



HELLOFRESH: PAYING PEOPLE TO EAT

A smaller TAM and weak business model will limit long-term growth expectations

The HelloFresh business model is structurally weak. Selling expensive meal kits with heavy discounts and high marketing spend has created a business that is churning through its customers at a rapid rate.

The TAM is small, and TAM penetration is already high. A HelloFresh meal box is 125-300% more expensive than supermarkets. Meanwhile, our proprietary analysis suggests TAM penetration is high at 35-40%.

With high discounting and weak customer relationships, HelloFresh is effectively paying people to eat, barely earning back customer acquisition costs.

We rate HelloFresh Underperform.

BERNSTEIN

PORTFOLIO MANAGER'S SUMMARY

Paying people to eat. HelloFresh is churning through customers at a rapid rate, acquiring and reactivating customers at deep discount, and not earning back customer acquisition costs over the lifetime of customers. It's a meal kit company, a product of its time (the 2010s) when capital was abundant, the TAM limitless, customers embraced new concepts, and subscriptions smoothed the frictions of daily life. Our work on the stock, the company, and its smaller-than-expected market opportunity are the subjects of this *Blackbook*.

Our bear case since our initiation of coverage in July 2021 has focused on **three key points: (1) a structurally weak business model; (2) a small TAM and high TAM penetration; and (3) a flawed growth strategy.** HelloFresh's results show high churn, high marketing spending, high discounting, and a very expensive product appropriate for city dwellers and people who work in large corporations. The positives around changing consumer habits and healthy eating do not capture consumer hearts fast enough to offset weak customer loyalty.

The numbers. The business is flawed. It is built upon high levels of discounting (>20% off on average), high levels of churn (90% of customers don't purchase in Q4), and high levels of marketing spend (>15% of sales). This leads to a business model that is predicated on acquiring and churning through customers at a rapid rate.

The product is too expensive, and the TAM is small. HelloFresh resells a highly commoditized product at significant markups (2-4x more than expensive than buying from a supermarket), with a HelloFresh box for two people for three meals in the US costing \$60 (vs. average US food spending of \$85 per week). Discounts devalue the brand. The TAM is smaller than what management claims, and TAM penetration is high at 35-40%. As a result of a small TAM, expensive product, high churn, and high discounting, it barely earns back its customer acquisition cost (CAC) with a customer lifetime value (CLTV) to CAC ratio of just 0.8x (vs. 4x at best-in-class companies). **Effectively, HelloFresh is paying people to eat.**

You can't have your cake and eat it too. We struggle to reconcile long-term expectations of high revenue growth and margin expansion. It will likely become harder to grow post-pandemic with high inflation and expand margins with pressure on COGS, high marketing spend, and the additional complexity introduced by its growth strategy. This strategy to transform into a "food solutions group" is just a clever name for a "grocer." New verticals, more recipes, customization, and grocery add-ons bring significant complexity to the operation without fundamentally improving the relationship with customers. We would prefer them to transform into a cash cow, focus on their most loyal and affluent customers, and pull back on massive TAM expansion. Shareholder returns would improve, and the business would be more sustainable.

William Woods
Eric Chen

william.woods@bernstein.com
eric.chen@bernstein.com

+44 207 959 4525
+44 207 170 0635

August 3, 2022

BERNSTEIN

BERNSTEIN

TABLE OF CONTENTS

SIGNIFICANT RESEARCH CONCLUSIONS	5
INTRODUCTION TO MEAL KITS What is a meal kit? What are the unit economics?	15
BULL VS. BEAR Laying out arguments from both sides	25
HELLOFRESH CUSTOMERS: GOODBYE FRESH CUSTOMERS Proprietary deep dive into customer database and churn	37
HEAVY DISCOUNTING, TRADING DOWN RISK, AND HIGH LOGISTICS COST EXPOSURE How HelloFresh fares in an increasingly inflationary environment	61
CUSTOMER LIFETIME VALUE (CLTV) HelloFresh effectively pays people to eat with a CLTV:CAC ratio of 0.8x	73
WOULD YOU PAY 2X, 3X, OR 4X MORE TO EAT? Putting HelloFresh's high price points into context	81
READY, STEADY, COOK – A MEAL KIT TASTE TEST How meal kits from different providers compare	89
PROPRIETARY US CONSUMER MEAL KIT SURVEY – PART 1 Meal kit users	105
PROPRIETARY US CONSUMER MEAL KIT SURVEY – PART 2 Non-meal kit users and demographics	119
FOUR KEY TAKEAWAYS FROM THE 2021 CMD FY22 margins hit, medium-term guidance unchanged	131
THE CASH COW POTENTIAL If we were in control, how we would steer the company	143

BERNSTEIN

EXHIBIT 1: **Financial overview**

	HelloFresh Group
Rating	Underperform
Target price	€24.00
Current price (28/07/2022)	€26.71
Downside	11.3%
Market cap (EUR mn)	€4,645

Stock price move	
52w range	€97.50 - €24.57
TTM performance	-68%
TTM relative performance	-63%

Bernstein & Consensus EBITDA forecasts	Bernstein EBITDA forecast	Bernstein EBITDA margin	EV/EBITDA on Bernstein forecast	Consensus EBITDA	Consensus EBITDA margin
2021A	528	8.8%			
2022E	490	6.4%	9.7x	483	6.4%
2023E	517	6.4%	9.2x	631	7.4%
2024E	772	8.8%	6.2x	815	8.5%
2025E	847	9.1%	5.6x	931	8.7%
2026E	902	9.1%	5.3x	1,010	8.6%

