Barry Callebaut AG (SWX: BARN)

BUY: CHF2,329.47 (+24.8%)

NUS INVESTMENT SOCIETY

Equity Research Department – Consumer Staples

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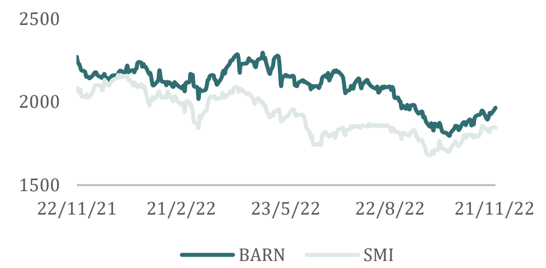
Basic Information

Last Closed Price	CHF1,866
12M Target Price	CHF2,329.47
+/- Potential	+24.8%
Bloomberg Ticker	BARN
GICS Sector	Consumer Staples
GICS Sub-Industry	Food Products

1Y Price vs Relative Index



Company Description

Barry Callebaut AG is the world's leading manufacturer of high-quality chocolate and cocoa products. The company is based out of Switzerland and is almost fully-engaged in the entire cocoa value chain, starting from cocoa bean processing right after procurement, to the production of cocoa products and gourmet chocolate for chefs and artisans, as well as providing production outsourcing for the top chocolate manufacturers in the world.

Key Financials

Market Cap	CHF 10.71b
Basic Shares O/S	5.48m
Free Float	64.9%
52-Wk High-Low	CHF 1,763 – CHF 2,320
Fiscal Year End	31-Aug-2022

(S$ M)	FY20A	FY21A	FY22E	FY23E
Revenue	7,207.6	8091.9	8604.9	9202.4
Gr Rate (%)	15.9	15.0	15.0	15.0
EBIT	566.7	624.7	578.7	616.1
Margin (%)	7.9	7.7	6.7	6.7%
ROE	14.3	14.8	12.6	12.4
ROA	5.3	5.7	5.4	5.3

We are initiating coverage of **Barry Callebaut AG, ("BARN" or "Company")** with a BUY rating and a **CHF 2,329.47** 12M price target.

FY2021/22 Earnings Highlights

- Sales revenue increased by 14.6% to CHF8.1b
- Sales volume grew by 5.3% to 2,306.7MT
- Gross margins remained stable and above peers at 15.0%
- Recurring net profit increased by 11.4% to CHF 428.5m

Investment Thesis

- **Position as the market leader in terms of scale enables Barry Callebaut to maintain resilient gross margins despite industry headwinds** – Barry Callebaut can take advantage of their scale to implement a cost-plus pricing model effectively and drive sustainable change at the top of the cocoa value chain.
- **Growth in their Gourmet & Specialties segment will allow Barry Callebaut to strengthen their top and bottom line** – Barry Callebaut can leverage its unparalleled scale in the gourmet chocolate market to invest heavily in cost reduction technologies and continue to develop new innovations to capture market share. This will help grow their margin accretive Gourmet & Specialties product group.
- **Heavy emphasis on R&D and sustainability opens opportunities for to drive growth** – Barry Callebaut's heavy emphasis on R&D and sustainability allows them to benefit from the age of conscious consumerism. This will help to increase the number of outsourcing agreements and boost total sales volume.

Catalysts

- Reopening of Wieze Factory will allow Barry Callebaut to meet contractual agreements and further drive up their total sales volume for the next fiscal quarter
- New partnerships with large food distributors will allow Barry Callebaut to re-establish themselves as a quality brand and the market leader of the cocoa and chocolate manufacturing company
- Expansion of production footprint into Africa allows Barry Callebaut them to capture more market share within the growing Africa and Middle East market.

Valuations

Our 12M price target at the date of coverage is **CHF 2329.47.** The valuation was obtained through a discounted cash flow model using perpetual growth.

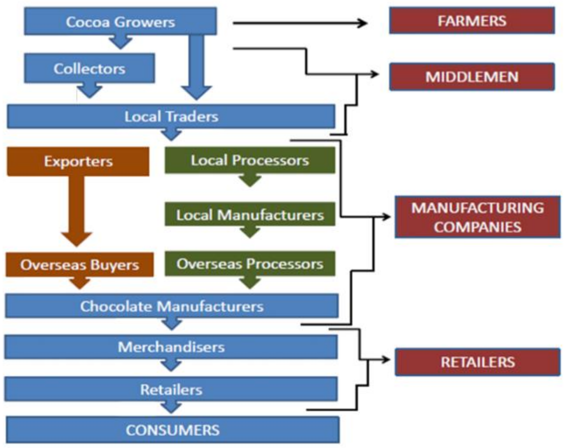
Investment Risks

- **Inflation of Raw Materials:** Due to inflation, cocoa products poses uncertainty to earnings performance
- **Dwindling Number of Cocoa Farmers:** Reduction in number of cocoa farmers could lead to the extinction of chocolates.
- **Failure to renew or early termination of contracts**: Loss of customers could backfire on Barry Callebaut's scale of economy

Figure 1: Barry Callebaut's Logo

Source: Barry Callebaut

Figure 2: Detailed Cocoa Value Chain

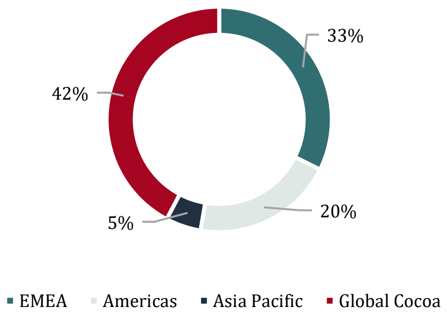


Source: ResearchGate

Figure 3: Barry Callebaut's Global Footprint

Source: Barry Callebaut

Figure 4: Barry Callebaut's Revenue Split by Business Segment



Source: Barry Callebaut

Company Overview

With over 175 years of chocolate heritage, Barry Callebaut is the leading cocoa bean processing company in the world. They have strong control over every step of the value chain, with the exception of cocoa bean planting. While Barry Callebaut's core business activities are processing cocoa beans into cocoa-derived food ingredients such as cocoa liquor, cocoa powder, and cocoa butter to be sold for commercial use, they are also heavily involved in the manufacturing of gourmet and specialties chocolates for use by professional chefs and artisans as well as consumer cocoa products. Their most notable brands include Van Houten and Caprimo.

Business Segments

Barry Callebaut segments its operations according to geographic region, which includes EMEA (Europe, Middle East, and Africa), Americas, and Asia Pacific. These three segments consist of their chocolate production and sales activities for consumer, professional, and industrial end-users in each region.

Apart from the three segments by geographic region, Barry Callebaut also operates a Global Cocoa segment which operates independently from the regional segments and is responsible for the procurement of ingredients for chocolate production as well as the group's cocoa-processing activities. The Global Cocoa segment generates over 56% of revenue internally within the group by supplying ingredients for each geographic region's respective chocolate production activities.

Products Groups

Each of Barry Callebaut's three geographical segments is further segmented into the following product groups:

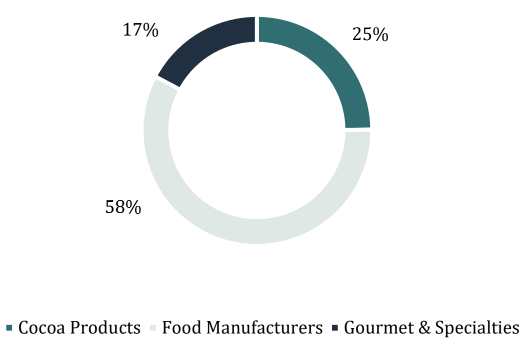
<u>Food Manufacturers</u>

The Food Manufacturers product group focuses on providing a wide range of ready-made inputs like chocolates, chocolate chips, cocoa powder, fillings, coatings, decorations, etc. to industrial customers for the production of their branded food products. The products under this group mainly cater to the production of foods involving cocoa or chocolates, ranging from pastries to ice creams and beverages. The sale of products under this group adopts a cost-plus pricing model to pass on the cost of raw materials to customers in order to achieve profit stability by mitigating the impact of price volatility on the main raw materials required for production. The customers for the Food Manufacturers group range from small to global food manufacturers and the products are used in the production of many well-known brands such as KitKat and Hershey's Kisses.

<u>Gourmet & Specialties</u>

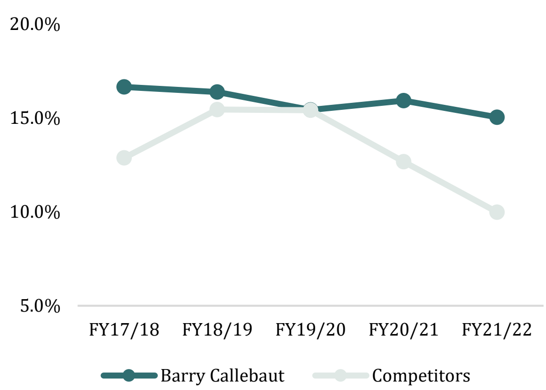
The Gourmet & Specialties product group's main customers are from the hotel, restaurant, and catering industries, which include professional chocolate users like chocolatiers, pastry chefs, and bakers. Under the Gourmet & Specialties group, Barry Callebaut provides a plethora of exquisite ingredients ranging from premium line, luxury chocolates to patterned chocolate eggs and truffle shells used by chocolate artisans. Barry Callebaut employs a price list strategy for this product group and shows continuous signs of innovation and sustainability improvements in their products such as their "Second-Generation Chocolate" which reduces the ingredients of

Figure 4: Barry Callebaut's Revenue Split by Product Group



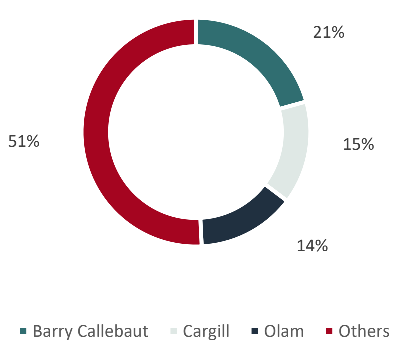
Source: Barry Callebaut

Figure 5: Barry Callebaut Gross Margin Versus Competitors



Source: Various Company Annual Reports

Figure 6: Cocoa Grinding Market Share



Source: GlobeNewswire

making chocolate to only cocoa, milk, and sugar as well as their one-of-a-kind 3D chocolate printing studio.

<u>Cocoa Products</u>
The Cocoa Products group mainly involves the sale of cocoa ingredients that have not been turned into food products, such as cocoa liquor, cocoa butter, and cocoa powder. They have recently ventured into providing cacaofruit products that have previously been neglected as part of their initiative to reduce cocoa waste. These ingredients are mainly sold to food manufacturers who choose to produce their own chocolate rather than outsource the production to Barry Callebaut. The pricing strategy for this product group consists of a mix of market price and cost-plus pricing.

FY2021/22 Earnings Review

- Sales volume grew by 5.3% while sales revenue grew by 14.6% to CHF 8.1 billion on the back of strong demand for solid chocolate.
- Gross margins fell by -0.9% compared to the average of -2.7% by competitors. The smaller decrease compared to peers was a result of the benefit of their cost-plus pricing model.
- Overall, recurring EBIT grew by 13.5%, mainly led by strong performance in the Americas (+14.8%) and EMEA (+10.5%) segments.
- Free cash flow normalised to CHF 266.2 million compared to an exceptionally strong performance in the prior year (CHF 355.0 million)
- Net profit for the year fell by -6.1% due to a one-off -CHF 76.9 million charge due to a salmonella incident at a factory in Wieze, Belgium.

Industry Outlook

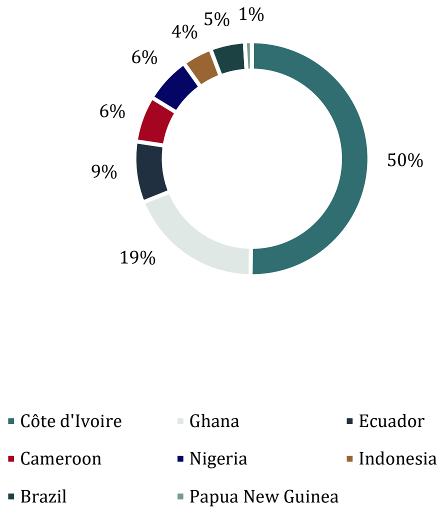
The cocoa processing industry mainly transforms cocoa beans into the three main components used for chocolate production, which are cocoa liquor, cocoa butter, and cocoa powder. While Barry Callebaut mainly operates in the cocoa processing industry, they are also involved in chocolate production and retail. Apart from Barry Callebaut, other key players in this industry include Olam, Cargill, Nestle, FUJI OIL, and Mars.

Given that each company in the cocoa and chocolate business command varying degrees of expertise and scales of operations along the cocoa value chain, it is impossible to perfectly compare their overall businesses and deduce a market share encompassing all of their activities. However, in terms of cocoa bean grinding, Barry Callebaut holds the largest market share globally, with a solid 20.7% market share, followed by Cargill and Olam, with the rest being made up of smaller cocoa grinding companies. Operations at the retail level of the value chain, however, are dominated by Nestle and Mars.

