growth of a company's operating cash flows and the strength of its current balance sheet.

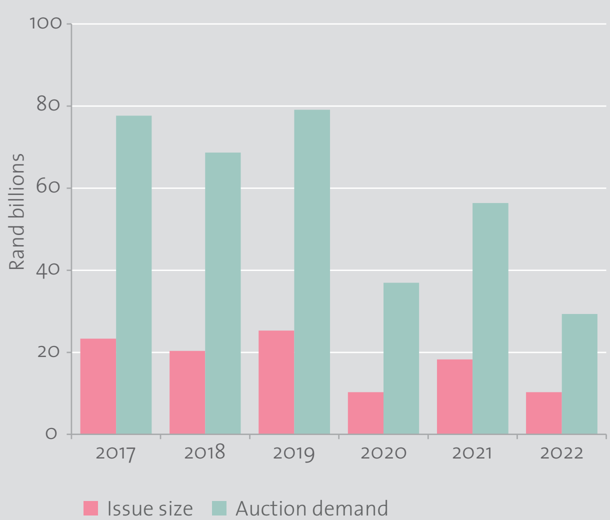
Companies with very predictable operating cash flows, growing cash flows and strong balance sheets present lower risks of default and will generally be able to raise debt at lower credit spreads (above risk free rates).

Percentage of corporate bonds on the SA debt market



Source: ABSA, Camissa Asset Management research

Demand is higher than company issue targets



Source: ABSA, Standard Bank, Camissa Asset Management research

In contrast, company characteristics that would lead to higher credit spreads include:

- variable revenue lines (eg for price taker companies or those with cyclical demand drivers) - especially where cost bases are largely fixed;
- revenue prospects that are stagnant or in decline;
- cost bases that may vary independently of company actions (eg those with commodity inputs);
- weak industry competitive positions; and
- high starting debt balances.

The local listed credit market

There are 42 non-bank corporate bond issuers in the South African listed credit market, comprising real estate investment trusts, industrial companies and insurers, with a total listed credit market value of approximately R170 billion. This is small in the context of the total listed debt market in South Africa.

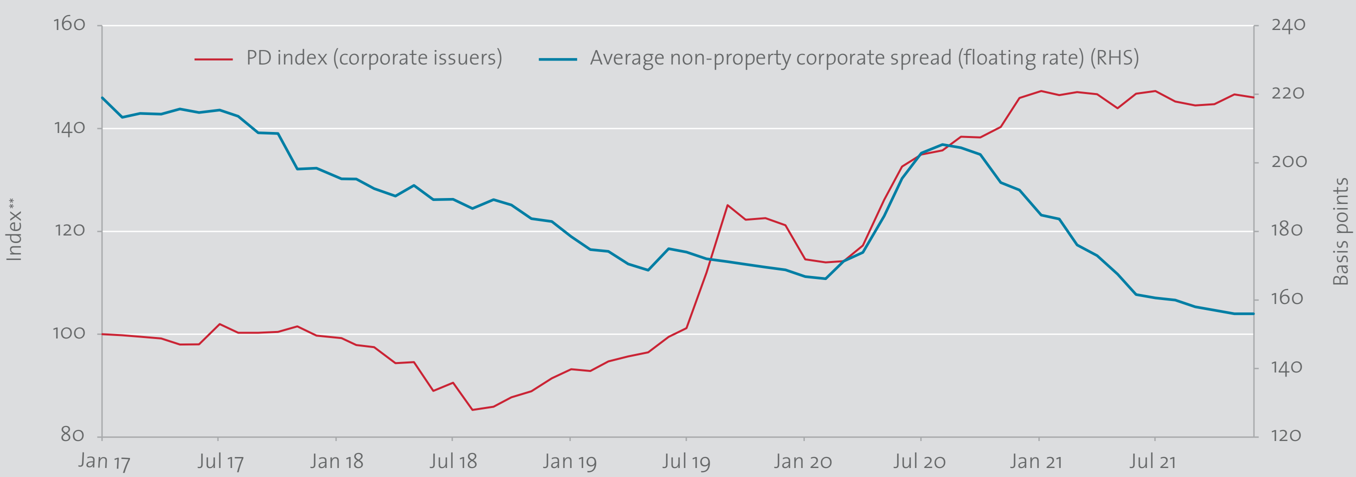
The size of the listed bank credit market is approximately R459 billion and makes up 47% of the listed credit market. Government's local issued debt, including fixed coupon bonds, inflation-linked bonds and the recently-issued floating rate note is approximately R3.3 trillion. South Africa's unlisted credit market is relatively small compared to the market value of the listed market. The *previous chart (left)* shows that non-government debt, including bank credit, makes up less than 25% of the South African debt market.