HelloFresh key operational metrics

Orders (mn)	2022FYE	2023FYE	2024FYE	2025FYE	2026FYE
US	65.2	68.4	73.5	76.4	79.5
International	64.7	67.9	72.4	75.3	78.3
Total	129.9	136.3	145.9	151.7	157.8

AOV (€)	2022FYE	2023FYE	2024FYE	2025FYE	2026FYE
US	67.9	67.1	66.8	68.2	69.5
International	49.7	51.8	53.6	54.6	55.7
Group	58.9	59.5	60.2	61.4	62.7

Active Customers	2022FYE	2023FYE	2024FYE	2025FYE	2026FYE
US	4.0	4.2	4.4	4.6	4.8
International	4.1	4.4	4.6	4.8	5.0
Total	8.1	8.6	9.0	9.4	9.8

Total Orders per Customer	2022FYE	2023FYE	2024FYE	2025FYE	2026FYE
US	16.4	16.2	16.6	16.6	16.6
International	15.6	15.5	15.7	15.7	15.7
Group	16.2	16.2	16.1	16.1	16.1

Revenue (€mn)	2022FYE	2023FYE	2024FYE	2025FYE	2026FYE
US	4,427	4,591	4,911	5,209	5,526
International	3,219	3,520	3,879	4,115	4,365
Holding	0	0	0	0	0
Total	7,646	8,111	8,789	9,324	9,891

Meals (mn)	2022FYE	2023FYE	2024FYE	2025FYE	2026FYE
US	508	534	573	596	620
International	572	601	637	663	689
Group	1,081	1,135	1,210	1,259	1,309

EBITDA (€mn)	2022FYE	2023FYE	2024FYE	2025FYE	2026FYE
US	375	410	515	550	585
International	162	141	308	351	374
Holding	-46	-34	-51	-54	-57
Total	490	517	772	847	902

Note: HFG.GR is benchmarked against the MSCI Europe, which had a closing price of €145.1 as of close July 28, 2020.

Source: Bloomberg, and Bernstein estimates and analysis

SIGNIFICANT RESEARCH CONCLUSIONS

+ THESIS OVERVIEW

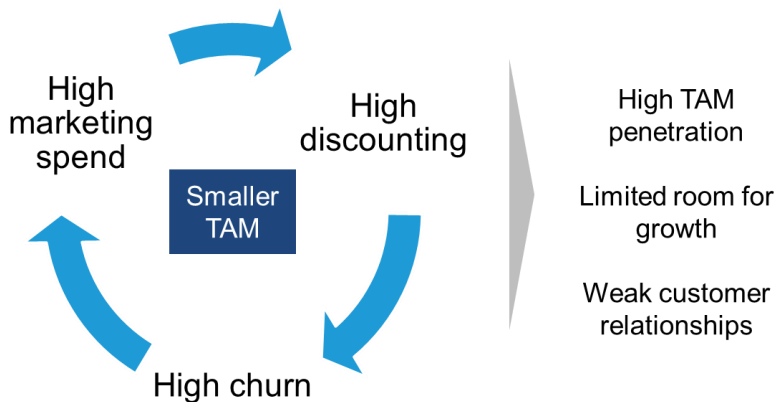
HelloFresh is the global leader in meal kits, selling and delivering boxes of prepared ingredients and recipes to customers on subscription. The industry remains immature as it has only existed at scale for the last few years, with growth supercharged by the Covid-19 pandemic.

At a structural level, HelloFresh has a weak business model with high churn, high marketing spend, and high discounting. 90% of customers aren't buying by Q4, discounting is >20% on average, customers are bombarded with discounts once they sign up, and marketing spend is >15%. The business is churning through customers at a rapid rate due to weak product-market fit, limited change in consumer habits, and the high cost of the product. With this business model, we think it will become increasingly hard to scale the business, maintain the growth in customers, and improve profitability — all at the same time.

It's also expensive relative to a normal food shop, which limits the TAM and brings into question TAM penetration. A HelloFresh box is 125-300%+ more expensive than cooking from scratch and unaffordable for the average consumer. A box for two people for three meals in the US costs \$60, while the average US family spends just \$80 on food for a week. This average family is included in management's TAM. We think that the TAM is smaller than the company identifies. With the high levels of churn, we expect TAM penetration to be between 35-40%.

As a result of a smaller TAM, expensive product, high churn, and high discounting, we think HelloFresh is barely earning back its CAC with a CLTV to CAC ratio of just 0.8x (vs. >4x for best-in-class businesses). **Effectively, HelloFresh is paying people to eat.**

EXHIBIT 2: **HelloFresh thesis summary in one chart**



Source: Bernstein analysis

BERNSTEIN

STRUCTURALLY WEAK BUSINESS MODEL

The business model is hard with high levels of discounting, high churn, and high marketing spend, leading to HelloFresh working its way through its TAM at a rapid rate. Customers come in and leave just as quickly, leading to an unhealthy customer database and weak relationships with customers (see Exhibit 7). It makes us concerned about long-term growth.