Social and environmental awareness driving change for sustainability at the top of the cocoa supply chain

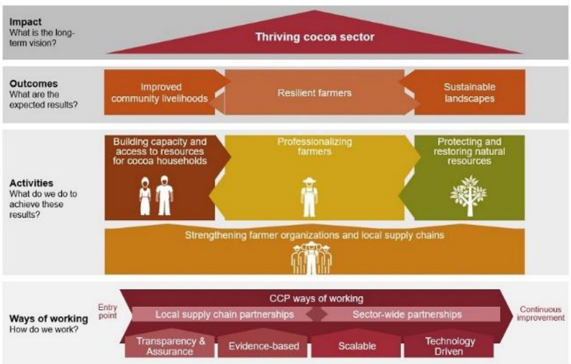
Social and environmental innovation is at the heart of the cocoa industry and supply chain. Over 70% of the world's cocoa supply originates from over 7 million family-owned farms in four West African countries, including Côte d'Ivoire, Ghana, Nigeria, and Cameroon. One of the top line items when discussing the ethical sourcing of cocoa beans is farmer income. For farmers in the top cocoa-

Figure 7: Top Global Cocoa Bean Producting Countries' Market Share



Source: Statista

Figure 8: Cargill's Approach to Cocoa Supply Chain Problems



Source: Cargill

Figure 9: Products Developed From Cocoa Flesh and Husk

Source: Barry Callebaut

producing countries, cocoa accounts for about 60% of their income. However, problems like aging cocoa trees, soil degradation, and unpredictable weather patterns have led to these farm owners not being able to secure stable incomes, which inhibit their ability to access the infrastructure and financing they need to invest in their farms. Moreover, it limits their ability to hire professional labour, forcing children to work on farms under dangerous conditions and not being able to receive an education. However, the top cocoa processing companies with strong control over the value chain close to the supply like Barry Callebaut and Cargill have started to address these issues in recent years through various initiatives to raise capital and provide professional training for the farmers, as well as invest in research to develop better farming practices and ways to reverse soil degradation and deforestation. Initiatives like this have been instrumental in lifting many of the cocoa farmers they work with out of poverty. These companies have a strong interest in ensuring that the suppliers of cocoa beans are able to continue producing cocoa beans sustainably to prevent supply chain disruptions.

On the environmental front, chocolate production is a significant driver of waste produced annually. Only 10% of the actual cocoa (cocoa beans) is used for production. The fruit flesh and husk, which make up the other 10% and 80% of the cocoa fruit have traditionally gone unused. In recent years, however, chocolate processing companies with strong capacities for R&D have developed creative ways to upcycle these byproducts that have been previously regarded as waste. Their use cases are now widespread and are used in recipes for many food products, including coffees, alcohols, sorbets, gelatos, etc., and continue to grow as more research is being done into them. According to calculations by the Upcycled Food Association, if cocoa processing companies are able to utilize all the cocoa that they harvest fully, the effect of reducing carbon dioxide emissions would be equivalent to planting 3.5 billion trees a year.

Robust growth in demand for specialty chocolates driving innovation

The chocolate and confectionery industry is seeing an increasing need to invest capital in R&D to meet the growing demand for more premium and specialty chocolates from customers in developed markets like the United States, France, Belgium, China, etc. The premium chocolate segment is projected to grow 8.96% CAGR from 2022 to 2027 according to Mordor Intelligence compared to 4.02% CAGR for the overall chocolate market. One kind of specialty chocolate that is on the rise is dark, sugar-free chocolate which is produced without additives and chemicals as consumers ride on the trend of healthy eating to maintain overall health and wellness. In 2021, the number of brands selling "dark" chocolates increased by 28%, compared to "milk" chocolate at 24%. Another driver for specialty chocolates is the consumer preference for knowing the origin of all ingredients used in the chocolates. The reason for the rise in this trend is to cater to a wide range of dietary preferences such as allergies and vegan diets, as well as increased consumer awareness regarding labour welfare and whether the ingredients are ethically sourced. These kinds of trends have led to chocolate producers becoming highly invested in the development of new specialty chocolates to tap into demand from unique consumer preferences that the wider market has not capitalised on yet.

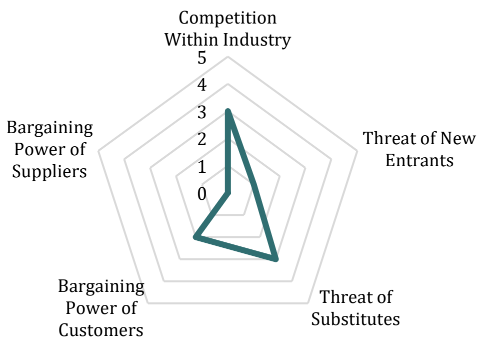
Figure 10: Customised Packaging by Toblerone

Source: packlyblog

Figure 11: Positive Effects of Personalisation

Source: Invesp

Figure 12: Porter's Five Forces



Source: NUS Investment Society Estimates

Figure 13: Number of Cocoa Processing Plants Used by Each Company

Barry Callebaut	Cargill	Guan Chong Berhad	Olam	JB Foods
66	33	10	12	5

Source: Various Company Websites

Mass customisation of gourmet chocolates to suit both personal and business needs

More and more chocolate producers are taking advantage of consumers' love for customisation. In the past, mass personalisation was mainly limited to packaging by allowing buyers to customise their own boxes or jars. Companies that have ventured into this space had seen success with it as customers were willing to pay higher prices just to add a personal touch for essentially the same product. But with technological advancement, newer innovations are allowing mass-personalisation of the chocolate itself. The ability to customise the shape and ingredients to achieve unique appearances of chocolates and exclusive aromas as well as tastes that cannot be found elsewhere particularly stands out to professional chocolate artisans in the F&B industry where they use distinct, high-quality products to differentiate themselves from their competition and win brand loyalty.

Porter's Five Forces

Competition within industry – Moderate

While the cocoa processing industry is highly fragmented, there are very few companies that have scales of operations substantial enough to provide stable sources of cocoa products to meet the demand of the top global chocolate manufacturers. The reason that companies as large as Mondelez International turn to Barry Callebaut for their ingredients is that it has the largest production capacity for industrial chocolate among all of its competitors and can provide them with peace of mind, knowing that cocoa supply bottlenecks are highly unlikely.

As for Barry Callebaut's Gourmet and Specialties segment which caters to artisans and chefs, they face more competition from smaller producers due to the need for exceptional quality and customisability over scale. Despite the perceived fiercer competition, Barry Callebaut is still one of the leaders in this arena, owing to their active efforts to continue expanding reach and expertise through strategic acquisitions, as well as their ability and propensity to invest heavily in R&D which their smaller-scaled counterparts are unable to.

Threat of new entrants - Low

The high level of capital outlay needed to set up factories and plants to build the necessary production capacity will deter new competitors from entering the market and stealing market share. Cocoa processing companies that serve the commercial chocolate manufacturing market benefit from a large scale of operations. This is because in order to be able to cater to the substantial demand of the largest chocolate producers, these cocoa processing companies have to demonstrate a large production capacity for the production of cocoa-derived food ingredients such as cocoa liquor and cocoa butter.

Threat of substitutes – Moderate

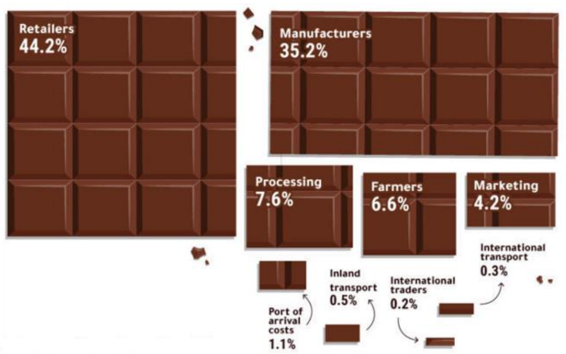
The short-term threat of substitutes is not a major concern for Barry Callebaut. This is because most customers in their Food Manufacturers segment which makes up the bulk of their revenue typically sign long-term outsourcing contracts with them. This prevents customers from switching suppliers easily without significant reason.

However, there is the threat that customers may opt-out of extending their contracts when it expires and turn to Barry Callebaut's competitors instead. But given that Barry Callebaut has just recently renewed its partnership contracts with Grupo Bimbo and The Hershey

Figure 14: Barry Callebaut's Customer Base With Long Term Contracts

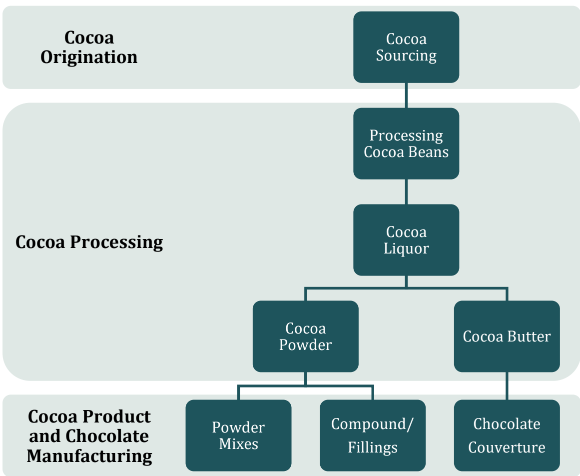
Source: Barry Callebaut, Compiled by NUS Investment Society

Figure 15: Each Stakeholder's Share in The Cocoa Supply Chain



Source: World Economic Forum

Figure 16: Cocoa Value Chain



Source: Barry Callebaut

Company and signed new outsourcing deals in EEMEA, we believe this is proof that they remain the preferred cocoa product supplier of the largest names in the retail chocolate industry.

Bargaining power of customers – Low

Barry Callebaut's cost-plus pricing model protects them from price bargains from their customers in their Food Manufacturers segment. By applying a fixed markup percentage over their production cost which is agreed upon when entering into long-term contracts, Barry Callebaut is able to strip away bargaining power from their customers. Similarly, customers in their Gourmet & Specialties segment also command low bargaining power because of their smaller sizes. However, in recent years, there has been mounting pressure by food manufacturers and consumers to drive sustainable and ethical change at the top of the cocoa value chain which all cocoa processing companies are facing.

Bargaining power of suppliers - Low

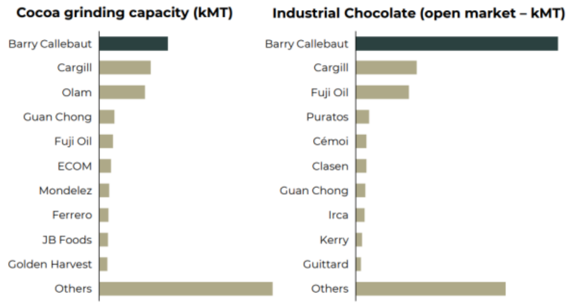
Barry Callebaut's main suppliers of cocoa beans are family-owned farms situated in West Africa. Given that the cocoa farming industry is extremely fragmented, there is not a single farm that makes up a significant enough portion of Barry Callebaut's total cocoa bean supply to have much bargaining power. Therefore, the cost of procuring cocoa beans is mainly dependent on its underlying market price, with farmers having little to no ability to command higher premiums.

Investment Thesis

1. Barry Callebaut's position as the largest cocoa processing company allows it to implement a cost-plus pricing model which shields its gross margins from the effects of high commodity prices and will allow it to continue to develop a stable pipeline for future cocoa supply

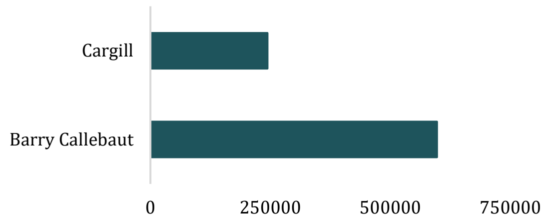
Barry Callebaut adopts a cost-plus pricing model in its Food Manufacturer's segment which makes up over 69% of its total sales volume. This allows them to pass on a fixed portion of its production costs to its customers and maintain consistent gross margin levels even in the face of supply-chain disruptions which have devastated competitors. The effects of the global supply chain crunch since the start of the pandemic have been well reflected in its competitors' gross margins with an average 5.4% drop to 10.0%, while Barry Callebaut was able to leverage on its unique pricing strategy to avoid similar issues and maintain a stable 15.0% gross margin level. The reason why Barry Callebaut is able to adopt a cost-plus pricing strategy effectively is because of its enormous scale of operations. Barry Callebaut has the largest cocoa grinding capacity in the world, which allows it to fulfill the outsourcing demand of the most notable brands in the chocolate manufacturing industry such as Hershey and Mondelez International which gives it significant pricing power that competitors cannot achieve. Barry Callebaut boasts an annual grinding capacity of 1.04 million MT compared to its competitors like JB Foods with an annual capacity of 146,577 MT and Guan Chong's 277,000 MT. The demand from Barry Callebaut's Food Manufacturers segment, which serves "small, medium and global food manufacturers" alone contributes 700,00 MT in sales volume, which shows how Barry Callebaut's economies of scale differentiate it from its competitors. Since the supply chain crisis has shown no signs of easing up anytime soon as signaled by a multitude of factors like shutdowns of major global ports, labour shortage, and high freight costs, we believe that competitors

Figure 17: Scale Comparison Between Barry Callebaut and Competitors



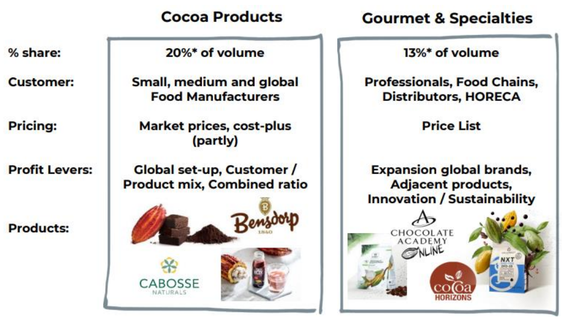
Source: Barry Callebaut

Figure 18: Number of Cocoa Farms Under Company's Supply Chain in West Africa



Source: Barry Callebaut, Cargill

Figure 19: Barry Callebaut's Pricing Strategies Across Other (Excl. Food Manufacturers) Product Segments



Source: Barry Callebaut

will continue to suffer from further gross margin contractions while Barry Callebaut is able to maintain its strong position as the industry leader.