In a corporate credit market this small (relative to the overall savings industry), increased demand can materially affect security prices (ie push credit spreads lower). Over the past five years, primary issue demand has been substantially higher than company issue targets, as indicated in the *right chart on the previous page*. This higher demand has led to higher clearing bond prices and lower credit risk premiums at issue and thereafter in the secondary market.

Other credit market dynamics

Given the scarcity of listed credit instruments relative to the demand for them in South Africa, most listed credit investors buy credit instruments at issue and then hold them to maturity. This results in a lack of visibility on true current credit spread market pricing (as there are often long periods when there are no trades in an instrument) and restricts credit investor buying opportunities to the infrequent primary auctions.

PD index* of corporate bonds relative to average spreads



* The probability of default index is a quantitatively derived measure of the likelihood that a company will fail to meet its debt obligations
** 1 January 2017 = 100
Source: Standard Bank, Camissa Asset Management research

Slim pickings in the South African credit market

The largest source of credit to South African corporates is provided by banks, who generally provide secured credit or revolving credit facilities (akin to a company overdraft). The appetite from the banks for providing this credit will impact the degree to which corporates will tap the listed debt market for credit. Bank corporate lending growth has been very low over the past few years. This is due to low business confidence given the weak South African economy, which has depressed corporate demand for credit.

Banks are also active investors in both the primary and secondary credit markets using bond instruments as an additional destination for their lending activity.

Credit spread pricing trends

The *chart on the previous page* indicates how (post-2019) a specific measure of default risk has risen in line with the weak economy, but how credit spreads have continued to decline, other than a pandemic-interrupted bump up. This is counter intuitive and, in our opinion, reflects a low corporate appetite for credit and the high demand for these instruments from institutional investors. Specifically, income fund unit trusts have grown markedly as a category in recent years and primarily invest in these instruments.

Prudence is needed

In South Africa, given that current credit spreads generally are inadequate for the risks taken on, our clients have a low exposure to corporate credit. UP

Camissa Asset Management Funds

Performance to 30 September 2022	1 year	3 years[1]	5 years[1]	10 years[1]	15 years[1]	Since launch[1]	Launch	TER[2]	TC[3]
Unit trust funds[4]									
Equity Alpha Fund	2.9%	11.7%	9.0%	9.9%	9.4%	15.3%	Apr-04	1.98%	0.49%
SA Equity General funds mean	1.9%	8.1%	4.6%	7.1%	6.7%	11.4%			
Outperformance	1.0%	3.6%	4.4%	2.8%	2.7%	3.9%			
Global Equity Feeder Fund[#]	-19.8%	-	-	-	-	-1.6%	Nov-19	2.18%	0.29%
FTSE World Index	-3.5%					10.1%			
Outperformance	-16.3%					-11.7%			
Balanced Fund	-2.3%	6.7%	6.2%	8.1%	-	8.3%	May-11	1.55%	0.35%
SA Multi Asset High Equity funds mean	-0.1%	6.5%	4.9%	7.3%		7.6%			
Outperformance	-2.2%	0.2%	1.3%	0.8%		0.7%			
Protector Fund	0.6%	7.3%	7.0%	7.6%	6.7%	9.4%	Dec-02	1.64%	0.29%
CPI + 4%	11.2%	9.0%	8.9%	9.7%	10.3%	10.2%			
Outperformance	-10.6%	-1.7%	-1.9%	-2.1%	-3.6%	-0.8%			
Stable Fund	7.6%	7.8%	8.1%	8.3%	-	8.3%	May-11	1.56%	0.39%
CPI + 2%	9.2%	7.0%	6.9%	6.3%		6.2%			
Outperformance	-1.6%	0.8%	1.2%	2.0%		2.1%			
Institutional funds[5]									
Managed Equity Fund	5.6%	12.0%	9.4%	9.7%	9.6%	11.3%	Sep-06		
FTSE/JSE Capped SWIX Index	1.1%	7.8%	4.6%	8.7%	8.6%	10.2%			
Outperformance	4.5%	4.2%	4.8%	1.0%	1.0%	1.1%			
Domestic Balanced Fund[6]	6.1%	10.9%	9.3%	8.7%	9.0%	8.9%	May-07		
Peer median	3.9%	8.0%	5.6%	8.0%	8.6%	8.6%			
Outperformance	2.2%	2.9%	3.7%	0.7%	0.4%	0.3%			
Global Balanced Fund[7]	-1.2%	8.2%	7.8%	-	-	9.0%	Jul-13		
Peer median	0.7%	7.6%	6.1%			8.3%			
Outperformance	-1.9%	0.6%	1.7%			0.7%			
Bond Fund	3.1%	6.7%	8.2%	-	-	8.2%	Aug-15		
BESA All Bond Index	1.5%	5.7%	7.1%			7.2%			
Outperformance	1.6%	1.0%	1.1%			1.0%			
Money Market Fund	6.3%	6.4%	7.2%	7.2%	7.5%	7.6%	Jan-04		
Alexander Forbes STeFI Composite Index	4.6%	4.8%	5.8%	6.1%	6.7%	6.9%			
Outperformance	1.7%	1.6%	1.4%	1.1%	0.8%	0.7%			
Sharia unit trust funds[4]									
Islamic Equity Fund	0.5%	11.7%	8.7%	9.4%	-	10.9%	Jul-09	1.51%	0.21%
SA Equity General funds mean	1.9%	8.1%	4.6%	7.1%		9.4%			
Outperformance	-1.4%	3.6%	4.1%	2.3%		1.5%			
Islamic Global Equity Feeder Fund	-13.2%	1.8%	-	-	-	4.5%	Jan-19	1.93%	0.17%
Global Equity General funds mean	-10.1%	6.9%				11.1%			
Outperformance	-3.1%	-5.1%				-6.6%			
Islamic Balanced Fund	2.0%	10.7%	7.9%	8.3%	-	7.7%	May-11	1.51%	0.16%
SA Multi Asset High Equity funds mean	-0.1%	6.5%	4.9%	7.3%		7.6%			
Outperformance	2.1%	4.2%	3.0%	1.0%		0.1%			
Islamic High Yield Fund	5.7%	7.4%	-	-	-	7.1%	Mar-19	0.58%	0.63%
Short-term Fixed Interest Index (STeFI)	4.6%	4.9%				5.3%			
Outperformance	1.1%	2.5%				1.8%			