- **Discounting — the opposite of pricing power — is high, which devalues the brand.** The product is unaffordable for most people, and HelloFresh is artificially stimulating growth by acquiring non-core TAM customers (e.g., students who buy on a discount), and by propping up customer numbers at the end of a quarter with deep discount emails. Looking at the history, frequent use of high levels of discounts has been a consistent theme at ~20% in the US and 10-17% in the International segment (see Exhibit 3).
- **Churn is high at 90%; customers aren't buying after Q4** (see Exhibit 6). Customers aren't sticking with the product due to the high costs and weak product-market fit. Reactivations are increasing (which the company is positive about), but we think they are mainly discount-driven, and customers churn just as quickly once reactivated. Although this isn't a subscription product and we don't expect customers to buy every week, we would expect greater customer engagement, given the product is a staple.
- **Marketing spend is high, and there is limited operational leverage.** This shows that HelloFresh has to work the business quite hard to maintain the same levels of growth. We struggle to see marketing spend getting below 15% in the long term unless it manages to fix the consumer relationship and improve retention. In addition, as a DTC company, HelloFresh is advertising in the traditionally lower ROI venues such as TV and public transportation with deep discounts, further reducing marketing efficiency and the likelihood of the expense remaining higher (see Exhibit 4).
- As a result, **HelloFresh is effectively paying consumers to eat with a CLTV-to-CAC ratio at 0.8** (see Exhibit 8). HelloFresh fails to earn back its customer acquisition costs due to its structurally weak business model — we estimated customer lifetime value over three years at €59 vs. the acquisition cost of €75.

BERNSTEIN

EXHIBIT 3: **US segment has an average discount of ~20%**

US	2019FY	2020FY	2021FY
Orders	21	39	59
Meals	138	278	452
Revenue	€ 1,025	€ 2,073	€ 3,294
Revenue per meal (EUR)	€ 7.4	€ 7.5	€ 7.3
Revenue per meal (USD)	\$8.6	\$8.7	\$8.5
Meals per order	6.7	7.2	7.6
Full price box for 8 meals (inc. delivery) (USD)	\$85.9	\$85.9	\$85.9
Price per meal	\$10.7	\$10.7	\$10.7
Average discount %	-20%	-19%	-21%

Source: Company reports, and Bernstein estimates and analysis

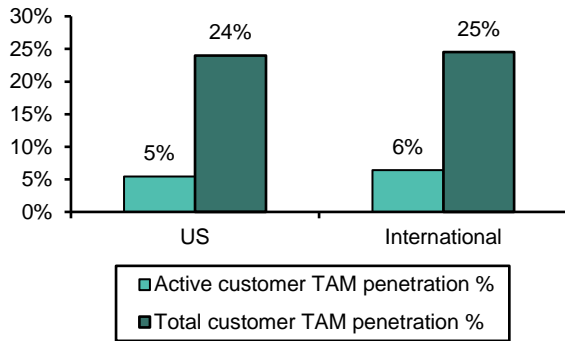
EXHIBIT 4: **HelloFresh London tube advertising – 60% off and 35% off on next three boxes**



Source: Bernstein photo

EXHIBIT 5: **Due to high churn, including lost customers, HelloFresh has worked its way through 35% TAM in the US based on our TAM**

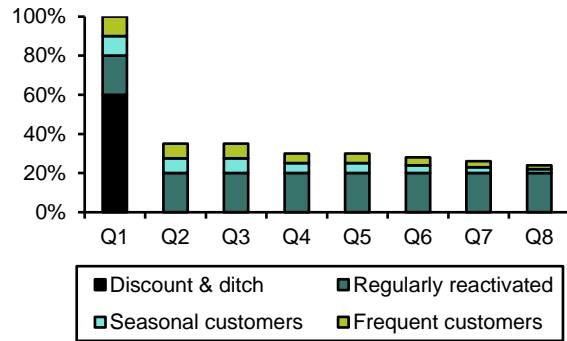
HelloFresh: Active vs. total customer TAM penetration % Q2-21



Source: Company reports, and Bernstein estimates (all data) and analysis

EXHIBIT 6: **We calculate that churn is high, with only 30% of customers retained in Q4; two-thirds of retained customers have been reactivated**

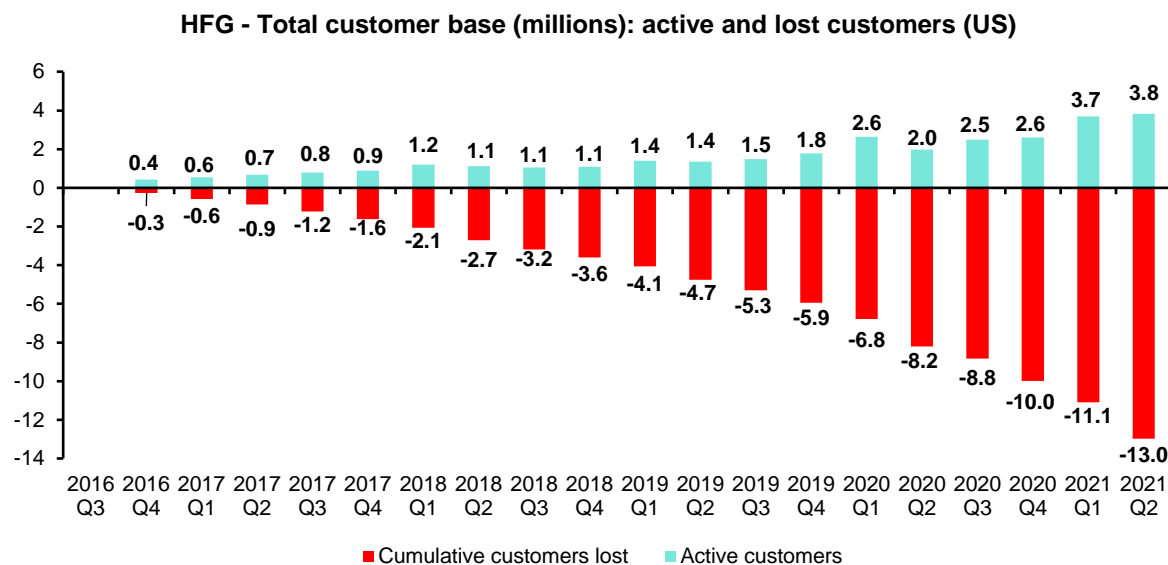
HelloFresh estimated customer retention rates (Q1-Q8)



