# CHOCOLATE: FROM BEAN TO BAR

Albin Kistler opinion piece
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Consumer goods stocks are generally seen as a defensive component within a well-diversified investment portfolio, alongside bonds. There is certainly some truth in this, but the reality is far more complicated. While demand can be stable, value chains are complex. In this opinion piece, we look more closely at some characteristics and challenges of this sector, taking chocolate as a case in point.

# Chocolate

**A defensive consumer good**
Demand for everyday consumer goods tends to be relatively resilient across economic cycles. That is why investments in food, household and personal care companies are regarded as defensive – and hence why consumer goods stocks have a place in every well-diversified investment portfolio.

Despite containing a kernel of truth, this view oversimplifies the reality. Stability of demand can vary greatly between product categories and is just one side of the coin. Studying an example sheds some light on this.

From a Swiss perspective, what product could be better to get our teeth into than chocolate? With illustrious company and brand names such as Lindt & Sprüngli, Cailler and Barry Callebaut, Switzerland is a stronghold of the global chocolate industry. However, it is not just the country's rich national tradition that makes this case study interesting. Switzerland clearly lacks the tropical rainforest climate needed for cocoa cultivation, necessitating a complex global value chain. This opinion piece examines its characteristics and the challenges it faces. There are also some key market participants to study, with the focus on listed companies.

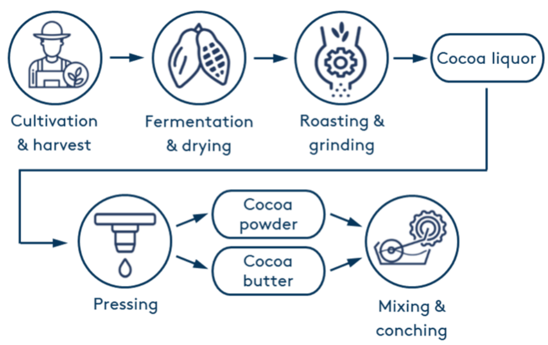
**Chocolate-making, step by step**
The value chain that stretches from a cocoa tree in an equatorial rainforest to chocolate bars on the shelves of retailers all over the world is a long and complex one. We will explain the key steps along the way.

As with any consumer good, the story starts with obtaining the raw material. Cote d'Ivoire and Ghana in Africa are among the main growers of cocoa beans, but there is also substantial cultivation in Latin America and South-East Asia. During the harvests, which take place twice a year, the cocoa pods are gathered from the trees and opened to obtain the beans. The next step is fermentation, which makes the cocoa usable and gives it its distinctive flavour profile. This is followed by a drying process.

Processing begins with roasting to intensify the flavours. The beans are then winnowed and ground to produce cocoa liquor. This is separated in presses into cocoa butter and cocoa powder.

The final step is to combine the cocoa butter and powder with other ingredients such as sugar and powdered milk, in ratios that depend on the final product being made. This mixture is then rolled, conched and tempered to produce that beloved product – chocolate.

Fig. 1: The chocolate value chain




Source: Albin Kistler

**The constant challenges of cocoa**
As we mentioned above, the chocolate market has to contend with some very specific challenges. Cocoa production is critical, and it is subject to major fluctuations.

The El Niño weather phenomenon pops up in the equatorial Pacific every few years, lasting for several months, altering currents and causing changes in temperatures and rainfall in key cocoa-growing countries. The end result is a temporary but significant fall in cocoa harvests.

Plant diseases – such as cocoa swollen-shoot virus (CSSV), which has been endemic to West Africa since 1930 – also reduce yields. An infected cocoa tree produces up to 70% fewer beans, before eventually dying off. Both knowledge on the ground and the necessary funds to strengthen plants and protect them against disease are generally lacking. Cocoa prices have been low for a long while now, placing many farmers in financial difficulty.

