Buying: AstraZeneca PLC (AZN)

Improve the portfolio : *As companies grow (or shrink) and as their share prices go up (or down) the attractiveness of the investment changes. If a company's share price shoots up too fast, or if a company falls into a long-term decline, it may be time to sell and replace it with something that appears to offer better value for money.*

Price on 1st July 2015	Index	Sector
4,019p	FTSE 100	Pharmaceuticals & Biotechnology
FTSE Market Cap	**Revenue**	**Latest Normalised Post-tax Profit**
£50.8 billion	£16.8 billion	£1.5 billion

"We are a global, science-led biopharmaceutical business. We are one of only a handful of companies to span the entire life-cycle of a medicine from research and development to manufacturing and supply, and the global commercialisation of primary care and specialty care medicines." (www.astrazeneca.com)

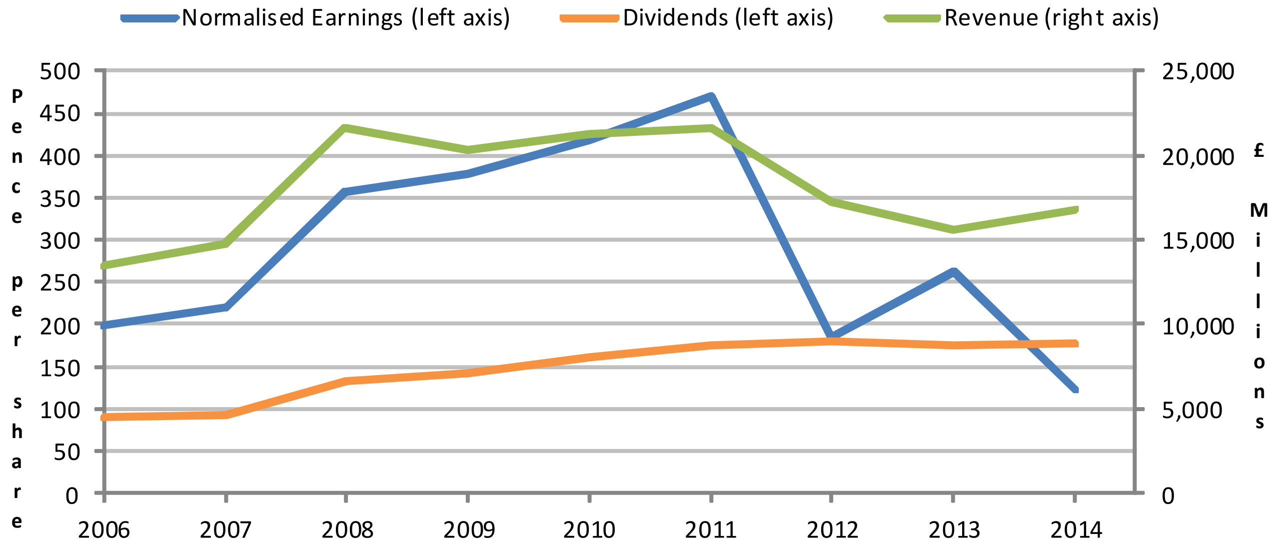
Overview

AstraZeneca is the world's 8th largest pharmaceutical company by revenue, employs almost 60,000 people worldwide and has its products used by millions of patients in over 100 countries across the globe. The company started life in 1999 with the merger of Astra AB and Zeneca Group. Astra was a Swedish company formed in 1913 to largely replace the traditional production of pharmaceuticals by individual pharmacists with industrial-scale mass production. Zeneca was spun off from ICI in 1993 and consisted of that conglomerate's pharmaceutical and agrochemical operations.

Today, AstraZeneca operates across the entire life-cycle from research to manufacture, supply and sales. Its key focus is on cardiovascular and metabolic diseases, oncology (tumors) and respiration, inflammation and autoimmunity. Profits are made through patented drugs, which allows high profit margins by restricting competition. These large profits make it economically rational to invest in the necessary (and frequently unsuccessful) research and development. However, patents don't last forever and AstraZeneca is currently going through a "patent cliff". Around 50% of its revenues will lose their patent protection in the next few years and those patents must be replaced, otherwise dividend cuts are inevitable.