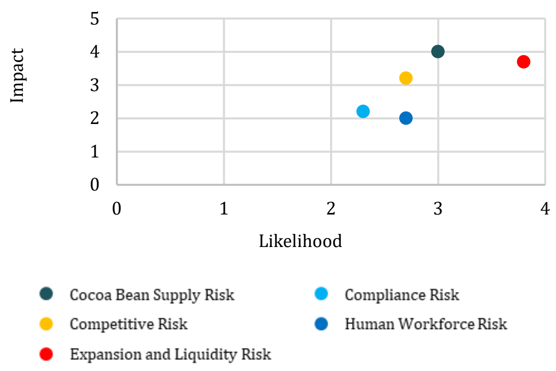
Barry Callebaut has also leveraged its scale to establish a strong presence in Côte d'Ivoire, Ghana, and Cameroon where it sources its cocoa beans, with connections to over 597,000 cocoa bean farms in West Africa. Cocoa farming in these countries is highly fragmented with small family farms of less than 2 hectares of land that typically do not employ hired labour or technology. The industry is plagued by a multitude of problems like soil degradation, extreme poverty among cocoa farm owners, child labour, etc., which lead to low crop yield and cocoa bean supply constraints. Barry Callebaut is actively addressing these issues through their Forever Chocolate initiative where they have released a new line of chocolate in which all profits are reinvested to overcome issues faced by the cocoa farms. By 2025, 500,000 cocoa farm owners that supply to Barry Callebaut will be lifted out of extreme poverty, which will allow them to make better investments in their farms. Barry Callebaut has also helped 92,000 of the farms that they source cocoa beans from to develop individualised Farm Business Plans which include increasing soil nutrition and formulating more effective harvesting labor strategies, which have shown results in the form of increased crop yield.

As Barry Callebaut continues to scale up these efforts to reach a greater portion of the farms they source from, they will be able to develop a more stable cocoa supply originating from West Africa which can further reduce supply-side shocks that they will experience. This will enable their Cocoa Products as well as Gourmet & Specialties segments which do not apply a cost-plus pricing strategy to benefit from a more stable cocoa supply and thus more stable gross margin levels. We expect the improvements from their efforts to continuously materialise in the next 3 to 10 years as the timelines for the realization of benefits from the individualised Farm Business Plans gradually mature.

We believe that the cost-plus pricing model and fortification of its cocoa bean supply mentioned above are unique to Barry Callebaut because of its dominant scale over its competitors. Hence, it is unlikely that competitors will be able to imitate these strategies without huge capital outlay or a strong customer network like Barry Callebaut's to drive demand. The reason that the aforementioned changes by competitors will not be a significant threat to Barry Callebaut also lies in the fact that not all of its competitors have an extensive vertically-integrated supply chain like Barry Callebaut, in particular those with smaller production capacities like Guan Chong Berhad. Among all the risks that Guan Chong Berhad's management foresees, they rank cocoa bean supply risk as number one in terms of impact and number two in terms of likelihood (Figure 20), this reinforces our thesis that a large scale of operations and strong control over the value chain is vital to the differentiation of these chocolate processing companies. In the foreseeable future, we expect competitors to be more concerned with ways to procure sufficient short term cocoa bean supply amidst supply shortages and rising prices, rather than making investments into developing sustainability changes at the cocoa farms they source from to ensure long-term benefits.

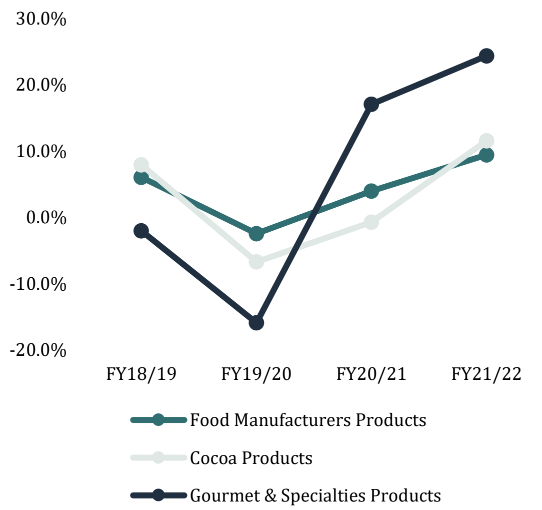
2. Growth in the gourmet chocolate segment is poised to boost both Barry Callebaut's top and bottom line

Figure 20: Guan Chong Berhad's Projected Risk Matrix



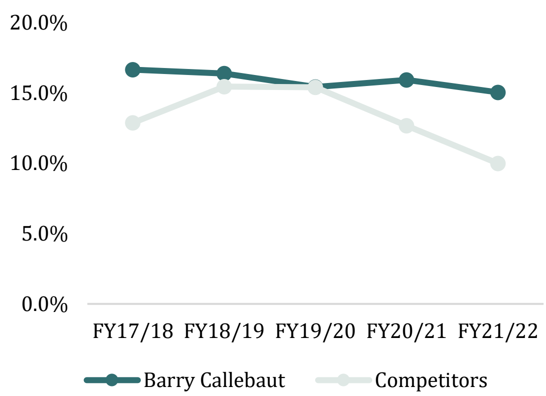
Source: Guan Chong Berhad

Figure 21: Barry Callebaut Revenue Growth by Segment



Source: Barry Callebaut

Figure 22: Barry Callebaut Gross Margin Comparison with Competitors



Source: Various Company Filings

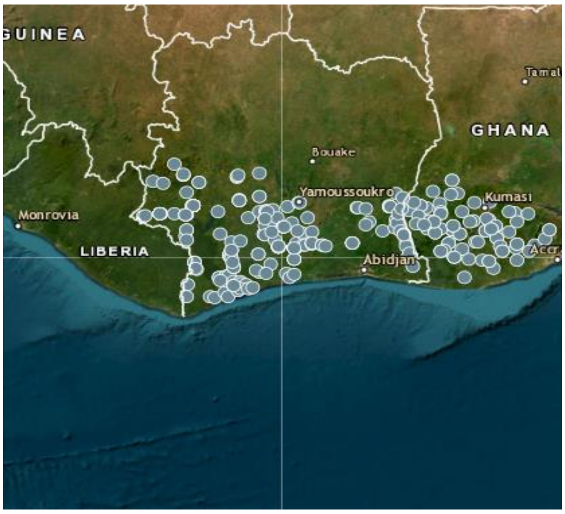
Barry Callebaut is expected to benefit from the increasing demand for gourmet chocolate driven by increasing affluence in key markets such as China. Their gourmet chocolate segment which represents 17% of revenue is noticeably growing faster than other segments. Furthermore, the gourmet chocolate segment is margin accretive, reflected in Barry Callebaut's margins which have held up better than competitors who do not have a large gourmet chocolate segment.

Gourmet chocolate is one of the key growth drivers identified by the management with plans to further consolidate their market share and double the operating profit of the segment. The fast-growing gourmet chocolate segment is highly fragmented with many small local suppliers and few regional players. Barry Callebaut is the largest supplier of gourmet chocolate globally with a 24% market share. We believe that with Barry Callebaut's strong supply chain network and value-added service, it is well positioned to further capture market share in the fragmented gourmet chocolate market and meet the management's earnings target.

Barry Callebaut's customers in the Gourmet & Specialties segment include bakeries, confectioners, hotels, and restaurants. Gourmet chocolate customers place a strong emphasis on the chocolate's origin and customisability; both of which are well-addressed by Barry Callebaut. Their vertically-integrated supply chain from the sourcing of raw materials to the production of the chocolates gives them an advantage over competitors who do not have the same level of supply chain expertise. With the growing emphasis on sustainability especially in the premium chocolate space, Barry Callebaut's gourmet chocolate brands took the lead by transitioning to 100% sustainably sourced ingredients. They have taken it a step further by publicly disclosing the geolocation of their direct suppliers in Côte d'Ivoire, Ghana, and Cameroon since 2019, being the only major industrial chocolate supplier to do so. Moreover, increasing consolidation among gourmet chocolate customers such as hotels and restaurants is driving them towards global players such as Barry Callebaut, which can provide a consistent supply of chocolate and exquisite quality globally compared to competitors who either only have a local presence or a small regional footprint. This serves as a pull factor towards Barry Callebaut and gives them an edge over competitors, especially in attracting high-value customers.

Furthermore, Barry Callebaut's factories allow mass customisation from the blend of chocolates to their design through the use of artificial intelligence and machinery. This compares with competitors which largely supply cocoa mass that requires further processing by their customers into chocolate products for consumption. Additionally, the opening of the world's first chocolate 3D printing studio by Barry Callebaut allows mass production of complex designs with lower lead time and lower costs. Given that design is one of the most highly emphasised factors in attracting artisans and professional users of chocolates to use their gourmet chocolate products, Barry Callebaut's advantage in customisation at low cost is highly appealing to customers. Additionally, considering that most of Barry Callebaut's competitors in gourmet chocolate are small, localised suppliers, we believe that it would be highly unlikely for them to be able to match Barry Callebaut's production technologies, making their share of the gourmet chocolate market impenetrable.

Figure 23: Map of Barry Callebaut's Cocoa Bean Suppliers

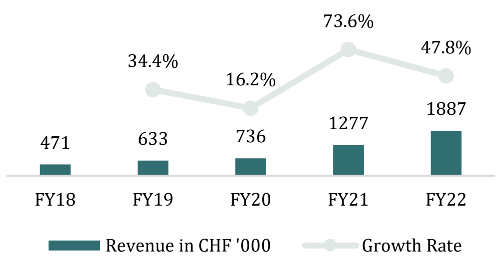


Source: Barry Callebaut

Figure 24: Zooming in Discloses Exact Location of Supplier

Source: Barry Callebaut

Figure 25: Barry Callebaut Sustainable Cocoa Revenue Growth



Source: NUS Investment Society Estimates, Barry Callebaut

While the majority of Barry Callebaut's business segment operates under a cost-plus model, their gourmet chocolate segment charges customers on a price list basis. We believe that the pricing model for their gourmet chocolate segment allows them to capture the benefits of lower price sensitivity of gourmet chocolate customers and their cost savings from investments in technology. Furthermore, customers in the gourmet chocolate segment have less bargaining power given their smaller size. This has allowed Barry Callebaut to earn higher margins from their Gourmet & Specialties segment despite lower revenue contribution. Moreover, Barry Callebaut's investment in production technologies allows them to achieve much lower production costs compared to other gourmet chocolate suppliers which are smaller in size. This allows them to undercut their competition to recognise the benefits from their lower costs. As such, we believe that the gourmet chocolate segment is highly margin accretive and will contribute meaningfully to Barry Callebaut's profitability going forward.

All in all, we believe that management's focus on growing their gourmet chocolate segment is a step in the right direction and the unique advantages that Barry Callebaut commands over its competitors are expected to allow further consolidation of market share. This will allow them to capitalise on the fast-growing premium chocolate segment, supporting our forecast of higher revenue and profitability.

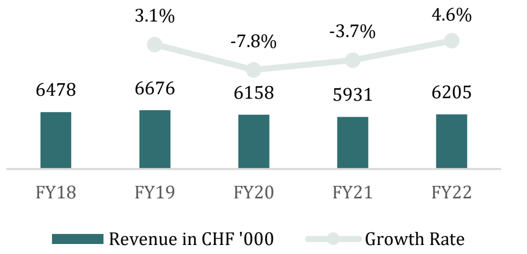
3. Barry Callebaut's heavy emphasis on R&D and sustainability opens opportunities to drive top-line growth

Barry Callebaut launched their sustainable chocolate strategy, the Forever Chocolate, where they aim to tackle issues related to cocoa farming to boost productivity as well as ensure a sustainable flow cocoa and chocolate products. In 2020, COVID-19 spiralled out of control, catalysing consumer trends such as healthy eating and ethical consuming to gain popularity and traction. Current consumption patterns are favouring Barry Callebaut's heavy focus on sustainability which can potentially drive Barry Callebaut's top-line growth and allow them to firmly establish themselves as the market leader for cocoa and chocolate production. Tailwind trends shifting in Barry Callebaut's favour is further supported by McKinsey's research, which shows that approximately 60% of Europe survey respondents across various demographics are willing to pay for sustainable alternatives.

To capitalise on the shift in consumption behaviour, Barry Callebaut have been heavily focusing on developing environmentally friendly and sustainable alternatives. According to Barry Callebaut, 37% of consumers are more likely to purchase sustainable chocolate confectionary products, a key trend that is gaining traction globally. As a growing number of consumers prioritize sustainability and environmentally friendly products, food producers must ensure that their product offerings come from a sustainable source to remain relevant within the age of conscious consumerism. With heavy emphasis on sustainability and innovation, Barry Callebaut have developed a new brand, Cabosse Naturals, to offer food producers a sustainable and environmentally friendly alternative.