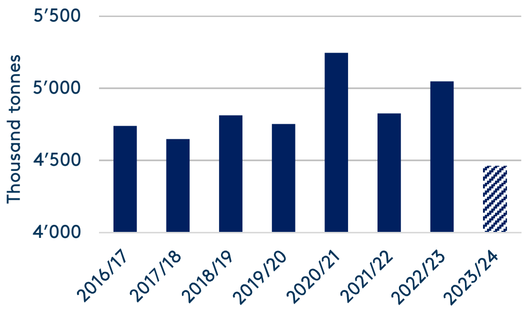
## Swiss tradition

**The history of chocolate**
Tracing the story of chocolate back to its roots takes us several centuries into the past. The Maya and Aztec peoples of Mesoamerica were the first to make bitter drinks from cocoa beans and other ingredients. The Spanish conquistadors then brought cocoa to Europe in the 16th century. However, it was the 19th-century invention of the cocoa press in the Netherlands that made it possible to manufacture solid chocolate, enabling cocoa beans to be separated into butter and powder for the first time.

At the same time, Philippe Suchard and François-Louis Cailler in Switzerland played major roles in mechanising chocolate production, establishing brands and developing international trade. Building on these innovations, there were some further product breakthroughs in Switzerland towards the end of the 19th century that would be central to chocolate's subsequent success. Daniel Peter added powdered milk, which had been developed by an acquaintance, Henri Nestlé. In so doing, he created milk chocolate –the most popular variety today. Another momentous invention was the conche, created by Rodolphe Lindt. The constant stirring and warming in the conching process allow the flavour and texture that are intrinsic to modern chocolate production to develop.

Invention and the drive to innovate are the foundations on which Switzerland's rich tradition in chocolate-making is built.

Fig. 2: Fluctuating cocoa bean harvests

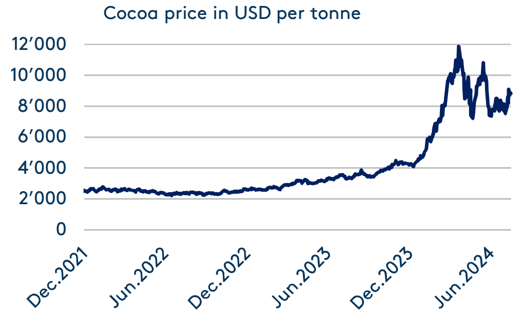



Source: International Cocoa Organization (ICCO)

As a result, measures such as plantation renewal or fertilisation to improve soil quality are often neglected.

Cocoa processors hedge prices on the futures markets to cushion sharp price fluctuations and ensure they are able to deliver. However, price volatility always attracts speculators; it is estimated that they account for some 20% of trading volumes on the futures markets.

Fig. 3: Cocoa prices have risen lately




Source: Bloomberg, own presentation, data as at 15 August 2024

**Not all chocolate is the same**
Fundamentally, the global chocolate market does not promise explosive growth. Annual increases in the volume sold around the world tend to be in the low single digits. There are various natural barriers, such as market saturation and increasing health-consciousness in developed countries. Other types of consumer goods, such as household and personal care products, are experiencing similar trends, which is why many firms have sought to expand geographically over recent decades to capitalise on growing prosperity in developing countries. Logistical and climatic considerations tend to make it harder for chocolate makers to grow in this way.

However, it is also important to note that chocolate can mean many different things. Premiumisation can be a clear growth drivers for companies able to specialise in that way. In doing so, they focus above all on the makeup of the ingredients used – alongside smooth, high-quality production operations and brand positioning. Including more cocoa solids and less butter and sugar makes chocolate darker, higher-quality and less unhealthy, but also costlier. Product innovations such as the use of alternative sweeteners and the use of modern distribution channels such as online retailing offer greater potential, for some brands at least.