10-Yr Growth Rate	Dividend Yield	10-Yr Median Net ROCE	Valuation (PE10)
1.4% (min = 2%)	4.4%	22.5% (min = 7%)	13.9 (max = 30)
10-Yr Growth Quality	**Debt Ratio**	**Pension Ratio**	**Rank**
75% (min = 50%)	1.8 (defensive max = 5)	3.4 (max = 10)	19 (out of 233)

Green *= Better than FTSE 100;* ***Red*** *= Worse than FTSE 100 or outside the "rule of thumb" minimum or maximum values*



Investment checklist

Successful investing requires the methodical application of a systematic approach in order to achieve specific objectives, and a checklist is a great aid towards that end. This checklist helps to ensure that the company under investigation is high quality, and that its shares are likely to improve the portfolio in the long-run.

Maintaining and increasing portfolio diversification

1. Will the addition of this company leave the proportion of UK revenues in the portfolio at less than 50%?

YES AstraZeneca generates just 17% of its revenues from the UK, so if it was added to the portfolio it would reduce the overall exposure to the UK. Specifically, adding AstraZeneca with a 4% position size would leave UK revenues from the portfolio at 48.7%, comfortably below the 50% maximum.

2. Will the addition of this company leave the proportion of cyclical sector companies in the portfolio at less than 50%?

NO Currently the portfolio is overexposed to cyclical companies. As AstraZeneca operates in the defensive Pharmaceuticals & Biotechnology sector it would reduce the portfolio's reliance on cyclical stocks. Adding AstraZeneca to the portfolio with a 4% position size would leave the cyclical sector weighting at 53.4%, still slightly above the 50% maximum.

3. Are there less than three companies in the portfolio from the same sector as this company?

YES The only other Pharmaceuticals & Biotechnology stock in the portfolio is GlaxoSmithKline.

Avoiding (or trying to avoid) value traps

Good management

1. Does the company have a clear and consistent goal and strategy and is it focused on implementing that strategy successfully?

YES The company's goal is to "push the boundaries of science to deliver life-changing medicines" and that, in essence, has been the goal of AstraZeneca as well as its parent companies before their merger. Its long-term strategy for achieving that goal is "to span the entire life-cycle of a medicine from research and development to manufacturing and supply" as well as focusing on "the global commercialisation of primary care and specialty care medicines."

A new medium-term strategy was reviewed in 2012 and finalised in 2013 after the previous CEO and Chairman resigned amid falling revenues and profits. A lack of new medicines to replace previous "blockbuster" products, whose patents were in the process of expiring around the world, was the major cause. The new and current strategy is to achieve scientific leadership, return AstraZeneca to growth and to make it a great place to work.

Achieving scientific leadership means focusing on therapy areas which are already key strengths (Cardio-Metabolism, Oncology, Respiratory/Inflammation) and investing heavily in the company's product pipeline, whether through internal R&D or partnerships and acquisitions.

Returning AstraZeneca to growth means focusing on five growth "platforms": Cardiovascular/Brilinta (Brilinta is a potential new "blockbuster" medicine used to lower the chances of a second heart attack); Diabetes; Emerging Markets (especially China); Respiratory; Japan.

And finally, making AstraZeneca a great place to work is important because its R&D efforts depend on having the very best scientists and medical engineers in the business.

This is a relatively new strategy which the company does appear to be strongly focused on, largely because it's going through a difficult period and needs to turn things around over the next few years. Both capex and acquisitions have increased significantly since 2013 as major investments have been made in order to return the company to growth by the latter part of this decade.

2. Does the company have an obvious core business upon which its goal, strategy and long-term future are heavily focused?

YES The company has been a "pure play" biopharmaceutical company, working on both the science and commercialisation sides of that industry, for many years.

Adequate financial control

3. Do the company's KPIs focus on a range of relevant indicators beyond revenue and EPS growth, such as profitability, leverage, liquidity and investment?

NO While the company's KPIs do include a range of factors outside of revenues and EPS, they don't focus on the factors I want to see management focusing on. Instead there are metrics for cash flow, the number of products at various phases of the development cycle, revenues from each of the five growth platforms and employee satisfaction surveys.

Whilst those are all useful factors to track, I would like to see a focus on profitability, leverage and so on. While those things are likely to be tracked within the business, I would prefer to see them as top level KPIs.

Low costs

4. Scale: Is the company in the leading group in terms of market share within its chosen markets?

YES AstraZeneca is currently the world's 8th largest pharmaceutical company by revenue.

5. Experience: Has the company had the same core business for many years?

YES AstraZeneca has always been in the pharmaceuticals business as were its parent companies before their merger in 1999.

Caution with big projects

6. Is the company free of "bold" projects which, if they failed, could push it into a major crisis?

YES Although I have answered "yes", it could easily have been a "no". While the company doesn't have a single large project which could cause major problems were it to fail, it does have the important company-wide "project" of replacing old "blockbuster" products that have expiring patents and returning to a path of sustainable growth (more on that later). If that turnaround "project" were to fail then the company would need to downsize significantly, which would include downsizing the dividend.