Source: Bernstein estimates (all data) and analysis

BERNSTEIN

EXHIBIT 7: 13 million customers have been acquired and lost in the US, trying HelloFresh and not sticking with the product over the last four years



Source: Company reports, and Bernstein estimates (all data) and analysis

EXHIBIT 8: Bernstein customer lifetime value calculation: Ratio to CAC is dismal at 0.8x

	1st Order	Year 1	Year 2	Year 3	Notes
Gross revenue per order	€ 62	€ 62	€ 62	€ 62	Full price for 2 people, 3 meals in the US
Discount	-€ 37	-€ 19	-€ 12	-€ 12	Calculation
% discount	60%	30%	20%	20%	Bernstein calculation
Net / reported revenue per order	€ 25	€ 43	€ 50	€ 50	Reported AOV ~50 EUR
Frequency per year	1	16	16	16	Reported order frequency
Contribution margin %	27%	27%	27%	27%	Avg. achieved CM % over last few years
Retention marketing spend %		11%	11%	11%	Backcalculated based on CAC to achieve target marketing spend
SG&A %	4%	4%	4%	4%	Reported SG&A
Contribution	€ 11	€ 95	€ 95	€ 95	Calculation
Net retention rate		30%	25%	20%	Bernstein calculation
Net contribution	€ 7	€ 29	€ 24	€ 19	Calculation
Discount rate				8%	
3 year CLTV inc. discounting (NPV)				€ 64	Calculation
Customer Acquisition Cost (CAC)	€ 100				
CLTV:CAC				0.6x	Calculation
Total marketing spend modelled				15.2%	Reported marketing spend ~15%

Source: Company reports, and Bernstein estimates (all data) and analysis

+ EXPENSIVE COMMODITIZED PRODUCT = SMALLER TAM

HelloFresh's business model is quite simple. It creates recipes, buys the ingredients, and puts both the recipe and pre-portioned ingredients into a box. The ingredients are typically low-margin commodities (e.g., potatoes). HelloFresh is then able to sell these products at a 70% gross margin, well above the 30% gross margin that supermarkets might achieve. As a result, the product is very expensive at 125-300%+ more expensive than cooking from scratch (see Exhibit 11 and Exhibit 12). In our surveys, customers dislike how expensive the

BERNSTEIN

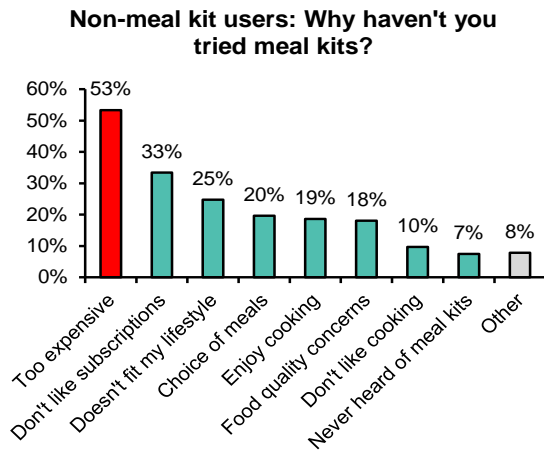
product is and is one of the key reasons why they churn (see Exhibit 9). Plus, the high cost of the product limits the TAM which, when combined with the structurally weak business model, suggests that HelloFresh is burning through its TAM at a rapid pace.

The product is expensive, and the higher cost does not outweigh the benefits of convenience and discovery of new recipes. 53% of non-meal kit users quoted "too expensive" as the reason for not using the product, while the net promoter score (NPS) score is -29 (should be at least positive) (see Exhibit 10) among meal kit users, as only 22% of people would actively recommend meal kits. This makes us cautious on the long-term ability of HelloFresh to change consumer habits, convert customers into meal kit users, and sustain long-term growth.

Compared with cooking from scratch, HelloFresh is very expensive. We deconstructed a selection of recipes which shows that the cost of cooking with HelloFresh ingredients is 125-300%+ more expensive than cooking from scratch. In an environment of higher inflation and consumer spending squeeze, this will make growth more difficult.

As a result, TAM penetration is high. Building a bottom-up view of churn and lost customers, TAM penetration is ~35% (see Exhibit 13). While surveying US consumers, almost 40% of affluent customers had used a meal kit at any point. This brings into question the headroom to further growth as HelloFresh churns its way through its addressable market.