**Sustainability – regulation versus independent initiatives**

Sustainability is a central concern in relation to cocoa harvesting. The climatic constraints on cocoa cultivation mean that production is concentrated in just a few countries, where loss of rainforests can reduce biodiversity and produce undesirable climate effects. Attention must also be paid to water consumption and soil degradation in cocoa farming. However, society and the media often focus more on social sustainability issues. These include fair pay for cocoa farmers, local working conditions and the elimination of child labour on plantations to the fullest extent possible.

Local political and socioeconomic factors ultimately create a context one cannot lose sight of in tackling these problem areas. Regrettably, we cannot rely on local governments alone when it comes to training and knowledge transfer or to fair working conditions and decent pay.

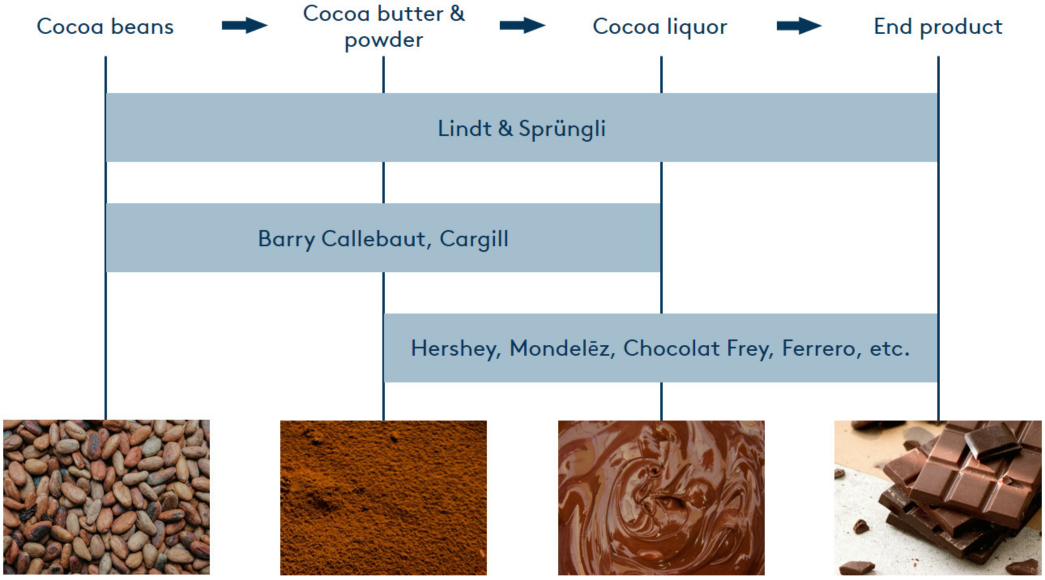
Whereas governments in the main production countries tend to regulate prices, the EU is seeking to improve conditions for the cultivation of commodities like cocoa via a new regulation. It specifies that cocoa from deforested land may not be imported into the EU. The commodities must also have been produced in compliance with the laws of their country of origin and with fundamental human rights. It is debatable whether this regulation really will directly improve the situation of farmers in West Africa. It is more likely that there will be a shift in global flows of goods, as buyers outside the EU do not have to comply with equivalent rules.

We therefore believe that increasing the relevant companies' awareness of their responsibility is the most powerful tool in combating these sustainability risks. Global and local initiatives by these major market participants must address the relevant issues and work for the farmers. It is ultimately in our hands as consumers and investors to consider companies with exemplary operations when making our purchasing decisions.

**Market participants and their positioning**

Even a long and distinguished history is not enough to protect the corporate landscape against change. For example, Swiss chocolate-making pioneers Cailler and Chocolat Suchard are no longer independent companies: Cailler was acquired by Nestlé back at the start of the 20th century, while Suchard became part of the US consumer giant Mondelēz following a series of mergers and acquisitions. Figure 4 shows – in highly simplified manner – how certain companies fit into the value chain.

