InvestSense

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The Ultimate Bottleneck?

After the Global Financial Crisis, for a period of almost 14 years, funds investing in high growth shares such as Amazon or Alphabet were supported by significant tailwinds in earnings and rating expansions, resulting in substantial outperformance of global equity markets.

Investors watching from afar rightly questioned the sustainability of these valuations. In fact, on some level, it would be surprising if growth managers themselves didn't at the very least acknowledge that market conditions have suited their style of investing for a very long time, despite their innate optimistic nature.

However, over the past six months, all of that has changed. Years of sustained monetary stimulus to revive global economies from the Global Financial Crisis and the COVID-19 Pandemic have come back to bite in the form of higher inflation. In the process, growth stocks have been caught in the crossfire and shares are broadly down 50-60% in this space.

Within the world of manager research, a lot of what we spend our time on is driven by the state of markets. And, for such a long period of time, we've been looking at parts of the market that haven't been as excessively priced as the growth basket of stocks.

That has now changed quite significantly, so recently we've been testing the investment case around this part of the market. Is this an opportunity, or not?

According to managers like Sands Capital and Baillie Gifford, both long established growth equity managers, there has never been a better time to invest. Indeed, if your only source of information were these managers, it's safe to say you would probably be investing quite heavily in growth right now. But for better or worse, our scope is a lot broader and there are a number of additional factors we need to consider.

While prices have fallen quite dramatically, to be able to assess the attractiveness of this opportunity we also need to assess to what extent the companies are able to deliver on earnings. As an indication, growth funds have delivered earnings growth rates of 3 to 4 times that of the overall market for a number of years now– an extremely healthy amount!

The key question for us in this exercise is *"what can derail the earnings underpinning these investments, and to what extent might they all fall at once?"* Or more simply put, what are the chances the rug can get pulled out from under us? When quizzed on this, managers often explain to us how their holdings are largely independent of one another and so we needn't be too concerned with wide scale disappointment across the portfolio.

Naturally then, we have gone about testing whether or not that's the case, and in the process we think we've found one very interesting commonality. In fact, that commonality is also one of these fund managers largest holdings – the Dutch technology company ASML. And while this may not necessarily be a household name in investing, it probably should be.

The global equity universe

Global equity managers have many thousands of companies to choose from as possible investments. Within that pool of potential opportunities, there is a wide variety of businesses that do very different things and filling an actively managed equity portfolio becomes an exercise in choice. The global equity market is split across 11 sectors that range from Information Technology to Financials, Energy and Materials. And, on a more granular level, you can split those sectors across a further 69 industries and 158 sub industries. As you can see, that's quite the variety. Growth managers are selective in what they look for. Carvana for example is an online car sales platform, Cloudflare is a cyber security company, and Moderna and BioNTech focus on areas like COVID vaccines and cancer treatment. On the face of it, you wouldn't be hard-pressed in arguing that each of these companies generate their revenue in very different ways.

Once we know what the typical basket of global growth stocks looks like, we can begin to assess whether or not there are underlying factors that tend to drive earnings across all of the businesses; or they are truly idiosyncratic in nature?

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To really get to grips with that, in many of our growth equity meetings we get into specific investment cases for the companies that managers invest in to understand what factors are driving earnings. On more than one occasion, we've discussed ASML because it is such a popular stock in the growth universe. To fully understand why we feel it is such an important part of the growth machine, we need to explore what ASML does. And, why it has the potential to be the ultimate bottleneck.

The most complicated machine in the world

ASML is a Dutch company that makes machines that are vital in the production of semiconductor chips.

Semiconductor chips (microchips) are also known as integrated circuits, and they power pretty much everything electronic in your life – from the laptop or phone you are using to read this article to the radio or television in your house. An integrated circuit is basically just a set of electronic circuits on a very small piece of flat silicon.

Microchips are about the size of a fingernail and each one contains billions of integrated circuits. The ultimate goal of semiconductor manufacturing is to cram as many integrated circuits onto a chip as possible. This generates more processing power and faster computers.

So then, if you can develop a machine that can pack more transistors onto a chip than any other machine, that's pretty valuable right? Well, ASML's TWINSCAN NXE:3600D extreme ultraviolet (EUV) lithography machine does exactly that, and each one costs about $200m.

