

FOOD TECH: INVESTING IN THE SUSTAINABILITY OF THE FUTURE

Introduction

The late celebrity chef Anthony Bourdain once remarked that “Singapore is possibly the most food-centric place on Earth, with the most enthusiastic diners, the most varied and abundant, affordable dishes — available for cheap — on a per-square-mile basis.”¹ Yet, food was not always abundant in Singapore. Many Singaporeans would remember the brief but uncomfortable episode of stock-piling rice in 2008 during the global food crisis. It was a confluence of factors including droughts and rising oil prices that resulted in imported food prices spiking 12%. The government had to step in to assure the public that there was ample stockpile of rice in government warehouses, and local supermarkets like Fairprice had to limit the number of packets of rice each person can buy as rice prices rose 30%.² It was not a pleasant time but it was a stark reminder about the importance of food security even in a city as affluent as Singapore.

Asia’s evolving food requirements provide opportunities for food tech investing

The history of the modernisation of Singapore is a short one, but it is in many ways a microcosm of a fast developing Asia. Singapore’s population has tripled since its founding in 1965 while Singaporean consumers have also premiumised rapidly at the same time as the economy developed. Asia is experiencing similar strains with one of the fastest growing demographics and now making up 60% of the world’s population.³ A growing Asia means its voracious appetite for food continues to grow and food security becomes of paramount concern. In addition, Chinese consumers are also premiumising swiftly and their taste and requirement for food has clearly evolved. As the middle class in China becomes more affluent, there is an increasing demand for more innovations in food safety, smarter food production, and distribution as well as the deployment of new technologies in farmlands. As Asia’s food requirements grow and evolve, food technology thus provides a huge opportunity to invest and shape the sustainability of our future.

Innovations in the food industry have been significant throughout history despite multiple doomsday prognostications about “peak food.” Thomas Malthus was one of the most famous “peak food” theorists when he theorised in the 1700s that human reproduction will always tend to outstrip increases in food supply.⁴ The Club of Rome repeated these fears in the 1970s⁵ and the United Nations as recently as 2015 discussed concerns about needing 70% more food production to feed 9.6bn people by 2050.⁶ What these

prognostications have in common is that they have in part grossly underestimated the power of innovation and this is also why food prices are now at cyclical lows since the United Nations’ discourse about food security in 2015.

One of the most significant innovations in the food industry happened in the early 1900s when some people thought most of the good arable land in the world was already being farmed. By devising a way to transform nitrogen in the air into fertiliser in what became known as the Haber-Bosch process⁷, two German scientists, Fritz Haber and Carl Bosch, laid the grounds for an unprecedented global population growth from two billion to seven billion people today. Plants need more nitrogen to grow better but natural forms of nitrogen struggle to fully satisfy a plant’s appetite for nitrogen. The Haber-Bosch process effectively resolved the nitrogen bottleneck on an industrial scale.

Progress in food technology today

Fast forward to food technology today, scientists from the Chinese Academy of Sciences and Purdue University are attempting to increase rice yields by as much as 31% with CRISPR-genome editing.⁸ They edited 13 genes linked to stress tolerance and suppression of growth and produced plants that had little change in stress tolerance but produced more yield. The CRISPR technique allowed breeders to be quick and precise in snipping portions of DNA, thereby editing the DNA code and optimising rice crop yields in days. Traditional breeding technique through random mutations and screening would have taken millions of plants and decades to produce the same result.

More specifically, an example of an Agri-food company we like is Costa Group, an Australian berries, avocado and citrus company, which has successfully shifted its focus away from traditional agriculture to technology. One of its major transformation in 2009 was to move significantly away from paddocks, where their produce were exposed to weather elements, and into glasshouses and galvanised steel tunnels. In addition, they also started developing and acquiring intellectual properties (IPs) such as high quality blueberry varieties that can be harvested in off shoulder seasons. Today they are so successful, they have been able to replicate their farming success in China and Morocco and receive regular royalties for the use of their blueberry varieties globally. For a long time, it has been easy for investors to ignore upstream food companies due to their cyclicity, which is driven by the unpredictability of weather and their low barrier to entry. However, companies like Costa Group, which have been able

to deliver sustainable returns due to their IPs and technology, are now compelling us to look at food companies in a completely different light.

The chief beneficiaries of food tech are ultimately consumers and select companies. Apart from a decline in poverty and starvation, food tech over the years has exerted disinflationary pressure on food prices. Not only do consumers pay less for food, they also feel safer about the food they consume. The other group of beneficiaries include select companies in our investment universe. Here at Nikko, our focus is very much on picking the winners and the leaders of the shift in food technology – namely which are the companies with the right management and competency to make or lead that shift, and which are the companies with the intellectual properties and technological moats to deliver sustainable returns.

Significant positive changes and sustainable returns in food tech driven by a fast growing and evolving Asia

Overall, Australian and New Zealand food companies have been some of the best in food technology adoption and this is in part due to their high labor cost. However, the most dominant theme in our universe is that there has been a significant paradigm shift for Chinese agri-food companies in recent years. With consumer behavior and needs changing rapidly and significantly, Chinese companies have been some of the most aggressive in investing in food technology. It also helps that the political will in China to fortify food security and support rural areas has never been higher, as evidenced by the rhetoric in the latest Central Conference on Rural Work.⁹ Further, capital supporting food tech innovation is also becoming increasingly abundant, with the proliferation of food industry-focused acceleration platforms and venture capital funds like Bits x Bites.

We see genuine positive fundamental changes happening across agriculture, food production, and food retail & distribution. Listed Chinese white spirit companies such as Kweichow Moutai and Wuliangye have begun adopting precision agriculture, robotics, big data and AI in their operations and business model. There has also been a real need for Chinese milk companies like Mengniu to invest heavily in food safety and in particular traceability of their product through QR code, especially after the 2008 milk scandal in China. In midstream food production, some of the processes such as 3D food printing and lab grown meat are still in the early adoption stage, but we think Asia could be amongst the earliest adopters given our dire need for innovations in the Asian food industry and the general openness to adopting new technology here in Asia. In downstream retail & distribution, supermarket and food aggregator companies like Yonghui Supermarket and Meituan Dianping have been making headway in the shift towards new retail. More pertinently, we think now is a good time to look at food technology companies given the buffer of cyclical low food prices. Structural shifts are always more compelling when supported by cyclical tailwinds.

At the heart of it all, our conviction lies in the fact that we think food companies in Asia are delivering more sustainable returns because of their investments in innovations. Our focus here at Nikko is to pick the right food technology companies and together with our clients invest in the sustainability of our future.

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