Fig. 4: Major companies along the value chain




Source: own presentation

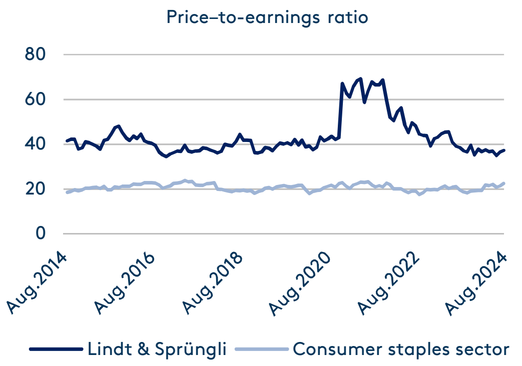
**Lindt & Sprüngli – premium**

Lindt & Sprüngli remains an independently run listed company whose story stretches back to the early days of chocolate-making. The company has played what is probably an unrivalled role in the success of Swiss chocolate.

Lindt & Sprüngli came into being in 1899 when the Lindt and Sprüngli confectioners merged some years after Rodolphe Lindt's crucial invention of the conche, which we touched on above. Even today, it still buys cocoa beans directly from the growers and processes them itself, which has become a rarity in the industry. Strong traditional brands such as Lindor and Excellence, along with iconic products like the "Gold Bunny", testify to Lindt & Sprüngli's successful strategic positioning in the premium segment, where the company is able to exploit its better-than-average pricing power. This helps it to achieve consistently high growth rates and stable profits.

Other quality attributes includes it's outstanding management team, known for its high continuity and careful succession planning, as well as the company's commitment to sustainability through its "Farming Program", aimed at improving the living standards of cocoa farmers. However, this level of quality comes at a price, and historically, Lindt & Sprüngli shares have been consistently expensive.

Fig. 5: Quality comes at a price




Source: Bloomberg, own presentation, data as at 31 August 2024

**Barry Callebaut – in transition**

Interestingly, however, there is another large listed company in Switzerland, which, despite its relative anonymity, is so important to the global chocolate market that it is almost impossible to imagine the industry without it: Barry Callebaut. Although it has only existed in its current form since 1996, its history can be traced backto the mid-19th century, when Barry was established in France and Callebaut in Belgium.

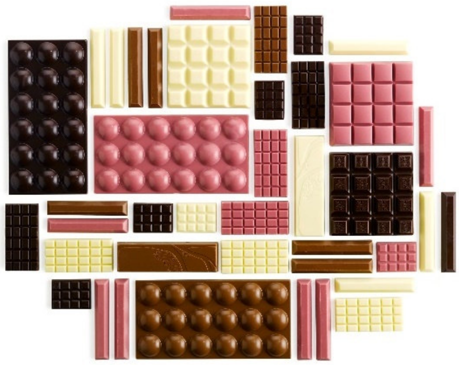
Today, Barry Callebaut is the biggest vertically integrated chocolate producer in the world, ahead of the USA's Cargill, which trades in agricultural commodities and food ingredients. Its internal value chain begins when it sources beans from cocoa farmers and ends with the production of finished cocoa liquor. However, its own brands, targeted at end consumers, play only a minor role in its business.

Barry Callebaut's operations are split into three divisions. The largest of these produces chocolate for other consumer companies (Hershey, Mondelēz, etc.). The smaller but highly profitable and promising Gourmet & Specialties Products division works with corporate customers such as confectioners, restaurants and hoteliers. The third division trades in cocoa products, mainly buying beans and selling the cocoa powder and cocoa butter derived from them.

This business model means that Barry Callebaut not only has to contend with the difficulties of a speculative cocoa market and fluctuating production capacity like its competitors, but it is also directly affected by the cocoa harvest problems outlined above. The company has been under new management since 2023 and recently underwent a reorganisation. New regional focus markets and cost savings from streamlining the organisation are among the measures designed to deliver profitable growth over the long term.