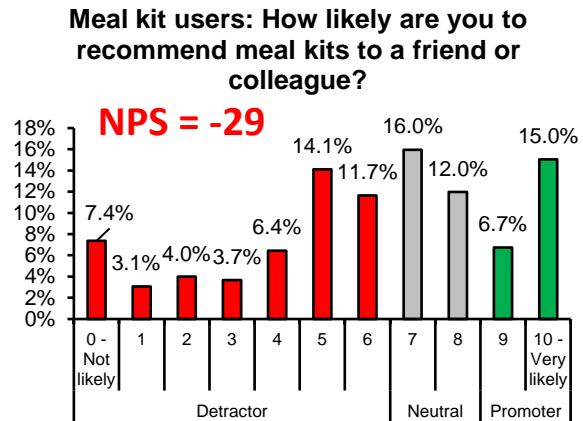
EXHIBIT 9: Top reasons for not using meal kits are that they are too expensive and people don't like the business model



Note: Sample = 763

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 10: NPS of -29, with the majority of people being detractors and only 22% of respondents actively promoting meals

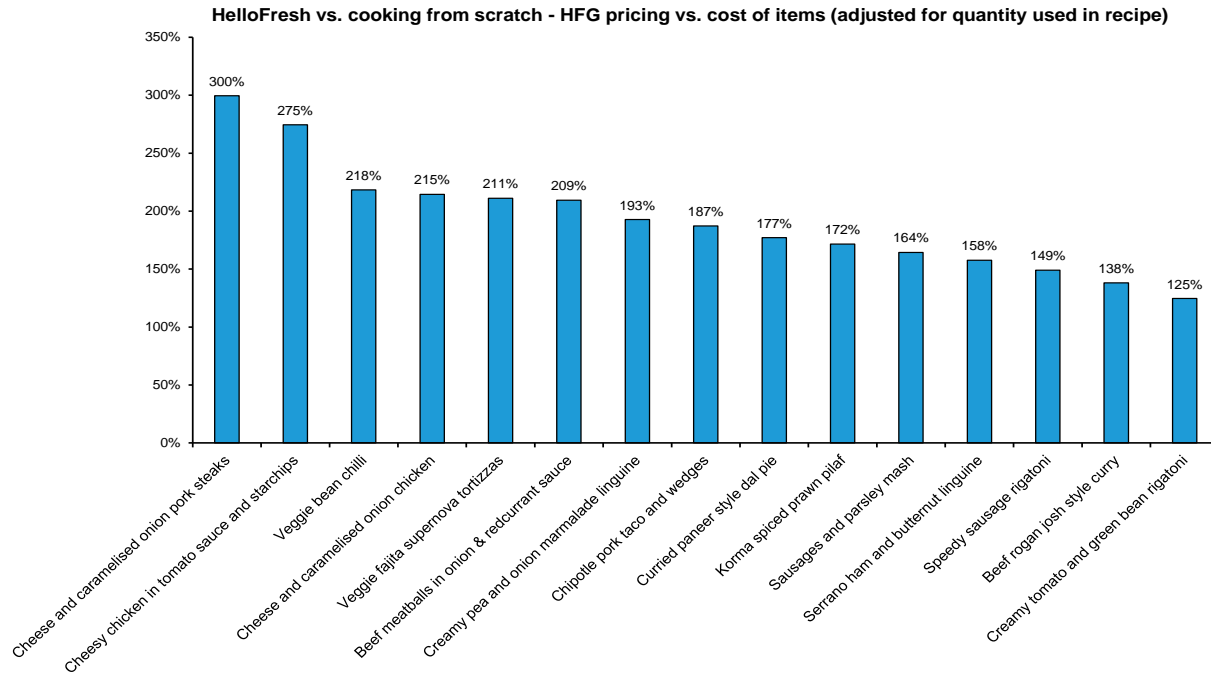


Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

EXHIBIT 11: Premium of HelloFresh meal vs. cooking from scratch (adjusted for recipe quantities)



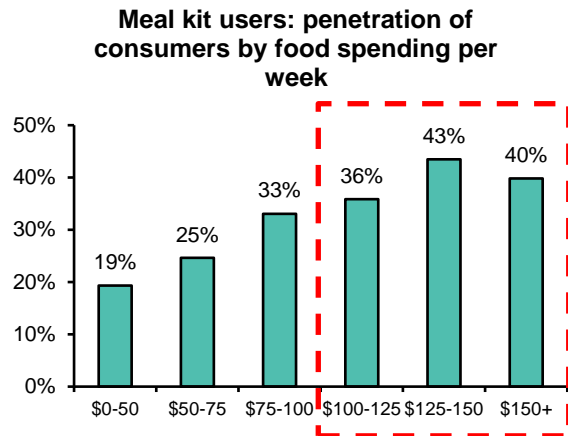
Source: Tesco website, HelloFresh website, and Bernstein analysis

EXHIBIT 12: Even for the highest quintile of earners (US), a HFG box takes up 46% of weekly food spending

US food spending by income quintile	Food spending at home per week	HFG box (three meals, two people)
Lowest quintile	\$54	117%
2nd quintile	\$71	89%
3rd quintile	\$85	74%
4th quintile	\$100	63%
Highest quintile	\$137	46%

Source: USDA, US Census Bureau, company website, and Bernstein analysis

EXHIBIT 13: With ~40% penetration of food spending quintiles, we think it is difficult for HFG to extend into lower income groups due to affordability



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

FLAWED GROWTH STRATEGY

New growth initiatives add complexity to the previously simple business model with limited impact on growth, putting into question the mid-term margin target. At the 2021 CMD, there was a raft of new growth initiatives announced, including expansion into new markets and other meal occasions, more recipes, and grocery add-ons, to achieve mid-term target of €10Bn revenue and 10-15% margins. While geographic expansion and new products will likely add to top line growth, impacts from other initiatives will be small. HelloFresh also plans to reduce lead times and bring in recipe customization. We think the business is becoming increasingly complex with the new initiatives, which puts into question mid-term margins as operational complexity eats into efficiency. With these growth levers, HelloFresh is hoping to lay the path toward a "food solutions group," which we think is just a clever name for "grocer," by rebundling the weekly shopping basket it initially claimed to unbundle. However, we don't think this will work as **HelloFresh will struggle to compete against food retailers on range, price, or speed.**

However, **we think at the core of HelloFresh is a small group of core affluent customers who love the product and are highly profitable.** Even with very high churn, we expect there to be almost three million regular core customers at present. Therefore, we think HelloFresh should pivot from being the Amazon of meal kits or creating a food solutions group to targeting this core of affluent customers and focusing on growing strong sustainable margins and FCF as opposed to discount-driven, churn-intensive, and Capex-intensive growth at all costs. This will likely lead to a much lower top line growth, but increase margins significantly and increase FCF. It will increase the company's product-market fit, enable it to pass on inflation, and improve customer satisfaction.