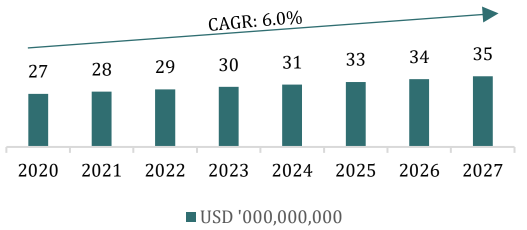
Cabosse Naturals have been developed to refine the process of harvesting cacaofruits efficiently. Originally, cacaofruits were gathered mainly for its seeds while 70% of the fruit was thrown away. This causes massive food wastage, with as much as 10 million tons of

Figure 26: Barry Callebaut Normal Unsustainable Cocoa Revenue Growth



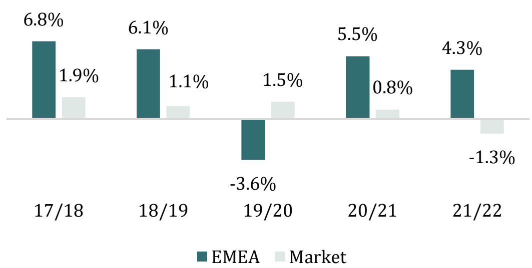
Source: NUS Investment Society Estimates, Barry Callebaut

Figure 27: Market Size of Globally Ethically Sourced Chocolate

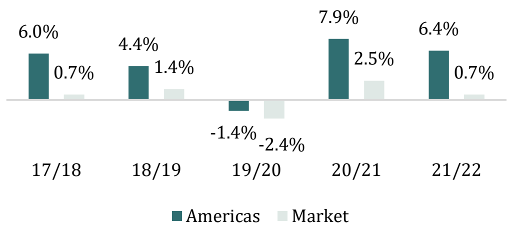


Source: NUS Investment Society Estimates

Figure 28: YoY Volume Growth Across Markets



Source: Barry Callebaut Analyst Conference



Source: Barry Callebaut Analyst Conference

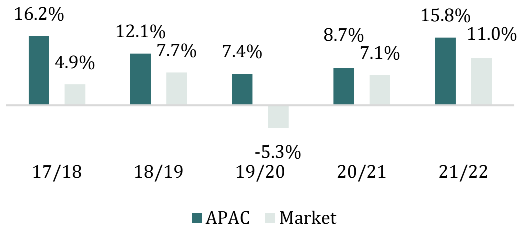
food wasted when 14 million tons of cacaofruits are harvested. Cabosse Natural has developed a low waste supply chain which enables 100% usage of the cacaofruit, effectively cutting down wastage. This resulted in Cabosse Naturals being Upcycle Certified, which is an indication of efficient usage of ingredient with minimal food wastage.

Furthermore, Barry Callebaut's WholeFruitChocolate is also the first-ever chocolate to be Upcycled Certified. According to MATTSON, 60 percent of consumers are likely to purchase upcycled food. Due to Barry Callebaut's strong focus on sustainability, food producers are more likely to partner with Barry Callebaut. This is attributable to Barry Callebaut's unique Upcycle Certified chocolate, which is highly valued amongst the consumers. As a result of their sustainability, they have been able to attract multiple partnership opportunities globally.

In addition to Cabosse Naturals, Barry Callebaut have also founded Cocoa Horizons, a non-profit and third-party verified organization which focuses on driving cocoa farmer prosperity. Barry Callebaut sells Cocoa Horizons' cocoa and chocolate products at a premium and the premium generated by products of Cocoa Horizons will be used to better the lives of farmers. In FY22, there is significant growth in Cocoa Horizons premiums, which is driven by consumers seeking sustainable alternatives to better the lives of cocoa farmers which can be observed as the premiums generated from purchase of Cocoa Horizons cocoa products generated over CHF37.4M in funds, a 30% increase as compared to FY21. This indicates that by being sustainable and environmentally friendly, consumers are more willing to pay a premium for the product. Furthermore, by producing cocoa and chocolate products with sustainable cocoa, the revenue growth rate for Barry Callebaut is significantly higher (Figure 25) as compared to utilising normal unsustainable cocoa (Figure 26), indicating that the shift to supplying sustainable products is an excellent move as it is increasing their top-line growth.

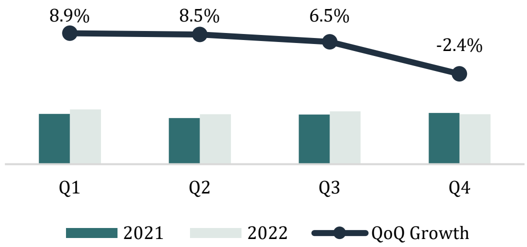
Moreover, the market size of the global ethically sourced chocolate is forecasted to grow at a CAGR of 6.0% (Figure 27) which is greater than the growth rate of the global chocolate market which is estimated to grow at CAGR of 3.7%. With Barry Callebaut focus on transitioning to 100% sustainable production of chocolate and cocoa products, Barry Callebaut will be able to continue outgrowing the global chocolate market.

Barry Callebaut has been consistently outperforming the market in volume growth YoY (Figure 29). By being the first-mover in becoming a more sustainable supplier as compared to its peers (i.e Producing WholeFruitChocolate), they are well-positioned to capitalize on the shifting consumption patterns to increase the number of partnerships with chocolate producers as more producers are sourcing for sustainable alternatives to align with consumer's consumption behaviour. Additionally, by providing sustainable cocoa and chocolate products, Barry Callebaut is also able to charge a higher premium. As a result, these 2 factors will contribute to their top-line growth as they provide raw, semi-processed and processed ingredients to a growing number of food manufacturers at a higher price.



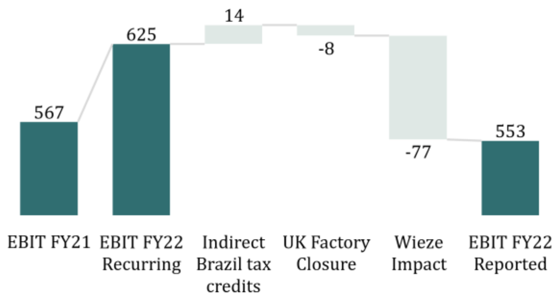
Source: Barry Callebaut Analyst Conference

Figure 29: QoQ Sales Volume for FY22



Source: Barry Callebaut

Figure 30: Loss in EBIT due to Wieze factory closure



Source: Barry Callebaut

Figure 31: Attelli Production Plant

Source: Barry Callebaut

Catalysts

Reopening of Wieze Factory

Barry Callebaut's largest chocolate production factory, the Wieze factory, detected Salmonella within their chocolate production lot on June 27 this year. This led to a halt in chocolate production at the Wieze factory on June 29. This has led to loss in sales volume (Figure 29) as well as profits related to the Wieze factory (Figure 30) in Q4.

Barry Callebaut's timely response to the issue at hand de-escalated the situation and they were able to restart the first production lines in Wieze factory by early August. This will drive up the sales volume for Barry Callebaut in the next fiscal quarter 1Q24. With the reopening of the Wieze factory, Barry Callebaut will experience a boost in the top-line growth.

New Partnerships with large food distributors

Barry Callebaut has been successful in its ventures globally as they garner more partnerships globally. One of their notable partnerships would be the extension of strategic outsourcing agreement with one of largest food producers in the world Grupo Bimbo in April 2022. This allows them to firmly re-establish themselves as a quality brand, which allows them to capture more partnerships as well as strengthen their existing supply agreements.

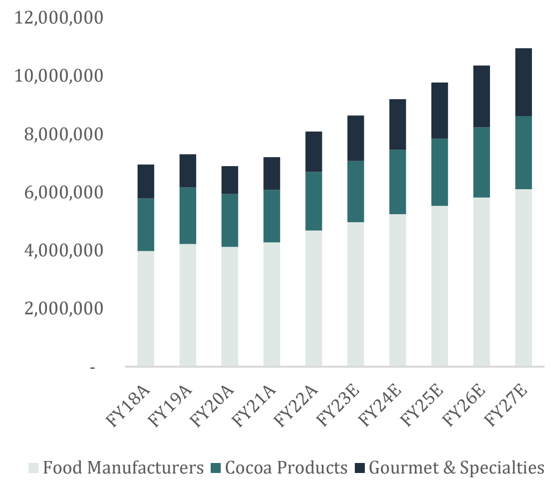
Furthermore, as Barry Callebaut controls the entire chain of supply for cocoa and chocolate production, Barry Callebaut is less susceptible to supply shocks, putting them in a stronger position to capture more partnerships globally to boost their sales volume and maintain low costs, separating themselves from other competitors.

Expansion of Production Footprints into Africa

Barry Callebaut has taken its first step into chocolate production in Africa after establishing a long-term agreement with Attelli, a subsidiary of the COFRAPEX Group. This allows Barry Callebaut to gain further insights regarding the consumption behaviour of local customers to better cater their products to drive growth in different segments, from gourmet to food manufacturers. According to analysts, the Middle East & African chocolate market is forecasted to reach US$6.5B by 2025 at a CAGR of 6.72% from 2022 to 2027, higher than the global cocoa market, which is slated to grow at a CAGR of 2.6%, highlighting potential growth opportunities. Furthermore, by expanding their production into Africa, this cuts down transportation costs when supplying cocoa or chocolate domestically or nearby North Africa.

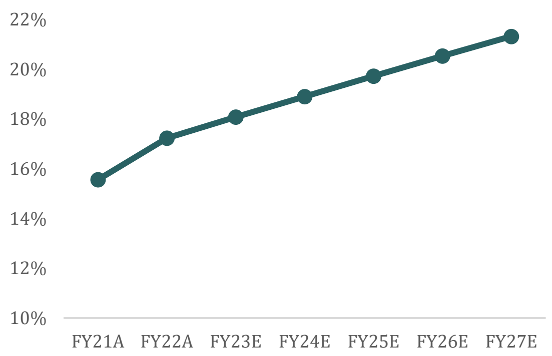
By utilizing cost leadership, they are able to provide low and competitive prices to capture more partnerships to increases their sales volume. This subsequently allows Barry Callebaut to re-establish themselves as the market leader within the chocolate and cocoa production space.

Figure 32: Barry Callebaut revenue forecast



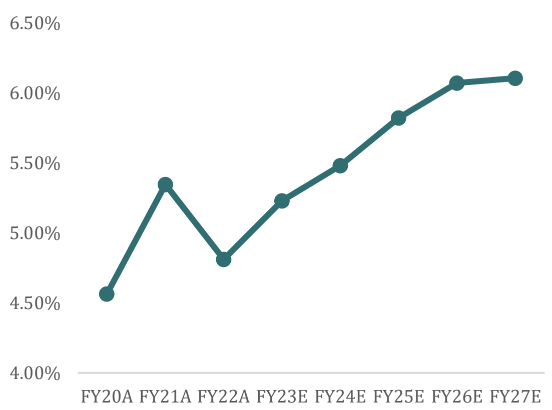
Source: NUS Investment Society Estimates, Company fillings

Figure 33: Gourmet & Specialties to occupy increasing share of revenue



Source: NUS Investment Society Estimates

Figure 34: Increasing Return on Assets due to efficiency gains



Source: NUS Investment Society Estimates

Financial Analysis

(CHF ,000)	2018A	2019A	2020E	2021E
Revenue	7,207,595	8,091,855	8,640,916	9,202,404
Net Income	384,505	360,940	396,591	424,170
NI Gr Rate (%)	*23.4%*	*(6.1%)*	*9.9%*	*7.0%*
Profit Margin (%)	*5.3%*	*4.5%*	*4.6%*	*4.6%*
ROA (%)	*5.3%*	*4.8%*	*5.2%*	*5.5%*
ROE (%)	*15.3%*	*12.9%*	*13.1%*	*12.9%*
EV/EBITDA	14.82	14.93	12.90	12.09
EPS	70	66	72	77
D/E	0.89	0.72	0.64	0.49

Overview

The chart above reveals Barry Callebaut's financial condition prospects, highlighting our assumptions. Most indicators yield positive and favourable trends that are supportive of the overall BUY recommendation.

Revenue Growth and Profitability

Barry Callebaut's revenue grew at a CAGR of 3.09% from FY2018 to FY2022. In line with our thesis of higher growth in the gourmet chocolate segment and sustainability-linked products, we are projecting a higher revenue growth of 4.85% CAGR from FY2023 to FY2027 (Figure 32). Furthermore, given that profitability in FY2022 was affected by a one-off charge relating to the salmonella incident at the Wieze factory, we are projecting an increase in profit margin of 4.6% in FY2023. In the longer term, profit margin will be relatively stable given that the majority of revenue is derived under a cost-plus model. However, gains in profitability are still expected and will be driven by Barry Callebaut's revenue mix given that the gourmet and specialty segment is forecasted to increase from 17% of revenue in FY2022 to 21% in FY2027 (Figure 33).

Efficiency gains to drive returns

Given Barry Callebaut's scale advantage as the largest cocoa processing company and their emphasis on improving their supply chain under their Forever Chocolate initiative, we believe that this would result in efficiently gains in their supply chain as impacts from supply chain shocks would be mitigated. Furthermore, investments into more efficient production technologies such as 3D printing to allow mass customisation is expected to drive efficiency gains in capital deployment as machines replaces artisans required in their production line. These are expected to translate to a higher return on assets as capital is deployed more efficiently (Figure 34).

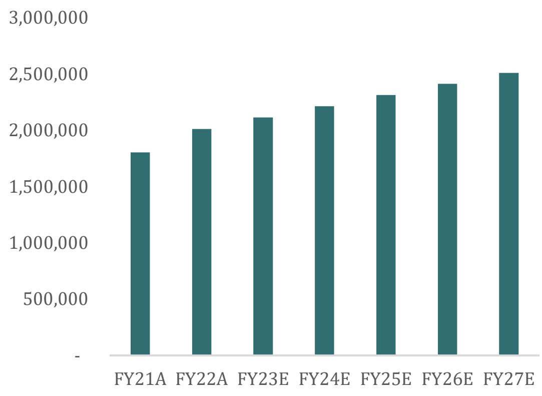
Strong cash flow to pay down debt

Barry Callebaut has a relatively high debt to equity ratio of 0.72 compared to the industry average of 0.19. Given Barry Callebaut's strong cash flow, we anticipate a pay down in debt as their business matures and excess cash flow is available to lower debt.