The ASML TWINSCAN NXE:3600D

IBM and Intel are some of the largest hardware technology companies around, and they both agree that ASML's EUV lithography machines are the most complicated machines in the world. But why? Well, it took ASML over 20 years to build these machines and the technology they use is extremely advanced.

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One EUV system consists of around 100 000 parts, 3 000 cables, 40 000 bolts and 2km of hosing. Together this adds up to about 180 tons of machinery that is shipped in 40 freight containers across twenty trucks and 3 cargo planes (Boeing 747s).

However, it has been a worthwhile investment for ASML. In fact, their next closest competitor will take at least 10 years to build anything close to ASML's latest machines.

Indeed, ASML is the only company in the world capable of producing these machines and they are essential to the world economy. Most smartphones, TVs and almost all computers use semiconductor chips which makes them reliant, in some way, on ASML.

A lot of moving parts

As it turns out, one of the most complicated parts of ASML's business is its supply chain. The company currently has 4 700 suppliers across the world. It gets the robotic arms that move the wafers into the EUV machines from a Dutch company, the EUV light comes from an American company that ASML ended up buying, and a German optics company supplies the lenses – that's just 3 of their suppliers.

Naturally then, one of the biggest risks the company faces is a breakdown in its supply chain. This is a risk that many companies have faced because semiconductors have been in short supply.

But here's the rub.

ASML's own suppliers have been impacted by the global chip shortage which means they can't provide the necessary materials to ASML to make machines that will eventually help address the chip shortage.

In addition, ASML is only building these machines for 5 customers – all of which are the biggest semiconductor manufacturers in the world. Three of those companies – Samsung, Intel and TSMC make up over 80% of ASML's revenue. In 2021, for the first time ever, the global semiconductor industry produced over 1 trillion chips. In money terms, that's a $590 billion market. ASML's three biggest customers were responsible for a lot of that chip production, and between them, they are the largest semiconductor manufacturers in the world.

Already, governments are starting to recognise ASML's strategic importance. In fact, on several occasions the United States has asked ASML not to supply any of its machines to China. The company has heeded the call and currently does not sell any of its EUV and DUV machines into this market.

The extent of the supply bottleneck that ASML has created is quite amazing. There is no other company in the world that can do what they do, and what they do is extremely vital to the global economy. Could this be a single point of failure for the global equity market? We hope not.

So where does all of this leave us? We are looking for commonality between the underlying earnings drivers for growth companies, to be able to evaluate whether this is an interesting opportunity or not.

While companies like Netflix and BioNTech generate revenue in completely different ways – Netflix produces video streaming content and BioNTech develops mRNA vaccines, to some extent they are reliant on ASML because they both use technology and computers to drive their businesses.

ASML may only be one bottleneck for this broader basket of companies to deliver the higher earnings streams investors require. There are likely others, or other common risks not visible even to trained eyes, and for this reason we need to weigh up what appears to be an increasingly attractive opportunity, with the potential for disappointment. With the premium you need to pay for high growth companies, you can't afford to have the earnings rug pulled out from under you.