Although the current circumstances are unsettling and the business environment is hard to predict for the foreseeable future, Barry Callebaut's inherent quality should not be overlooked. This is reflected in the strong market position it has carved out over time, its ambitious sustainability initiatives and its ability to innovate. For example, few people will have missed the launch in 2017 of "ruby" chocolate, a pink variety made from a special type of bean previously thought to be unprocessable.

Fig. 6: "Ruby" chocolate is the new kid on the block



Source: Barry Callebaut, www.flickr.com/photos/barrycallebautgroup

**Looking further afield**

If we expand the search to unlisted and foreign companies, there are many other exciting names to consider. These include Chocolat Frey, part of the Migros Group, the family-owned Italian firm Ferrero, and the US chocolate and snack giants Mondelēz, Hershey and Mars.

Chocolat Frey AG, founded in 1887, was acquired in 1950 by the retailer Migros. It was then merged with other brands to form the new Delica AG in 2021. Frey has deep roots in Switzerland, where it holds a market share of around one-third. However, the brand is also known well beyond national borders. It earns around a third of its sales outside Switzerland. Many readers will also be familiar with the "SWISS Schöggeli" handed out on flights with the airline SWISS, which since 2015 has come from Frey. As neither Frey, Delica nor Migros are listed, it is not possible to invest in these companies.

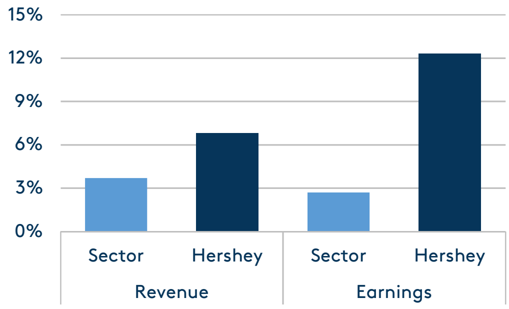
That is not the case with the big US corporations Mondelēz and Hershey. Because of their diversification into snacks (crisps, biscuits, etc.), neither can be described as a pure-play chocolate-maker, but chocolate still represents a large slice of their revenue. Hershey generates nearly 75% of its sales from chocolate, and Mondelēz generates around a third.

**Hershey – a US icon**

Hershey was founded by Milton S. Hershey in the USA back in 1894, and the Hershey Foundation still owns a significant share of the company today. With sales of more than USD 9 billion, Hershey is the biggest chocolate maker in North America. Its brand portfolio has an outstanding reputation, even if its products are not at the premium end like those of Lindt & Sprüngli's.

Hershey has an experienced, far-sighted management team, which has been very stable. Clear and transparent communication and a strong commitment to social projects and to upholding the highest ethical standards are anchored deep in the company's philosophy. Hershey has succeeded in steadily gaining market share, establishing new trends and growing sustainably thanks to its ability to innovate, its market leadership and its excellent marketing. The business linked to holidays such as Easter, Halloween and Christmas is essential. Consumers show little price sensitivity in this regard, which is positive for the stability of sales.

Fig. 7: Annual growth rates over five years.




Source: Hershey, data from 2019–2023; comparison with the North American food sector

Companies such as Hershey, Mondelēz, Mars, Ferrero and Frey are positioned in the final two-thirds of the value chain. They normally buy cocoa butter and powder and combine them according to their own recipes to make cocoa liquor. However, they do also buy ready-made cocoa liquor from suppliers such as Barry Callebaut and Cargill to some extent.

**Conclusion**

The fact that demand for consumer goods is largely impervious to economic cycles gives the sector its defensive reputation mentioned at the start of this report. The example of chocolate illustrates that stable demand does not exempt market participants from facing various specific challenges and cycles. Consumer goods are diverse in nature and have properties both upstream and downstream of production that investors should understand. The example we have looked at here shows that there are some outstanding companies – primarily but not exclusively here in Switzerland – that are dealing with the challenges in their value chains in exemplary fashion.

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