Valuation

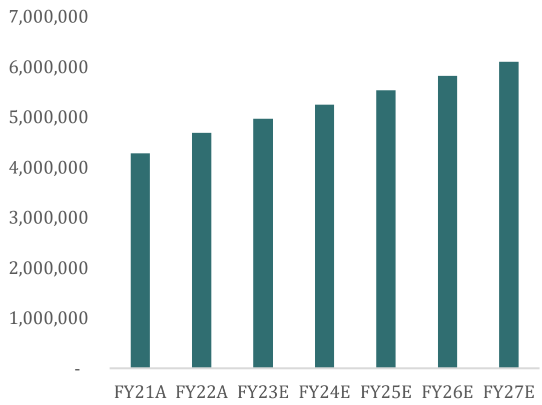
Valuation Price Target: **CHF 2,329.47** was derived using a bottom-up discounted cash flow model.

Figure 35: Cocoa Products revenue projections



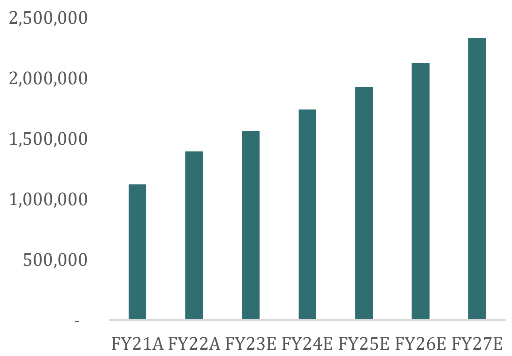
Source: NUS Investment Society Estimates, Company fillings

Figure 36: Food Manufacturers revenue projections



Source: NUS Investment Society Estimates, Company fillings

Figure 37: Gourmet & Specialties revenue projections



Source: NUS Investment Society Estimates, Company fillings

DCF Model

We utilised a discounted cash flow model with a 5-year forecast period to derive our target price given the relative maturity of Barry Callebaut's business.

Revenue projections

Our revenue build was broken down and forecasted based on Barry Callebaut's 3 operating segments namely 1. Cocoa Products, 2. Food Manufacturers and 3. Gourmet & Specialties. While revenue growth is largely influenced by the broader chocolate market, changing consumer preferences drives higher growth for specific subsegments.

<u>Cocoa Products</u>

The main business in this segment is cocoa grinding. With a 51% market share globally, Barry Callebaut is the largest player in the cocoa grinding. While this demonstrates the strong position of Barry Callebaut, the growth rate of this segment would be a derived demand for chocolate end products. Furthermore, given the lack of product differentiation in this segment, further market share gains would prove difficult. As such, we projected its Cocoa Products segment to have the lowest growth among the other 2 segments and based our revenue growth on the growth rate of the chocolate segment as well as historical growth (Figure 35).

<u>Food Manufacturers</u>

In Barry Callebaut's Food Manufacturers segment, industrial chocolate is supplied to some of the largest food and beverage companies in the world such as Hershey, Mondelez, Nestle and more. Revenue in this segment is largely stable given the long-term contracts entered with customers. Growth in this segment would largely depend on the growth in chocolate demand as well as Barry Callebaut's ability to attract new customers. Revenue would be negatively impacted by any loss of customers given their large size. However, we view this as highly remote given that Barry Callebaut is a key supplier of industrial chocolate. Overall, we projected a stable growth in this segment based on the aforementioned reasons (Figure 36).

<u>Gourmet & Specialties</u>

The Gourmet & Specialties segment provides high quality chocolate and adjacent products such as decorations and compound coatings. With the raising affluence globally, the gourmet chocolate segment is projected to grow faster than the overall chocolate segment as mentioned previously. Furthermore, as we expect Barry Callebaut to consolidate market share in the fragmented gourmet chocolate segment, we are projecting a higher growth rate for this segment relative to the overall market (Figure 37).

Margins

We expect operating margins to improve over the long run given the margin accretion from the Gourmet & Specialties segment. However, as the other segments operates under a cost-plus model with stable margins, the overall margin expansion would be at a moderate pace. Thus, we forecasted a moderate expansion in Barry Callebaut's operating margins.

Weighted Average Cost of Capital (WACC)

The Cost of Equity is derived using the Capital Asset Pricing Model ("CAPM"). As the valuation is done in CHF, we used the 10-year Switzerland government bond yield of 1.13% as the risk-free rate to

Figure 38: Weighted Average Cost of Capital

Barry Callebaut WACC Build	
Cost of Equity	
10-Year CHF Government Bond Yield	1.13%
Unlevered Beta	0.64
Levered Beta	1.04
Equity Risk Premium	5.48%
Cost of Equity	**6.84%**
Cost of Debt	
Credit Rating	Baa3
Default Spread	1.59%
Cost of Debt	2.72%
Marginal Tax Rate	14.93%
After Tax Cost of Debt	**2.31%**
Cost of Capital	
Debt	2,141,474
Equity	2,904,346
Total Capital	5,045,820
% Debt	42%
%Equity	58%
Cost of Capital	**4.92%**

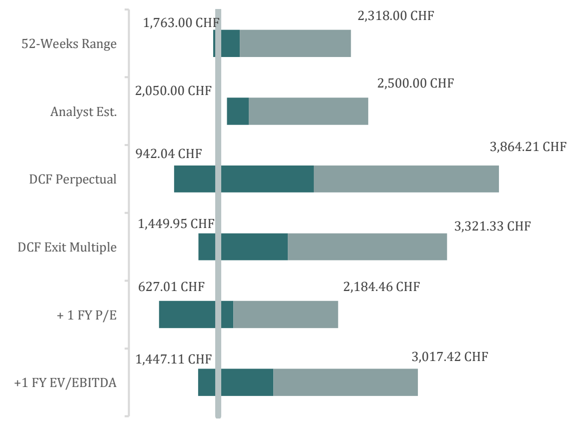
Source: NUS Investment Society Estimates

Figure 39: Sensitivity Analysis for Terminal Value

Implied Share Price		WACC				
		4.72%	4.82%	**4.92%**	5.02%	5.12%
Perpectual Growth	0.93%	14,717,256	14,338,920	13,979,548	13,637,750	13,312,267
	1.03%	15,116,097	14,717,256	14,338,920	13,979,548	13,637,750
	1.13%	15,537,158	15,116,097	**14,717,256**	14,338,920	13,979,548
	1.23%	15,982,349	15,537,158	15,116,097	14,717,256	14,338,920
	1.33%	16,453,805	15,982,349	15,537,158	15,116,097	14,717,256

Source: NUS Investment Society Estimates

Figure 40: Football Field Analysis



be currency consistent. Further, given that Switzerland is rated triple A by the major credit rating agencies, we determined that adjustments to the yield to account for potential default risks is unnecessary. The levered beta of 1.04 is calculated based on Barry Callebaut's leverage with the industry average unlevered beta from Professor Damodaran. The equity risk premium of 5.48% by Professor Damodaran is also used in the calculation. Thus, the cost of equity is calculated to be 6.84%. Cost of debt is calculated by adding a default spread to the risk-free rate. Given Barry Callebaut's credit rating of Baa3, it corresponds to a default spread of 1.59% representing the typical default risk of companies with the same credit rating. As such, the cost of debt is calculated to be 2.72%. Weighting by the capital structure of Barry Callebaut, the WACC of 4.92% is used (Figure 38).

Terminal growth

The risk-free rate is used as the terminal growth rate given that it is a good proxy for long-term economic growth as long-term economic growth cannot be lower than the risk-free rate. The perpetual growth method is used to calculate the terminal value in our model.

Relative valuation

Relative valuation is used as a sanity check to our DCF valuation. As there are few comparables in the industrial chocolate segment, we also used consumer chocolate companies in our peer group. We used the median +1FY EV/EBITDA and +1 FY P/E ratio as our valuation multiple. We arrived at a target price of CHF 2,225.07 and CHF 1,389.33. We believe the low target price based on the P/E ratio is unjustified given Barry Callebaut's higher growth and profitability. As such, we believe that our target price of CHF 2,329.47 is still justified.

Investment Risks

<u>Inflation of Raw Materials (M1)</u>

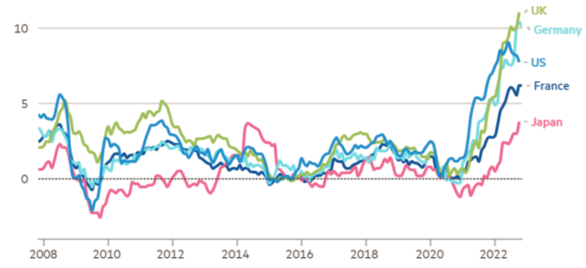
Due to COVID-19, inflation has been running rampant, with global inflation reaching a peak of 9.5%. This has eroded the purchasing power of many consumers, resulting in a decrease in overall chocolate sales by 2%-3% in the U.S, according to the Reuters. Furthermore, price of sugar has been inflating (Figure 42), increasing the cost of producing chocolate. These factors have contributed in chocolate producers decision pull-back in their volume production as of late. This will indirectly cause a fall in total sales volume for Barry Callebaut, impacting their top-line growth.

However, Barry Callebaut employs a cost-plus pricing model which generates 68% of their sales. Through this, they are able raise the cost of the raw materials to pass the rising costs to their customers with the objective to mitigate the effects of the decrease in total sales volume as well as to limit the impact on their profitability margins.

<u>Dwindling Number of Cocoa Farmers (B2)</u>

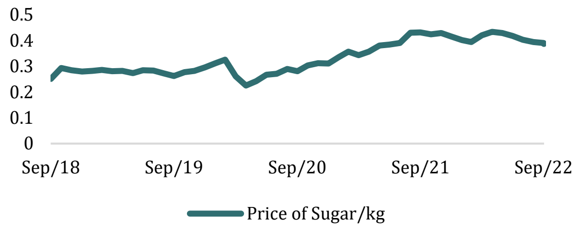
As of 2020, the average income of a cocoa farmer earns is $0.85/day. In the current society where global inflation is rising steadily, there has been an increasing number of cocoa farmers pushed into the extreme poverty cycle. Barry Callebaut measures the number of cocoa farmers in their supply chain facing extreme poverty against the World Bank's USD1.90/day threshold for extreme poverty. Due to low wage, this deters the younger generation from becoming a cocoa farmer as they take their innovation and talent into the cities to earn higher wages. As a result, the number of cocoa farmers are dwindling. This is evident as more than 90% of cocoa farmers are aged over 50, according to

Figure 41: Global Inflation



Source: Refinitiv

Figure 42: Raw Material Price Inflating

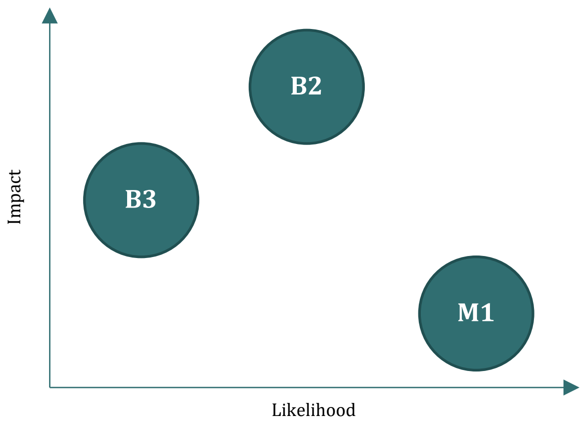


Source: Y Charts

Figure 43: Barry Callebaut SMART Strategy

Source: Barry Callebaut

Figure 44: Risk Matrix



analysts. This indicates that the farming population is aging and that the younger generation are not replacing the older farmers. Consequently, cocoa yield will decrease in conjunction with the decreasing number of cocoa farmers. If the issue is left untouched, the chocolate industry could go extinct.

The main driving factor for a lack of young farmers is poor income. However, Barry Callebaut has been implementing several strategies such as Forever Chocolate to mitigate this issue. Through their sustainability strategies, they have managed to lift 214,124 farmers out of poverty in 2022, a 50% increase since 2020, Furthermore, Barry Callebaut is also enhancing the productivity of cocoa farming with technology and innovation.

With Barry Callebaut's active involvement in bettering the lives of the cocoa farmers within their supply chain, we foresee that Barry Callebaut will be able to achieve its goal of lifting 500,000 cocoa farmers in their supply chain out of extreme poverty, making cocoa farming a viable job to pursue, hence, stabilizing their flow of cocoa products.

Failure to renew or early termination of contracts (B3)

Barry Callebaut's SMART strategy focuses on expansion (Figure 43), hence, to remain profitable, they have to maintain their current outsourcing contracts as well as increase the number of partnerships.

As Barry Callebaut is utilising their large scale operations to remain profitable, failure to renew as well as increasing the number of partnerships could backfire on Barry Callebaut and negatively impact their profitability margins as they are unable to fully leverage on the scales of economy. However, due to Barry Callebaut's extensive and unique offerings, the likelihood of this materialising is low (Figure 44).