BERNSTEIN

EXHIBIT 14: **We think new geographies and product lines have the greatest business benefit**

Lever	Initiative	What is it?	Business benefit	Complexity	Bernstein perspective
TAM penetration	Quicker lead times	Go from 4-5 day lead times to 2-3 days, speeding up delivery to customer and cut off times	Low	Easy	Quicker lead times would increase competitiveness vs. grocers, but 2-3 days is still uncompetitive. This would reduce the effectiveness of the supply chain & inventory/labor forecasting.
	More recipes	Increase from 35 recipes to 50-100 recipes and full market rollout of all brands	Low	Medium	More recipes would help order frequency and may attract some new customers (e.g. vegan). It adds to complexity of operations in handling combinations.
	Value	Become more competitive on price reducing price vs market by -25 to 40% vs. the 2016 baseline (2021 at -20 to -30%)	High	Hard	Reducing prices would open up the TAM but create significant challenges for unit economics. Price gap is significant vs. grocers.
TAM expansion	New meal kit brands	Rollout GreenChef (premium offer) and EveryPlate (reduced cost offer)	Low	Hard	New brands are cannibalistic, require more marketing spend, and the operations are duplicated with dedicated sites to each brand. Limited synergies, and the same TAM.
	New geographies	Expand into new markets such as Italy and Norway (both in 2021), and Japan (2022)	High	Medium	New markets are attractive as an organic growth source. Italy and Norway are small. Japan will be challenging, given no experience in Asian markets or with Japanese cuisine.
	New product lines	Continue expansion of RTE (ready to eat) products through Factor 75 and YouFoodz; Factor 75 to launch in a new market in 2022	High	Medium	High growth rates in short term due to low levels of sales today. TAM is very small, given very high cost of the product, requires more labour to prepare, complexity of ops is increased, and sites are duplicated.
Additional monetization	New meal occasions	Focus on getting greater share of weekly meal occasions (e.g., breakfast and lunch)	Low	Easy	Meal kits have limited appeal to consumers due to cost and take time to prepare. On breakfast, we question the value added by a meal kit compared with cheap options such as cereal or toast. On lunch, we question the value/time trade off vs. sandwiches and salads.
	Grocery product additions	Rollout of HelloFresh Market to 4 new markets (as well as US) with private label and ~1000 SKUs. Market is effectively a grocery offering of ready meals, and "solution-oriented" items	Low	Hard	We don't think HelloFresh can compete on range, price, or convenience vs. grocers. Adding 1,000 SKUs to the warehouses will increase food waste, add complexity to picking, and require significant investment in technology (e.g. WMS/IMS/OMS).
	Recipe customization	Driving additional AOV and orders by allowing customers to swap ingredients, upgrade ingredients, and add ingredients to meal kits	Low	Medium	Increases complexity of operations (e.g. not just a single pick of individual recipes) whilst driving limited incremental AOV growth.

Source: HelloFresh reports and Bernstein analysis

BERNSTEIN

EXHIBIT 15: **HFG current strategy (our published model) vs. our corporate action strategy**

		FY21	FY22E	FY23E	FY24E	FY25E
Active Customers (m)	Model - HFG current strategy	7.2	8.1	8.7	9.3	9.6
	Corporate Action strategy	7.2	4.9	4.1	4.1	4.2
Group Revenue	Model - HFG current strategy	5993	7126	7788	8421	8933
	Corporate Action strategy	5993	4674	4179	4390	4612
Revenue growth %	Model - HFG current strategy	59.8%	18.9%	9.3%	8.1%	6.1%
	Corporate Action strategy	59.8%	-22.0%	-10.6%	5.1%	5.1%
Contribution margin %	Model - HFG current strategy	25.3%	23.9%	25.1%	25.9%	26.1%
	Corporate Action strategy	25.3%	28.4%	32.0%	32.8%	33.5%
Adj EBITDA	Model - HFG current strategy	528	448	574	710	791
	Corporate Action strategy	528	619	795	868	940
Adj EBITDA %	Model - HFG current strategy	8.8%	6.3%	7.4%	8.4%	8.9%
	Corporate Action strategy	8.8%	13.2%	19.0%	19.7%	20.4%
Basic EPS	Model - HFG current strategy	1.4	1.1	1.5	1.8	2.0
	Corporate Action strategy	1.4	1.8	2.4	2.7	3.0
FCF	Model - HFG current strategy	181	-138	39	149	209
	Corporate Action strategy	181	150	394	468	519
Net Cash / (Debt)	Model - HFG current strategy	276	101	134	283	492
	Corporate Action strategy	276	289	776	1244	1763