7. Is the company free of the need for large capital expenditures (i.e. was total capex less than total EPS over the past 10 years?)

YES Although AstraZeneca does have to spend large amounts developing and commercialising new products, these are typically accounted for as revenue expenses rather than capital expenses (i.e. the cost of R&D typically ends up as an expense on the income statement rather than as an asset on the balance sheet).

In recent years capex has increased as the company tries to turn itself around, but even then capex is not high. In the last decade, post-tax profits have averaged £4bn, while capex has averaged £1.5bn or 36% of profits (anything below 50% is "low" by my definition).

8. Are revenues generated through the sale of a large number of small-ticket items rather than through major one-off contracts?

YES Revenue is primarily driven by the purchase of relatively small volumes of its products by thousands of individual physicians around the world.

Caution with acquisitions and mergers

9. Has the company avoided mergers or large acquisitions in the last few years (i.e. cost more than a year's profit)?

NO In general, AstraZeneca is not a particularly acquisitive company. However, it has on a couple of occasions spent more on acquisitions in a single year than it earned in profits.

In 2007 the company acquired MedImmune, a leading biotechnology and biologics (protein-based drug) company, for a cash payment of almost £8bn, which was more than 200% of 2007 post-tax profits. It is difficult to tell how successful this acquisition has been, but it has not been obviously disruptive, and biologics now make up about half of AstraZeneca's drug pipeline.

In 2014 the company again had a year of large acquisitions, spending almost £2.5bn in cash. For that the company acquired total ownership of its diabetes alliance with Bristol-Myers Squibb and total ownership of Almirall's respiratory franchise.

I am comfortable with these occasional large acquisitions because they are neither stupendously large (a deliberately fuzzy definition) nor particularly frequent.

10. Has the company avoided acquisitions that have little to do with its core capability?

YES Each major acquisitions was closely related to the company's core biopharmaceutical business.

Ability to adapt to changing market demand

11. Does the company operate in defensive markets?

YES AstraZeneca operates in the Pharmaceuticals & Biotechnology sector which is a defensive sector. However, while AstraZeneca does sell into defensive markets, it is not entirely immune to the economic cycle. For example, austerity in many countries has led to stronger price control policies for medical drugs.

12. Does the company operate in markets where the pattern of demand (whether cyclical or defensive) is expected to stay the same?

YES I don't see any strong evidence for a change in the pattern of demand for medical drugs and other biopharmaceutical treatments.

13. Does the company operate in markets where demand is expected to grow?

YES As the latest annual report says, "The pharmaceutical industry is expected to enjoy long-term growth due to favourable demographic trends and significant unmet medical need."

Globally, the number of people is increasing (from 7bn today to 9bn by 2050) and the number of people who need and can afford advanced treatments (either directly or indirectly through private or national health insurance) is increasing even faster (by 2018, 30% of the world's population is expected to be over 65).

Of course, most of this growth is expected in emerging markets, which is why emerging markets are one of AstraZeneca's five growth platforms.

Competitive product, service and price

14. Does the company generate most of its profits from products or contracts that do not need to be replaced in the next 10 years?

NO This is the key issue for AstraZeneca. As a biopharmaceutical company it generates profit by selling products at a high price relative to production costs (i.e. with a high profit margin) which is possible because those products are protected from competition by patents. However, patents do not last forever. *Crestor*, which generates around 20% of the company's revenues, has patents which will expire between 2015 and 2023. *Nexium* and *Symbicort*, which are responsible for about 15% of total revenue each, have patents which will expire in the next three years.

That's 50% of total revenue which will be producing far lower profit margins than before, because those products will have to compete against generic competition primarily on price.

To maintain its current size (and dividend) AstraZeneca simply must increase sales of its other products and produce new products with new patents as quickly as possible. That is the challenge the company has been battling with these last few years, and will continue to do so for the rest of this decade.

I do not know whether the company can outgrow the "patent cliff" (I doubt that anybody does), but a plan is in place, AstraZeneca is focusing heavily on its five growth platforms, and management appear confident that sustainable longer-term growth is an achievable objective (although of course they would think that).

15. Does the company sell differentiated products that do not compete purely on price?
YES AstraZeneca's products are differentiated by their patents, which effectively give them a monopoly over their specific solution to a medical problem. With little or no competition, profit margins are abnormally high, although of course pricing pressures remain in order to maximise the volume/margin trade-off, and from government policies aimed at reducing the cost of medical treatments.