Highest and lowest monthly fund performance	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Equity Alpha Fund	7.4%	-3.4%	12.6%	-21.6%	12.6%	-21.6%	12.6%	-21.6%	12.6%	-21.6%	12.6%	-21.6%
Global Equity Feeder Fund	5.6%	-8.2%	-	-	-	-	-	-	-	-	18.1%	-15.6%
Balanced Fund	4.4%	-4.5%	9.1%	-15.7%	9.1%	-15.7%	9.1%	-15.7%	-	-	9.1%	-15.7%
Protector Fund	4.4%	-3.7%	7.4%	-13.9%	7.4%	-13.9%	7.4%	-13.9%	7.9%	-13.9%	9.5%	-13.9%
Stable Fund	4.0%	-2.2%	6.1%	-11.4%	6.1%	-11.4%	6.1%	-11.4%	-	-	6.1%	-11.4%
Islamic Equity Fund	5.3%	-8.9%	9.6%	-14.3%	9.6%	-14.3%	9.6%	-14.3%	9.6%	-14.3%	9.6%	-14.3%
Islamic Global Equity Feeder Fund	4.4%	-7.4%	14.6%	-7.4%	-	-	-	-	-	-	14.6%	-8.4%
Islamic Balanced Fund	3.9%	-6.2%	8.0%	-9.3%	8.0%	-9.3%	8.2%	-9.3%	-	-	8.2%	-9.3%
Islamic High Yield Fund	1.3%	-1.2%	2.7%	-2.4%	-	-	-	-	-	-	2.7%	-2.4%

Footnotes and disclaimer follow overleaf.

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Footnote: [1] Annualised (ie the average annual return over the given time period); [2] TER (total expense ratio) = % of average NAV of portfolio incurred as charges, levies and fees in the management of the portfolio for the rolling three-year period to 30 September 2022; [#] over 12 months to 30 September 2022; [3] Transaction costs (TC) are unavoidable costs incurred in administering the financial products offered by Camissa Collective Investments and impact financial product returns. It should not be considered in isolation as returns may be impacted by many other factors over time including market returns, the type of financial product, the investment decisions of the investment manager and the TER. This is also calculated over a rolling three-year period to 30 September 2022; [#] over 12 months to 30 September 2022. [4] Source: Morningstar; net of all costs incurred within the fund and measured using NAV prices with income distributions reinvested; [5] Source: Camissa Asset Management; gross of management fees; [6] Median return of Alexander Forbes SA Manager Watch: BIV Survey; [7] Median return of Alexander Forbes Global Large Manager Watch.