Source: Company reports, and Bernstein estimates and analysis

VALUATION METHODOLOGY

European Food Retail: We value stocks in our coverage through the following steps: (1) We use a market-based approach to valuation. We take data for a set of comparable companies and assess how multiples relevant to the sector (PE, EV/EBITDA, EV/sales, EV/EBIT, FCF yield) change relative to expected growth rates, creating a regression of each multiple vs. expected growth; (2) We generate earnings forecasts for the company, compare those forecasts with consensus expectations, and seek to reflect events that may happen during the 12 months that are likely to move consensus expectations; (3) We value the stock by applying the relevant multiple (as determined by our industry valuation regressions) to our earnings forecast; and (4) Where appropriate, we break down the company into its parts (e.g., by geography) and value it as a sum of those parts. Note that we make several adjustments to our valuation analysis: (1) For company-specific tax rates, habits of recurring one-off charges, or other company-specific traits; (2) To separate non-operating assets if we feel their inclusion is distorting the valuation multiples; and (3) To include pension deficits, non-operating provisions, and seasonality of debt in our net debt calculation.

HelloFresh SE: We value HelloFresh using an average of a 15-year DCF, PE, and EV/EBITDA.

BERNSTEIN

RISKS

European Food Retail: There are certain risks that are common to all the companies in our coverage: (1) Prevailing economic conditions — in each of the territories our coverage companies operate in, the food retail spend is correlated to prevailing economic conditions. Thus, any unexpected deterioration or improvement in the macroeconomic conditions in these countries will likely impact the growth assumptions applied to those operations; and (2) New Entrants — all companies in our coverage are at risk from new entrants either at a local/regional level (i.e., a new supermarket opening locally to an incumbent) or national level (a new entrant entering a whole market). Currently, the greatest expansion is being seen at the lower (Lidl/Aldi in the discount sector) and higher (Waitrose/Wholefoods) ends of the market or online (Amazon). These companies may continue to outpace the sector and impact the growth of the companies in our sector. Similarly successful operators in certain regions/countries, e.g., E.Leclerc in France, could expand beyond their current boundaries. As a lot of the non-coverage companies are privately held, it can be difficult to assess the ability and willingness of these companies to expand further.

HelloFresh SE: The upside risks to our target price include: (1) Pandemic behavior sticks and new customers continue ordering; (2) Cost reduction sticks post-pandemic and marketing spend stays low vs. 2019 levels; (3) Further acquisitions that grow the business; and (4) New strategic initiatives or geographies provide material upside.

INVESTMENT IMPLICATIONS

We rate HelloFresh Underperform with a target price of €24. HelloFresh operates a hard business model with high discounting, high churn, and high marketing spend. The TAM is smaller than management expects due to the commoditized and expensive nature of the product. In addition, retention is poor, which means the already limited TAM is being churned through quickly. We think it will become increasingly harder to scale the business, maintain the growth in customers, and improve profitability. But consensus expectations remain high, expecting +15.5% revenue CAGR during FY 2021-26 and expanding EBITDA margin by +100 bps at the same time. We project a 10.5%+ CAGR with -240 bps margin decline into FY22 and recovery to FY21 level in FY24.

INTRODUCTION TO MEAL KITS

What is a meal kit? What are the unit economics?

+ OVERVIEW

A meal kit is a selection of prepared, pre-portioned ingredients delivered directly to a consumer's home (D2C) for home cooking of a pre-selected recipe. However, the concept of a meal kit is not new. It bridges the gap between a ready meal (fully prepared meal to cook at home) and scratch cooking (selecting raw ingredients to cook a meal of your choosing). Meal kits have been sold in some form for many years by supermarkets, with Old El Paso (a General Mills brand, covered by Alexia Howard) being a prime example. The D2C meal kit emerged in the early 2000s in the Nordics and evolved into its current guise in the 2010s, with HelloFresh, Blue Apron, Gousto, and HomeChef being some of the largest global players.

Not all meal kits were born equal. There's a significant difference between the supermarket meal kit (e.g., Old El Paso fajitas); a classic DIY meal kit (e.g., HelloFresh) where pre-portioned ingredients are sold D2C via a subscription; the more recent cook-it-yourself meal kit (e.g., Pasta Evangelists) where a meal is delivered that just needs cooking; to prepared ready meals (e.g., Factor 75) where a selection of ready meals is delivered to your door. We focus on the classic DIY meal kit as it makes up the majority of the market.

Meal kit unit economics are attractive and relatively simple to understand. They are attractive because on a single unit basis, a meal kit company is selling simple commoditized products at very high gross margins (65% vs. supermarkets' gross margin of 25-30%). Although shipping the product is expensive and involves a high variable cost (40% of revenue), this is more than compensated for by the high gross margin. Whilst the single unit economics look attractive, the big problem is below contribution margin (revenue – procurement – fulfillment) where marketing spend is high and will remain high, leading to lower EBITDA margins. This is further compounded by weak customer relationships, high churn, and weak product-market fit, which brings into question the sustainability of growth.

History of meal kits is checkered. The number of meal kit companies mushroomed in the D2C explosion of 2015-17, and while the D2C market consolidated, it was due to failures rather than to structural consolidation. Many smaller competitors ran out of cash as a result of the challenging business model, while HelloFresh survived through strong execution and a push toward profitability. As a result, HelloFresh has a strong global market share, but it doesn't matter. Consumers aren't shifting from HelloFresh to other meal kits but are instead shifting back to grocery stores, which are still cheaper, easier, and simpler to shop from. We think the threat of meal kits to food retailers is limited, given the high cost of the product. On valuation, we think HelloFresh should be compared with other staples retailers, and we value the business based on PE, EV/EBITDA, and a DCF.