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data provided by Refinitiv

MARKET REPORT

30/06/2022

		3m	YTD	1yr	3yr pa	5yr pa	10yr pa	5yr Vol1	10yr Vol1
LOCAL MARKET INDICES									
FTSE/JSE All Share Index (ALSI)	ZAR	**-11.7%**	**-8.3%**	4.7%	8.2%	8.7%	10.5%	15.9%	13.4%
FTSE/JSE SA Listed Property	ZAR	**-11.6%**	**-12.7%**	0.2%	**-9.0%**	**-7.3%**	2.7%	26.7%	21.4%
SA All Bond Index (ALBI)	ZAR	**-3.7%**	**-1.9%**	1.3%	5.8%	7.8%	7.2%	8.2%	8.0%
SA Cash Index (SteFI)	ZAR	1.2%	2.2%	4.2%	5.0%	5.9%	6.1%	0.4%	0.4%
Balanced Benchmark	ZAR	**-7.8%**	**-8.3%**	2.8%	7.3%	8.2%	10.3%	10.9%	9.0%
SA Inflation (1 month lag)	ZAR	2.3%	3.7%	6.5%	4.7%	4.5%	5.1%	1.3%	1.4%
GLOBAL MARKET INDICES BASED TO USD									
Global Equity (Datastream World)	USD	**-16.1%**	**-20.3%**	**-13.9%**	7.5%	8.2%	10.1%	16.5%	13.5%
Emerging Markets Equity (Datastream EM)	USD	**-11.3%**	**-17.5%**	**-25.0%**	0.9%	2.5%	3.4%	17.1%	15.7%
Global Property	USD	**-14.5%**	**-19.4%**	**-10.8%**	1.9%	4.6%	6.6%	16.0%	14.1%
Global Bonds (Barclays Global Bond Index)	USD	**-10.3%**	**-17.1%**	**-18.7%**	**-4.0%**	**-0.7%**	0.1%	6.5%	6.2%
Global Cash	USD	0.4%	0.5%	0.6%	0.8%	1.3%	0.9%	0.3%	0.2%
MAJOR INDICES BASED TO RANDS									
FTSE/JSE All Share Index (ALSI)	ZAR	**-11.7%**	**-8.3%**	4.7%	8.2%	8.7%	10.5%	15.9%	13.4%
Global Equity (Datastream World)	ZAR	**-5.9%**	**-18.2%**	**-1.3%**	13.0%	13.2%	18.0%	16.4%	14.9%
Emerging Markets Equity (Datastream EM)	ZAR	**-0.6%**	**-15.3%**	**-13.9%**	6.1%	7.2%	10.9%	14.2%	13.1%
Global Property	ZAR	**-4.2%**	**-17.2%**	2.3%	7.2%	9.4%	14.3%	17.3%	15.0%
SA All Bond Index (ALBI)	ZAR	**-3.7%**	**-1.9%**	1.3%	5.8%	7.8%	7.2%	8.2%	8.0%
Global Bonds (Barclays Global Bond Index)	ZAR	0.5%	**-14.9%**	**-6.7%**	0.9%	3.8%	7.3%	15.6%	13.7%
COMMODITIES									
Gold (US Dollars)	USD	**-6.9%**	**-0.8%**	2.3%	8.6%	7.8%	1.2%	12.7%	14.5%
Gold (Rands)	ZAR	4.4%	1.8%	17.4%	14.1%	12.7%	8.5%		
CURRENCIES									
Rand / Dollar	ZAR	**-12.1%**	**-2.6%**	**-14.7%**	**-5.1%**	**-4.6%**	**-7.2%**	16.1%	14.8%
Rand / GBP Pound	ZAR	**-3.4%**	8.0%	**-0.9%**	**-3.5%**	**-3.2%**	**-4.5%**	14.8%	14.6%
Rand / Euro	ZAR	**-5.3%**	5.6%	**-1.1%**	**-2.2%**	**-2.8%**	**-5.1%**	14.3%	13.7%

Spot Rates		30-Jun-22	Latest Quarter	1 Year Ago	5 Years Ago	10 Years Ago	20 Years Ago
CURRENCIES							
Rand/US$	Rand	16.38	14.61	14.28	13.10	8.18	10.31
Rand/GBP	Rand	19.90	19.23	19.71	17.02	12.83	15.73
Rand/EUR	Rand	17.13	16.26	16.93	14.94	10.38	10.18
RATES							
Libor 6m $	US$	2.94	1.47	0.16	1.45	0.73	1.96
Repo Rate	Rand	4.75	4.25	3.50	7.00	5.50	12.50
Prime	Rand	8.25	7.75	7.00	10.50	9.00	15.00
All Bond Index Yield	Rand	11.05	10.08	11.64	9.49	7.58	9.74
COMMODITIES							
Gold ($/oz)	US$	1 806.87	1 941.15	1 765.43	1 243.47	1 597.36	317.75
Platinum	US$	907.00	983.00	1 059.00	922.00	1 428.00	545.00
Oil (Brent Crude) $	US$	114.93	107.46	75.25	47.82	95.44	25.77
INFLATION							
SA Inflation	%	6.5	5.9	4.9	5.2	5.5	9.4

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