Disclaimer

Appendix:

Pro-Forma Financial Statements

CHF thousands	FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
Assets										
Current Assets										
Cash and cash equivalents	404,183	557,827	1,385,976	1,095,831	878,197	689,882	566,524	595,911	724,359	664,555
Short-term deposits	1,656	1,549	6,251	1,467	1,824	1,824	1,824	1,824	1,824	1,824
Trade receivables and other current assets	911,904	815,783	610,785	759,951	915,579	900,255	1,033,572	1,020,573	1,155,922	1,144,652
Inventories	1,476,667	1,803,674	1,909,917	2,043,333	2,426,485	2,160,646	2,724,557	2,464,593	3,033,635	2,778,040
Income tax receivables	29,685	62,977	62,099	74,854	70,623	70,623	70,623	70,623	70,623	70,623
Derivative financial assets	502,471	616,284	365,984	290,642	466,589	466,589	466,589	466,589	466,589	466,589
Non-current Assets										
Property, plant and equipment	1,420,885	1,498,878	1,491,753	1,604,705	1,558,791	1,650,852	1,725,934	1,782,025	1,817,017	1,828,709
Right-of-use assets	-	-	186,948	259,928	256,301	273,220	290,973	309,077	327,487	346,156
Intangible assets	991,510	1,026,331	985,684	995,483	1,020,417	1,020,417	1,020,417	1,020,417	1,020,417	1,020,417
Employee benefit assets	5,558	4,924	14,888	15,056	21,664	21,664	21,664	21,664	21,664	21,664
Deferred tax assets	65,679	86,869	83,546	77,172	97,283	97,283	97,283	97,283	97,283	97,283
Other non-current assets	21,844	33,036	37,279	25,596	47,126	50,324	53,594	56,928	60,319	63,758
Total Assets	5,832,042	6,508,132	7,141,110	7,244,018	7,760,879	7,403,578	8,073,555	7,907,508	8,797,138	8,504,270
Liabilities										
Current Liabilities										
Bank overdrafts	26,267	132,638	103,603	63,564	62,418	-	-	-	-	-
Short-term debt	285,048	197,003	461,375	119,427	449,967	415,026	144,000	221,732	569,340	-
Short-term lease liabilities	-	-	36,543	41,075	42,141	45,014	48,029	51,104	54,230	57,401
Trade payables and other current liabilities	1,121,082	1,127,511	1,119,643	1,433,470	1,793,254	1,225,511	1,989,414	1,425,537	2,192,816	1,631,815
Income tax liabilities	52,518	60,079	100,829	115,351	114,840	114,840	114,840	114,840	114,840	114,840
Derivative financial liabilities	641,997	741,383	528,492	350,911	560,326	560,326	560,326	560,326	560,326	560,326
Provisions	26,015	20,381	19,894	31,154	88,952	88,952	88,952	88,952	88,952	88,952
Non-current Liabilities										
Long-term debt	1,168,797	1,534,453	2,006,328	1,930,054	1,302,026	1,336,967	1,222,699	1,225,307	655,967	1,135,292
Long-term lease liabilities	-	-	150,325	224,464	222,504	236,549	251,288	266,318	281,600	297,099
Employee benefit liabilities	130,826	184,562	154,041	138,333	85,817	85,817	85,817	85,817	85,817	85,817
Provisions	8,735	4,929	6,314	8,709	12,437	12,437	12,437	12,437	12,437	12,437
Deferred tax liabilities	70,892	80,283	79,999	86,298	106,991	106,991	106,991	106,991	106,991	106,991
Other non-current liabilities	14,354	11,298	18,457	15,991	14,860	15,868	16,899	17,951	19,020	20,104
Total Liabilities	3,546,531	4,094,520	4,785,843	4,558,801	4,856,533	4,244,299	4,641,693	4,177,311	4,742,336	4,111,074
Equity										
Share capital	110	110	110	110	110	110	110	110	110	110
Retained earnings and other reserves	2,269,686	2,399,182	2,353,387	2,682,747	2,901,889	3,156,822	3,429,405	3,727,740	4,052,345	4,390,739
Non-controlling interests	15,715	14,320	1,770	2,360	2,347	2,347	2,347	2,347	2,347	2,347
Total equity	2,285,511	2,413,612	2,355,267	2,685,217	2,904,346	3,159,279	3,431,862	3,730,197	4,054,802	4,393,196
Total Liabilities & Equity	5,832,042	6,508,132	7,141,110	7,244,018	7,760,879	7,403,578	8,073,555	7,907,508	8,797,138	8,504,270

CHF thousands	FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
Income Statement *units*										
Revenue	6,948,411	7,309,036	6,893,146	7,207,595	8,091,855	8,640,916	9,202,404	9,774,959	10,357,177	10,947,626
Cost of goods sold	(5,791,331)	(6,111,829)	#######	#######	(6,874,688)	(7,344,779)	(7,822,044)	(8,308,715)	(8,803,600)	(9,305,482)
Gross profit	1,157,080	1,197,207	1,063,701	1,147,203	1,217,167	1,296,137	1,380,361	1,466,244	1,553,577	1,642,144
Marketing and sales expenses	(149,956)	(149,337)	(140,773)	(135,376)	(148,467)	(172,067)	(183,248)	(194,650)	(206,243)	(218,001)
General and administration expenses	(441,040)	(434,129)	(416,465)	(430,390)	(434,739)	(259,221)	(253,104)	(245,190)	(235,354)	(223,475)
Depreciation						(253,575)	(293,014)	(334,907)	(379,295)	(426,213)
Other income	19,595	6,716	4,820	3,060	21,444	12,983	13,551	14,106	14,647	15,172
Other expense	(31,655)	(19,269)	(28,131)	(17,809)	(101,919)	(45,519)	(48,477)	(51,493)	(54,560)	(57,670)
Operating profit	554,024	601,188	483,152	566,688	553,486	578,738	616,068	654,110	692,772	731,956
Finance income	6,539	10,879	6,978	3,628	8,077	8,018	6,424	5,944	6,751	7,102
Finance expense	(107,687)	(159,299)	(109,425)	(105,297)	(129,831)	(101,281)	(103,258)	(90,577)	(78,784)	(92,554)
Profit before income tax	452,876	452,768	380,705	465,019	431,732	485,475	519,234	569,477	620,739	646,504
Income tax expense	(95,517)	(84,037)	(69,211)	(80,514)	(70,792)	(88,884)	(95,064)	(104,263)	(113,649)	(118,366)
Net profit for the year	357,359	368,731	311,494	384,505	360,940	396,591	424,170	465,214	507,090	528,138
Attributable to non-controlling interests	(1,226)	1,549	4,560	(566)	(235)	-	-	-	-	-
Attributable toshareholders of Barry Callebaut AG	356,133	370,280	316,054	383,939	360,705	396,591	424,170	465,214	507,090	528,138

CHF thousands		FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
Cash Flow Statement	*units*										
Cash Flow from Operating Activities											
Net profit for the year		357,359	368,731	311,494	384,505	360,940	396,591	424,170	465,214	507,090	528,138
Income tax expense		95,517	84,037	69,211	80,514	70,792	88,884	95,064	104,263	113,649	118,366
Depreciation, amortization and impairment		181,259	176,384	230,186	230,696	236,819	253,575	293,014	334,907	379,295	426,213
Interest expense/(interest income)		93,469	137,752	95,337	93,584	100,537	93,263	96,834	84,634	72,033	85,452
Loss/(gain) on sale of property, plant and equipment, net		7,479	1,241	1,194	1,562	2,689	-	-	-	-	-
Increase/(decrease) of employee benefit liabilities		(19,065)	(10,766)	(5,490)	(7,940)	(7,041)	-	-	-	-	-
Equity-settled share-based payments		14,464	15,043	12,512	16,028	13,317	16,978	18,082	19,207	20,351	21,511
Unrealised currency translation losses / (gains)		-	-	-	2,923	(106,682)	-	-	-	-	-
Change in working capital:											
Inventories cocoa beans		(194,897)	65,913	(86,818)	40,104	(92,275)					
Inventories other		-	(160,058)	(112,459)	(171,364)	(229,237)					
Write down of inventories		33,500	44,600	40,039	31,661	44,495					
Inventory fair value adjustment		(52,886)	57,017	(64,570)	(13,346)	(47,138)					
Inventories							265,839	(563,912)	259,965	(569,042)	255,595
Derivative financial assets/liabilities		395,867	(36,998)	47,579	(85,017)	64,771	-	-	-	-	-
Trade receivables and other current assets		(197,163)	80,568	117,412	(113,315)	(112,904)	15,324	(133,317)	12,999	(135,348)	11,269
Trade payables and other current liabilities		(38,977)	(18,029)	79,683	270,140	343,004	(567,743)	763,903	(563,877)	767,279	(561,001)
Right-of-use assets							(16,919)	(17,754)	(18,104)	(18,409)	(18,670)
Short-term lease liabilities							2,873	3,015	3,074	3,126	3,171
Long-term lease liabilities							14,045	14,739	15,029	15,283	15,499
Other non-current assets							(3,198)	(3,270)	(3,334)	(3,391)	(3,439)
Other non-current liabilities							1,008	1,031	1,051	1,069	1,084
Provisions less payments		(14,938)	(8,669)	4,492	16,853	66,885	-	-	-	-	-
Other non-cash effective items		10,196	(7,014)	2,881	1,357	(3,260)	-	-	-	-	-
Cash generated from operating activities		671,184	789,752	742,683	778,945	705,712	560,523	991,598	715,028	1,152,984	883,189
Interest paid		(93,120)	(139,657)	(94,116)	(95,358)	(104,378)	(101,281)	(103,258)	(90,577)	(78,784)	(92,554)
Income taxes paid		(62,557)	(94,347)	(55,019)	(67,950)	(79,683)	(88,884)	(95,064)	(104,263)	(113,649)	(118,366)
Net cash from operating activities		515,507	555,748	593,548	615,637	521,651	370,359	793,276	520,187	960,552	672,270
Cash Flow from Investing Activities											
Purchase of property, plant and equipment		(180,821)	(218,360)	(233,430)	(227,190)	(239,507)	(345,637)	(368,096)	(390,998)	(414,287)	(437,905)
Proceeds from sale of property, plant and equipment		4,422	4,970	2,804	6,422	3,943	-	-	-	-	-
Purchase of intangible assets		(37,111)	(61,216)	(47,464)	(48,054)	(36,383)	-	-	-	-	-
Proceeds from sale of intangible assets		3,731	322	311	33	314	-	-	-	-	-
Acquisition of subsidiaries/businesses net of cash acquired		(126,655)	(33,983)	(12,750)	(907)	(38,203)	-	-	-	-	-
Disposal of investments in associates		-	-	-	-	342	-	-	-	-	-
Purchase of short-term deposits		(1,588)	(536)	(7,070)	(67)	(735)	-	-	-	-	-
Proceeds from sale of short-term deposits		551	245	1,682	4,923	4	-	-	-	-	-
Proceeds from sale/(purchase) of other non-current assets		983	(1,933)	102	(174)	1,460	-	-	-	-	-
Receipt of government grants		-	-	-	-	7,082	-	-	-	-	-
Dividends received from equity-accounted investees		239	-	-	-	-	-	-	-	-	-
Interest received		5,959	10,479	6,533	3,428	8,077	8,018	6,424	5,944	6,751	7,102
Net cash used in investing activities		(330,290)	(300,012)	(289,282)	(261,586)	(293,606)	(337,619)	(361,672)	(385,055)	(407,537)	(430,804)
Cash Flow from Financing Activities											
Proceeds from the issue of short-term debt		31,362	98,530	423,348	32,184	41,662	-	-	-	-	-
Repayment of short-term debt		(65,177)	(533,033)	(141,721)	(443,810)	(89,620)	-	-	-	-	-
Proceeds from the issue of long-term debt		1,200	677,579	1,593,050	137	11,814	-	29,732	224,340	-	479,325
Repayment of long-term debt		(8,534)	(281,459)	(1,075,336)	(28,433)	(130,928)	-	(415,026)	(144,000)	(221,732)	(569,340)
Payment of lease liabilities		(69,873)	-	(38,164)	(39,943)	(44,006)	-	-	-	-	-
Dividend paid to shareholders of Barry Callebaut AG		(39,904)	(131,501)	(142,710)	(120,715)	(153,467)	(158,637)	(169,668)	(186,085)	(202,836)	(211,255)
Purchase of treasury shares		(22,783)	(22,781)	(27,332)	(18,400)	(16,951)	-	-	-	-	-
Dividends paid to non-controlling interests		(247)	(17)	-	-	-	-	-	-	-	-
Effect of changes in non-controlling interests		-	-	(9,110)	-	-	-	-	-	-	-
Net cash used in Financing activities		(173,956)	(192,682)	582,025	(618,980)	(381,496)	(158,637)	(554,962)	(105,746)	(424,568)	(301,270)
Effect of exchange rate changes on cash and cash equivalents		(11,373)	(15,781)	(29,107)	14,823	(63,037)	-	-	-	-	-
Net (decrease)/increase in cash and cash equivalents		(112)	47,273	857,184	(250,106)	(216,488)	(125,897)	(123,358)	29,387	128,448	(59,804)
Cash and cash equivalents at beginning of year		378,028	377,916	425,189	1,282,373	1,032,267	815,779	689,882	566,524	595,911	724,359
Cash and cash equivalents at end of year		377,916	425,189	1,282,373	1,032,267	815,779	689,882	566,524	595,911	724,359	664,555