Indifferent to commodity prices

16. Is the company relatively immune to commodity price movements?
YES Although commodities are used as inputs to the companies products, their price movements do not have a significant impact on AstraZeneca's profits.

Sound financial policy

17. Does the company have a target rate of return on investment (ROCE or similar) of more than 10%?
NO I could not see a target or expected rate of profitability in the annual reports. However, profitability is not a major concern, assuming sufficient new profitable patents can be generated to replace expiring ones. Gross profitability and operating profitability are typically high at around 80% and 30% respectively. 10-year median net ROCE is also high at 22.5%, although it has been lower in recent years due to the fall in profits.

18. Is the company's use of leverage conservative enough given the potential for its earnings to decline?
YES The Debt Ratio is only 1.8 and I don't think that's an excessive amount of debt, even if AstraZeneca fails to replace all of its currently expiring patents.

19. Are the chances of this company being a value trap acceptably low (and if so, why are the shares cheap at the moment)?
YES Whether AstraZeneca turns out to be a value trap or not depends on whether it is able to overcome the "patent cliff". As I've already mentioned, whether that's possible or not is uncertain, although the consensus seems to be that success is quite likely and that the company can return to growth after a few years. Having reviewed the company and its plans for the next few years, I think the odds of AstraZeneca becoming a value trap are acceptably low, although of course that does not guarantee its success.

In terms of why the shares appear to be cheap, the answer is the same. Investors are rightly worried about the patent cliff and AstraZeneca's ability to replace profits generated from products whose patents are soon to expire. Some investors are put off by obvious risks, while others see it as a chance to buy a good company at an attractive price.

Uncovering competitive advantages

1. Does the company have any intangible asset advantages (e.g. brand names that command pricing power; patents; regulatory barriers)?
YES AstraZeneca's patents are a form of intangible asset that create barriers to entry for competitors.

2. Does the company gain an advantage from "switching costs", i.e. the effort required for customers to switch to another supplier (e.g. bank accounts or computer software)?

NO A physician could easily switch their patients onto a competitor's product if it was better or cheaper.

3. Do the company's products or services have a "network effect", i.e. become more attractive as more people use them (e.g. Facebook, eBay)?

NO AstraZeneca's products do not become better as more people use them (at least not significantly; there is some benefit as more use of a product allows further research into side effects and other features).

4. Does the company have any durable cost advantages (e.g. unique location, unique low cost source of raw materials, greater scale)?

NO Although the company seems to work hard to have efficient operations, it is not primarily a low cost producer and it does not appear to have any durable advantages on the cost side.

Making the trade - Are you happy to own these shares for at least 5 years?

YES I do not expect AstraZeneca to have an easy time of it over the next few years. The patent cliff is a serious problem which has already led to the resignation of the previous CEO and Chairman in 2012. However, the company has a plan and the new CEO and his board seem to be willing to do what is necessary to fill the hole left by expiring patents. Of course there are never any guarantees of success, but for me the company seems more likely than not to get through the patent cliff without having to downsize or cut its dividend significantly.

I will be buying shares in AstraZeneca for the UKVI Portfolio and my personal portfolio a few days after this issue is published and will be giving it a position size of approximately 4% in the UKVI Portfolio in order to soak up excess cash. As usual I expect this investment to last something in the region of one to ten years, although exactly how long it lasts will depend on how the company and the share price perform.

Higher ranked stocks that were not bought	Reason for not buying
Chesnara PLC	Operates in the cyclical Life Insurance sector and the portfolio already holds too many cyclical stocks
Amec Foster Wheeler PLC	Debt Ratio too high
Fenner PLC	Operates in the cyclical Industrial Engineering sector and the portfolio already holds too many cyclical stocks
Sky PLC	Operates in the cyclical Media sector and the portfolio already holds too many cyclical stocks
Beazley PLC	Operates in the Non-Life Insurance sector and the portfolio already holds three companies in that sector
Rotork PLC	Operates in the cyclical Industrial Engineering sector and the portfolio already holds too many cyclical stocks
PayPoint PLC	Operates in the cyclical Support Services sector and the portfolio already holds too many cyclical stocks

"In investing, as in life, there are very few sure things. Values can evaporate, estimates can be wrong, circumstances can change and 'sure things' can fail. However, there are two concepts we can hold to with confidence:

- ***Rule number one: most things will prove to be cyclical.***
- ***Rule number two: some of the greatest opportunities for gain and loss come when other people forget rule number one."***

- The Most Important Thing, by Howard Marks