Revenue Model

	FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
Income Projections										
Net sales	6,948,411	7,309,036	6,893,146	7,207,595	8,091,855	8,640,916	9,202,404	9,774,959	10,357,177	10,947,626
%yoy		5.2%	(5.7)%	4.6%	12.3%	6.8%	6.5%	6.2%	6.0%	5.7%
Revenue Build										
Cocoa Products	1,805,246	1,948,581	1,817,586	1,804,791	2,012,871	2,113,515	2,213,906	2,313,809	2,412,999	2,511,269
Bull Case		8%	-7%	-1%	12%	6.0%	5.8%	5.5%	5.3%	5.1%
Base Case					95%	5.0%	4.8%	4.5%	4.3%	4.1%
Bear Case						4.0%	3.8%	3.5%	3.3%	3.1%
Food Manufacturers	3,979,929	4,220,809	4,117,213	4,281,151	4,684,339	4,965,399	5,248,427	5,532,629	5,817,242	6,101,533
Bull Case		6%	-2%	4%	9%	7.0%	6.7%	6.4%	6.1%	5.9%
Base Case					95%	6.0%	5.7%	5.4%	5.1%	4.9%
Bear Case						5.0%	4.7%	4.4%	4.1%	3.9%
Gourmet & Specialties	1,163,236	1,139,646	958,347	1,121,653	1,394,645	1,562,002	1,740,071	1,928,520	2,126,936	2,334,824
Bull Case		-2%	-16%	17%	24%	13.0%	12.4%	11.8%	11.3%	10.8%
Base Case					95%	12.0%	11.4%	10.8%	10.3%	9.8%
Bear Case						11.0%	10.4%	9.8%	9.3%	8.8%
Cost of goods sold	(5,791,331)	(6,111,829)	(5,829,445)	(6,060,392)	(6,874,688)	(7,344,779)	(7,822,044)	(8,308,715)	(8,803,600)	(9,305,482)
%sales	(83.3)%	(83.6)%	(84.6)%	(84.1)%	(85.0)%	(85.0)%	(85.0)%	(85.0)%	(85.0)%	(85.0)%
Bull Case						-83.0%	-83.0%	-83.0%	-83.0%	-83.0%
Base Case					100%	-85.0%	-85.0%	-85.0%	-85.0%	-85.0%
Bear Case						-87.0%	-87.0%	-87.0%	-87.0%	-87.0%

	FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
Marketing and sales expenses	(149,956)	(149,337)	(140,773)	(135,376)	(148,467)	(172,067)	(183,248)	(194,650)	(206,243)	(218,001)
%sales	(2.2)%	(2.0)%	(2.0)%	(1.9)%	(1.8)%	(2.0)%	(2.0)%	(2.0)%	(2.0)%	(2.0)%
Bull Case						-1.6%	-1.6%	-1.6%	-1.6%	-1.6%
Base Case					100%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%
Bear Case						-2.4%	-2.4%	-2.4%	-2.4%	-2.4%
General and administration expenses	(441,040)	(434,129)	(416,465)	(430,390)	(434,739)	(512,797)	(546,118)	(580,097)	(614,648)	(649,689)
%sales	(6.3)%	(5.9)%	(6.0)%	(6.0)%	(5.4)%	(5.9)%	(5.9)%	(5.9)%	(5.9)%	(5.9)%
Bull Case						-5.3%	-5.3%	-5.3%	-5.3%	-5.3%
Base Case					100%	-5.9%	-5.9%	-5.9%	-5.9%	-5.9%
Bear Case						-6.5%	-6.5%	-6.5%	-6.5%	-6.5%
Other income	19,595	6,716	4,820	3,060	21,444	12,983	13,551	14,106	14,647	15,172
%sales	0.3%	0.1%	0.1%	0.0%	0.3%	0.2%	0.1%	0.1%	0.1%	0.1%
Bull Case						0.1%	0.1%	0.1%	0.1%	0.1%
Base Case					98%	0.2%	0.1%	0.1%	0.1%	0.1%
Bear Case						0.2%	0.2%	0.2%	0.2%	0.2%
Other expense	(31,655)	(19,269)	(28,131)	(17,809)	(101,919)	(45,519)	(48,477)	(51,493)	(54,560)	(57,670)
%sales	(0.5)%	(0.3)%	(0.4)%	(0.2)%	(1.3)%	(0.5)%	(0.5)%	(0.5)%	(0.5)%	(0.5)%
Bull Case						-0.5%	-0.5%	-0.5%	-0.5%	-0.5%
Base Case					100%	-0.5%	-0.5%	-0.5%	-0.5%	-0.5%
Bear Case						-0.6%	-0.6%	-0.6%	-0.6%	-0.6%
Finance income	6,539	10,879	6,978	3,628	8,077	8,018	6,424	5,944	6,751	7,102
Average Cash Balance		481,005	971,902	1,240,904	987,014	784,040	628,203	581,218	660,135	694,457
% Cash Balance		2.3%	0.7%	0.3%	0.8%	1.0%	1.0%	1.0%	1.0%	1.0%
Earnings before income taxes	452,876	452,768	380,705	465,019	431,732	485,475	519,234	569,477	620,739	646,504
Income tax expense	(95,517)	(84,037)	(69,211)	(80,514)	(70,792)	(88,884)	(95,064)	(104,263)	(113,649)	(118,366)
Tax Rate	(21.1)%	(18.6)%	(18.2)%	(17.3)%	(16.4)%	(18.3)%	(18.3)%	(18.3)%	(18.3)%	(18.3)%
Bull Case						-17.3%	-17.3%	-17.3%	-17.3%	-17.3%
Base Case					100%	-18.3%	-18.3%	-18.3%	-18.3%	-18.3%
Bear Case						-19.3%	-19.3%	-19.3%	-19.3%	-19.3%
SBC	14,464	15,043	12,512	16,028	13,317	16,978	18,082	19,207	20,351	21,511
%sales	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%

Financial Projections

	FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
Working Capital Assumptions *units*										
Trade receivables and other current assets	911,904	815,783	610,785	759,951	915,579	900,255	1,033,572	1,020,573	1,155,922	1,144,652
Trade accounts receivable Turnover		8	10	11	10	10	10	10	10	10
Days Sales Outstanding		43	38	35	38	38	38	38	38	38
Bull Case						36	36	36	36	36
Base Case						38	38	38	38	38
Bear Case						40	40	40	40	40
Inventories	1,476,667	1,803,674	1,909,917	2,043,333	2,426,485	2,160,646	2,724,557	2,464,593	3,033,635	2,778,040
Inventory Turnover		4	3	3	3	3	3	3	3	3
Days Inventory Outstanding		98	116	119	119	114	114	114	114	114
Bull Case						111	111	111	111	111
Base Case						114	114	114	114	114
Bear Case						117	117	117	117	117
Trade payables and other current liabilities	1,121,082	1,127,511	1,119,643	1,433,470	1,793,254	1,225,511	1,989,414	1,425,537	2,192,816	1,631,815
Accounts payable Turnover		5	5	5	4	5	5	5	5	5
Days payable Outstanding		67	70	77	86	75	75	75	75	75
Bull Case						68	68	68	68	68
Base Case						75	75	75	75	75
Bear Case						83	83	83	83	83

	FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
Other Assets/Liabilities *units*										
Other non-current assets	21,844	33,036	37,279	25,596	47,126	50,324	53,594	56,928	60,319	63,758
%sales	0.3%	0.5%	0.5%	0.4%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
Other non-current liabilities	14,354	11,298	18,457	15,991	14,860	15,868	16,899	17,951	19,020	20,104
%sales	0.2%	0.2%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Right-of-use assets	-	-	186,948	259,928	256,301	273,220	290,973	309,077	327,487	346,156
%sales	-	-	2.7%	3.6%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
Short-term lease liabilities	-	-	36,543	41,075	42,141	45,014	48,029	51,104	54,230	57,401
Long-term lease liabilities	-	-	150,325	224,464	222,504	236,549	251,288	266,318	281,600	297,099
Total lease liabilities	-	-	186,868	265,539	264,645	281,564	299,317	317,421	335,831	354,500
Change in ROU assets				72,980	(3,627)	16,919	17,754	18,104	18,409	18,670
Change in lease liabilities				78,671	(894)	16,919	17,754	18,104	18,409	18,670
% current lease liabilities			19.6%	15.5%	15.9%	17.0%	17.0%	17.0%	17.0%	17.0%
% non current lease liabilities			80.4%	84.5%	84.1%	83.0%	83.0%	83.0%	83.0%	83.0%

		FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
PPE Summary	*units*										
Revenue		6,948,411	7,309,036	6,893,146	7,207,595	8,091,855	8,640,916	9,202,404	9,774,959	10,357,177	10,947,626
Property, plant and equipment		1,420,885	1,498,878	1,491,753	1,604,705	1,558,791	1,650,852	1,725,934	1,782,025	1,817,017	1,828,709
Cost Allocation	Assumed Useful Life										
Land and Buildings	35	589,088	677,355	672,799	740,917	753,849	840,258	932,282	1,030,032	1,133,604	1,243,080
Plant and machinery	12	1,875,656	2,001,810	2,023,649	2,176,851	2,218,396	2,460,342	2,718,009	2,991,708	3,281,709	3,588,242
Office equipment, furniture and motor vehicles	6	161,481	140,526	118,363	127,649	129,956	147,238	165,643	185,193	205,907	227,802
Under construction		140,298	111,122	168,854	170,568	146,693	146,693	146,693	146,693	146,693	146,693
PPE at cost		2,766,523	2,930,813	2,983,665	3,215,985	3,248,894	3,594,531	3,962,627	4,353,625	4,767,912	5,205,817
Beginning Accumulated Depreciation							(1,690,103)	(1,943,678)	(2,236,693)	(2,571,600)	(2,950,895)
Depreciation							(253,575)	(293,014)	(334,907)	(379,295)	(426,213)
Accumulated depreciation		(1,345,638)	(1,431,935)	(1,491,912)	(1,611,280)	(1,690,103)	(1,943,678)	(2,236,693)	(2,571,600)	(2,950,895)	(3,377,108)
Capex		(180,821)	(218,360)	(233,430)	(227,190)	(239,507)	(345,637)	(368,096)	(390,998)	(414,287)	(437,905)
%revenue		(2.6)%	(3.0)%	(3.4)%	(3.2)%	(3.0)%	-4.0%	-4.0%	-4.0%	-4.0%	-4.0%
Land and Buildings			88,267	(4,556)	68,118	12,932	86,409	92,024	97,750	103,572	109,476
Plant and machinery			126,154	21,839	153,202	41,545	241,946	257,667	273,699	290,001	306,534
Office equipment, furniture and motor vehicles			(20,955)	(22,163)	9,286	2,307	17,282	18,405	19,550	20,714	21,895
Under construction			(29,176)	57,732	1,714	(23,875)	-	-	-	-	-
Total Net Additions			164,290	52,852	232,320	32,909	345,637	368,096	390,998	414,287	437,905
% net additions											
Land and Buildings			53.7%	(8.6)%	29.3%	39.3%	25.0%	25.0%	25.0%	25.0%	25.0%
Plant and machinery			76.8%	41.3%	65.9%	126.2%	70.0%	70.0%	70.0%	70.0%	70.0%
Office equipment, furniture and motor vehicles			(12.8)%	(41.9)%	4.0%	7.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Under construction			(17.8)%	109.2%	0.7%	(72.5)%	0.0%	0.0%	0.0%	0.0%	0.0%
Total			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

				FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
Land and Buildings			*units*										
Useful Life			35										
Opening Balance									753,849	816,251	881,638	949,958	1,021,141
Additions									86,409	92,024	97,750	103,572	109,476
Depreciation									(24,007)	(26,637)	(29,429)	(32,389)	(35,517)
Net Balance									816,251	881,638	949,958	1,021,141	1,095,101
			Final Year										
FY22A	753,849.0	35	FY57A					(21,539)	(21,538.5)	(21,538.5)	(21,538.5)	(21,538.5)	(21,538.5)
FY23E	86,409.2	35	FY58E					(2,469)	(2,468.8)	(2,468.8)	(2,468.8)	(2,468.8)	(2,468.8)
FY24E	92,024.0	35	FY59E					(2,629)	-	(2,629.3)	(2,629.3)	(2,629.3)	(2,629.3)
FY25E	97,749.6	35	FY60E					(2,793)	-	-	(2,792.8)	(2,792.8)	(2,792.8)
FY26E	103,571.8	35	FY61E					(2,959)	-	-	-	(2,959.2)	(2,959.2)
FY27E	109,476.3	35	FY62E					(3,128)	-	-	-	-	(3,127.9)
Depreciation									(24,007)	(26,637)	(29,429)	(32,389)	(35,517)

				FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
Plant and machinery			*units*										
Useful Life			12										
Opening Balance									2,218,396	2,255,313	2,286,480	2,310,870	2,327,395
Additions									241,946	257,667	273,699	290,001	306,534
Depreciation									(205,028)	(226,501)	(249,309)	(273,476)	(299,020)
Net Balance									2,255,313	2,286,480	2,310,870	2,327,395	2,334,908
			Final Year										
FY22A	2,218,396.0	12	FY34A					(184,866)	(184,866.3)	(184,866.3)	(184,866.3)	(184,866.3)	(184,866.3)
FY23E	241,945.7	12	FY35E					(20,162)	(20,162.1)	(20,162.1)	(20,162.1)	(20,162.1)	(20,162.1)
FY24E	257,667.3	12	FY36E					(21,472)	-	(21,472.3)	(21,472.3)	(21,472.3)	(21,472.3)
FY25E	273,698.8	12	FY37E					(22,808)	-	-	(22,808.2)	(22,808.2)	(22,808.2)
FY26E	290,001.0	12	FY38E					(24,167)	-	-	-	(24,166.7)	(24,166.7)
FY27E	306,533.5	12	FY39E					(25,544)	-	-	-	-	(25,544.5)
Depreciation									(205,028)	(226,501)	(249,309)	(273,476)	(299,020)

				FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
Office equipment, furniture and motor vehicles			*units*										
Useful Life			6										
Opening Balance									129,956	122,698	174,845	216,426	246,567
Additions									17,282	92,024	97,750	103,572	109,476
Depreciation									(24,540)	(39,877)	(56,169)	(73,431)	(91,677)
Net Balance									122,698	174,845	216,426	246,567	264,367
			Final Year										
FY22A	129,956.0	6	FY28A					(21,659)	(21,659.3)	(21,659.3)	(21,659.3)	(21,659.3)	(21,659.3)
FY23E	17,281.8	6	FY29E					(2,880)	(2,880.3)	(2,880.3)	(2,880.3)	(2,880.3)	(2,880.3)
FY24E	92,024.0	6	FY30E					(15,337)	-	(15,337.3)	(15,337.3)	(15,337.3)	(15,337.3)
FY25E	97,749.6	6	FY31E					(16,292)	-	-	(16,291.6)	(16,291.6)	(16,291.6)
FY26E	103,571.8	6	FY32E					(17,262)	-	-	-	(17,262.0)	(17,262.0)
FY27E	109,476.3	6	FY33E					(18,246)	-	-	-	-	(18,246.0)
Depreciation									(24,540)	(39,877)	(56,169)	(73,431)	(91,677)

Debt Schedule	units	FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
Short-term debt		285,048	197,003	461,375	119,427	449,967	415,026	144,000	221,732	569,340	-
Long-term debt		1,168,797	1,534,453	2,006,328	1,930,054	1,302,026	1,336,967	1,222,699	1,225,307	655,967	1,135,292
Total Debt		1,453,845	1,731,456	2,467,703	2,049,481	1,751,993	1,751,993	1,366,699	1,447,039	1,225,307	1,135,292
Cash BoP		-	404,183	557,827	1,385,976	1,095,831	878,197	689,882	566,524	595,911	724,359
Cash Flow from Operations/Investing							32,740	431,604	135,133	553,016	241,466
(-) Mandatory Debt Amortisation							-	(415,026)	(144,000)	(221,732)	(569,340)
(-) Minimum Cash Balance	8%						(691,273)	(736,192)	(781,997)	(828,574)	(875,810)
Cash Surplus/Shortfall							-	(29,732)	(224,340)	-	(479,325)
Revenue			7,309,036	6,893,146	7,207,595	8,091,855	8,640,916	9,202,404	9,774,959	10,357,177	10,947,626
% revenue			5.5%	8.1%	19.2%	13.5%					
Required Fundraise — Debt Ratio	100%						-	29,732	224,340	-	479,325
Debt Raised							-	29,732	224,340	-	479,325
Equity Raised							-	-	-	-	-
Total Debt Beginning Balance			1,453,845	1,731,456	2,467,703	2,049,481	1,751,993	1,751,993	1,366,699	1,447,039	1,225,307
(+) Borrowings							-	29,732	224,340	-	479,325
(-) Repayments							-	(415,026)	(144,000)	(221,732)	(569,340)
Ending Balance		1,453,845	1,731,456	2,467,703	2,049,481	1,751,993	1,751,993	1,366,699	1,447,039	1,225,307	1,135,292

Repayment	Principle:	Interest Rate:	Maturity:	FY23E	FY24E	FY25E	FY26E	FY27E
EUR 450 million 2.375% Senior Note	415,026	2.4%	FY24E	-	415,026.0	-	-	-
Schuldscheindarlehen	17,000	3.0%	FY25E	-	-	17,000.0	-	-
Schuldscheindarlehen	15,000	2.3%	FY25E	-	-	15,000.0	-	-
Schuldscheindarlehen	112,000	3.0%	FY25E	-	-	112,000.0	-	-
Schuldscheindarlehen	104,000	3.0%	FY26E	-	-	-	104,000.0	-
Schuldscheindarlehen	88,000	3.0%	FY26E	-	-	-	88,000.0	-
Schuldscheindarlehen	132,000	3.0%	FY27E	-	-	-	-	132,000.0
Schuldscheindarlehen	21,000	2.3%	FY27E	-	-	-	-	21,000.0
Schuldscheindarlehen	122,000	3.0%	FY27E	-	-	-	-	122,000.0
Schuldscheindarlehen	18,000	3.0%	FY27E	-	-	-	-	18,000.0
Schuldscheindarlehen	47,000	3.0%	FY27E	-	-	-	-	47,000.0
Schuldscheindarlehen	5,000	2.3%	FY27E	-	-	-	-	5,000.0
Schuldscheindarlehen	45,000	3.0%	FY28E	-	-	-	-	-
Schuldscheindarlehen	82,000	3.0%	FY28E	-	-	-	-	-
Schuldscheindarlehen	12,000	3.0%	FY29E	-	-	-	-	-
Schuldscheindarlehen	10,000	3.0%	FY29E	-	-	-	-	-
Schuldscheindarlehen	57,000	3.0%	FY30E	-	-	-	-	-
FY23E	-	2.4%	FY25E	-	-	-	-	-
FY24E	29,732	2.4%	FY26E	-	-	-	29,732.0	-
FY25E	224,340	2.4%	FY27E	-	-	-	-	224,339.7
FY26E	-	2.4%	FY28E	-	-	-	-	-
FY27E	479,325	2.4%	FY29E	-	-	-	-	-
Total Repayment				-	415,026	144,000	221,732	569,340

Interest	Principle:	Interest Rate:	Maturity:	FY23E	FY24E	FY25E	FY26E	FY27E
FY16A	415,026	2.4%	FY24E	(9,856.9)	(9,856.9)	-	-	-
FY20A	17,000	3.0%	FY25E	(510.0)	(510.0)	(510.0)	-	-
FY20A	15,000	2.3%	FY25E	(342.0)	(342.0)	(342.0)	-	-
FY20A	112,000	3.0%	FY25E	(3,360.0)	(3,360.0)	(3,360.0)	-	-
FY19A	104,000	3.0%	FY26E	(3,120.0)	(3,120.0)	(3,120.0)	(3,120.0)	-
FY19A	88,000	3.0%	FY26E	(2,640.0)	(2,640.0)	(2,640.0)	(2,640.0)	-
FY19A	132,000	3.0%	FY27E	(3,960.0)	(3,960.0)	(3,960.0)	(3,960.0)	(3,960.0)
FY19A	21,000	2.3%	FY27E	(478.8)	(478.8)	(478.8)	(478.8)	(478.8)
FY19A	122,000	3.0%	FY27E	(3,660.0)	(3,660.0)	(3,660.0)	(3,660.0)	(3,660.0)
FY20A	18,000	3.0%	FY27E	(540.0)	(540.0)	(540.0)	(540.0)	(540.0)
FY20A	47,000	3.0%	FY27E	(1,410.0)	(1,410.0)	(1,410.0)	(1,410.0)	(1,410.0)
FY20A	5,000	2.3%	FY27E	(114.0)	(114.0)	(114.0)	(114.0)	(114.0)
FY20A	45,000	3.0%	FY28E	(1,350.0)	(1,350.0)	(1,350.0)	(1,350.0)	(1,350.0)
FY20A	82,000	3.0%	FY28E	(2,460.0)	(2,460.0)	(2,460.0)	(2,460.0)	(2,460.0)
FY19A	12,000	3.0%	FY29E	(360.0)	(360.0)	(360.0)	(360.0)	(360.0)
FY19A	10,000	3.0%	FY29E	(300.0)	(300.0)	(300.0)	(300.0)	(300.0)
FY20A	57,000	3.0%	FY30E	(1,710.0)	(1,710.0)	(1,710.0)	(1,710.0)	(1,710.0)
FY23E	-	2.4%	FY25E	-	-	-	-	-
FY24E	29,732	2.4%	FY26E	-	(706.1)	(706.1)	(706.1)	-
FY25E	224,340	2.4%	FY27E	-	-	(5,328.1)	(5,328.1)	(5,328.1)
FY26E	-	2.4%	FY28E	-	-	-	-	-
FY27E	479,325	2.4%	FY29E	-	-	-	-	(11,384.0)
Total Interest				(36,172)	(36,878)	(32,349)	(28,137)	(33,055)
% of Interest				1.8	1.8	1.8	1.8	1.8
Other Finance Cost				(65,109)	(66,380)	(58,228)	(50,647)	(59,499)

Equity Schedule	units	FY18A	FY19A	FY20A	FY21A	FY22A	FY23E	FY24E	FY25E	FY26E	FY27E
Beginning Retained earnings and other reserves			2,269,686	2,399,182	2,353,387	2,682,747	2,901,889	3,156,822	3,429,405	3,727,740	4,052,345
(+) Net Income			368,731	311,494	384,505	360,940	396,591	424,170	465,214	507,090	528,138
(-) Dividends							(158,637)	(169,668)	(186,085)	(202,836)	(211,255)
(+) Share-Based Compensation							16,978	18,082	19,207	20,351	21,511
(+) New Equity Financing							-	-	-	-	-
(-) Treasury Buybacks							-	-	-	-	-
(-) Buybacks							-	-	-	-	-
Ending Retained earnings and other reserves		2,269,686	2,399,182	2,353,387	2,682,747	2,901,889	3,156,822	3,429,405	3,727,740	4,052,345	4,390,739
Dividends Per Share		24	26	22	28	28	29	31	34	37	39
Common Shares (Basic)		5,485	5,480	5,481	5,482	5,481	5481	5481	5481	5481	5481
Earnings Per Share		65	68	58	70	66	72	77	85	93	96
Payout Ratio		37%	38%	38%	40%	43%	40.0%	40.0%	40.0%	40.0%	40.0%

Valuation

Discount Rate	units	
10-Year CHF Government Bond Yield		1.13%
Unlevered Beta		0.64
Levered Beta		1.04
Equity Risk Premium		5.48%
Cost of Equity		6.84%
Credit Rating		Baa3
Default Spread		1.59%
Cost of Debt		2.72%
After Tax Cost of Debt		2.31%
Marginal Tax Rate		14.93%
Debt		2,141,474
Equity		2,904,346
Cost of Capital		4.92%

Free Cash Flow to Equity	units						
Operating Income		553,486	578,738	616,068	654,110	692,772	731,956
Tax Rate		(16.4)%	(18.3)%	(18.3)%	(18.3)%	(18.3)%	(18.3)%
After Tax Operating Income		644,242	684,697	728,861	773,869	819,609	865,967
(-) CapEx		(239,507)	(345,637)	(368,096)	(390,998)	(414,287)	(437,905)
(+) Depreciation		236,819	253,575	293,014	334,907	379,295	426,213
(-) Change in Working Capital		(29,284)	(288,769)	64,434	(293,196)	60,567	(296,491)
Free Cash Flow to the Firm			303,867	718,214	424,581	845,184	557,784

Present Value of Cash Flows	units						
Cost of Capital			4.9%	4.9%	4.9%	4.9%	4.9%
Discount Factor			0.95	0.91	0.87	0.83	0.79
Present Value of Cash Flow			289,625	652,467	367,636	697,526	438,761

Terminal Value	units	
Terminal Growth Method		
Perpetual Growth Rate		1.13%
Terminal Cash Flow		557,784
Terminal Value		14,727,257
Present Value of Terminal Value		11,584,672
Exit Multiple Method		
Exit EV/EBITDA		12.84x
Terminal Year EBITDA		1,158,170
Terminal Year Enterprise Value		14,870,897.3
Present Value of Terminal Value		11,697,661.1

Equity Value (Perpetual Growth)	units	
PV (CF over growth period)		2,446,015
PV(Terminal value)		11,584,672
Enterprise Value		14,030,686.8
(-) Debt		(2,141,474)
(-) Minority interests		(235.0)
(-) Preferred Shares		-
(+) Cash		878,197
Equity Value		12,767,175
Number of shares		5,481
Estimated value /share		$ 2,329.47
Current Price		$ 1,866.00
% Upside/(Downside)		24.8%

Equity Value (Exit Multiple)	units	
PV (CF over growth period)		2,446,015
PV(Terminal value)		11,697,661
Enterprise Value		14,143,676
(-) Debt		(2,141,474)
(-) Minority interests		(235)
(-) Preferred Shares		-
(+) Cash		878,197
Equity Value		12,880,164
Number of shares		5,480.7
Estimated value /share		$ 2,350.08
Current Price		$ 1,866.00
% Upside/(Downside)		25.9%

Multiples

Comparable Companies	+1FY P/E	+1FY EV/EBITDA
Fuji Oil	17.59x	10.46x
JB Foods	8.76x	17.2x
Guan Chong Berhad	13.52x	10.12x
Kerry Group	20.71x	15.14x
The Hershey Company	27.9x	19.28x
Mondelez International	22.57x	18.03x
Nestlé	23.2x	18.02x
Grupo Bimbo	17.69x	9.06x
Median:	19.2x	16.17x

Screening Criteria: Food Products

Relative Valuation (EV/EBITDA)	*units*
Median +1FY EV/EBITDA	16.2
FY23E EBITDA	832,313
Implied Enterprise Value	13,458,509
(-) Debt	(2,141,474)
(-) Minority interests	(235)
(-) Preferred Shares	-
(+) Cash	878197
Implied Equity Value	12,194,997
Number of shares	5480.7
Implied Share Price	2,225.07

Relative Valuation (P/E)	*units*
Median +1FY P/E	19.2
FY23E Net Income	396,591
Implied Equity Value	7,614,552
Number of shares	5480.7
Implied Share Price	1,389.33