BERNSTEIN

WHAT IS A MEAL KIT?

- **A meal kit is a selection of prepared, pre-portioned ingredients that are delivered directly to a consumer's home (D2C) for home cooking of a pre-selected recipe.** They are typically run as subscription services where a consumer signs up to several recipes each week. For example, one could choose to have three meals delivered (cheese & caramelized pork steaks; a sticky Thai rice bowl; and a lamb ragu) and receive the exact ingredients required for each meal in the box (e.g., for lamb ragu, 500g tomatoes, 500g lamb mince, a small sachet of herbs, one onion, two cloves of garlic, etc.). One could then prepare these at home following the recipe cards (see Exhibit 17 to Exhibit 21).
- **The concept of a meal kit is not new.** It bridges the gap between a ready meal (fully prepared meal to cook at home) and scratch cooking (selecting raw ingredients to cook a meal of choice). Meal kits have been sold in some form for many years by supermarkets, with Old El Paso (a General Mills brand, covered by Alexia Howard) being a prime example. Old El Paso has had fajita or taco kits on supermarket shelves for years, where a box contains tortillas, a spice mix, and some tomato salsa. All the consumer needed to do was follow the recipe on the back and buy some fresh chicken, peppers, and onions. This is the original form of the meal kit that has evolved into a D2C model.
- **D2C model of meal kits started in the 2000s** in the Nordics with Linas Matkasse (not covered) and expanded with the growth of players such as HelloFresh, Blue Apron (not covered), and other startups. These new D2C players focused on delivering the boxes directly to the home (thereby disintermediating food retailers) and focusing on improving the offer with more fresh products, all the ingredients included, and a wider range of innovative recipes (e.g., a Massaman fish curry cooked at home on a Tuesday).
- **Meal kit companies have a broad appeal, but they normally claim that their target customers are young women in their early 30s with two children under the age of five, where both parents are working.** Given the expense of the products, they typically target more affluent, urban professionals, and some are only available in major urban centers.
- However, "meal kits" is a bit of a catch-all term with different variants.
 - **Supermarket meal kit (e.g., Old El Paso fajita kit):** Sold on a supermarket shelf, contains a few ingredients to make a recipe (consumers need to buy the remaining ingredients), and often focuses on "world cuisines" (e.g., Mexican, Thai, Indian, etc.).
 - **Classic DIY meal kit (e.g., HelloFresh or Blue Apron):** Sold D2C via a subscription model, contains all the ingredients for a recipe; the meal kit typically contains three or four recipes for two people and is delivered D2C.
 - **CIY meal kits (e.g., Pasta Evangelists or Nonna Tonda — both private):** Cook-it-yourself (CIY) meal kits are often a specific meal delivered to your door; are one-step away from a ready meal and, in the case of the pasta kits, include freshly

BERNSTEIN

made pasta and a sauce which need to be cooked separately and then served. They tend to be much quicker, focus on the convenience, and come with high-quality fresh pasta and sauce.

- **Prepared ready meals (e.g., Freshly (owned by Nestlé and covered by Bruno Monteyne), AllPlants (private), and Factor 75 (owned by HelloFresh)):** These are effectively D2C ready meal boxes but are often targeted at consumers who want to know all the nutritional information about what they are eating and are therefore typically perceived as healthier than traditional supermarket ready meals. In a prepared ready meal kit, a selection (e.g., 12) of ready meals which can be heated and eaten is delivered. There is limited preparation time. Often, they target specific dietary needs (e.g., AllPlants is vegan and others target bodybuilders).

EXHIBIT 16: **Meal kits sit in between cooking from scratch and ready meals, along a spectrum of level of preparedness**



Source: Bernstein analysis

EXHIBIT 17: **Ready meals have evolved from frozen meals in the 1970s to traditional meal kits and fresh ready meals with the most recent iteration of meal kits such as HelloFresh, ready meals delivered, and new FMCG channels**



Source: Company websites and Bernstein analysis

BERNSTEIN

EXHIBIT 18: **HelloFresh meal kit**



Source: Company website

EXHIBIT 19: **HelloFresh ingredients for pasta recipe**



Source: Bernstein photo

EXHIBIT 20: **Pasta Evangelists**



Source: Company website

EXHIBIT 21: **Factor 75 ready meals**



Source: Company website

BERNSTEIN

+ UNIT ECONOMICS AND AN EIGHT-LINE P&L

- Meal kit unit economics are attractive and relatively simple to understand. They are attractive because on a single unit basis, a meal kit company is selling simple commoditized products at very high gross margins (65% gross margin vs. supermarkets' gross margin of 25-30%). Although shipping the product is expensive and involves a high variable cost (40% of revenue), this is more than compensated for by the high gross margin. While the single unit economics look attractive, the big problem is below contribution margin (revenue – procurement – fulfillment) where marketing spend is high and will remain high, leading to lower EBITDA margins. This is further compounded by weak customer relationships, high churn, and weak product-market fit, which brings into question the sustainability of growth.
- The unit economics of a meal kit are quite simple.
 - **Revenue = customers x orders per customer x average order value (AOV)**
 - **AEBITDA = revenue – procurement – fulfillment – marketing & SG&A**

EXHIBIT 22: Simple eight-line HelloFresh/meal kit P&L



Source: Bernstein analysis

- **Revenue = customers x orders per customer x average order value (AOV)**
 - **Customer numbers** are typically measured by active customers in the quarter (i.e., a customer who bought at least once). Customers are driven by acquisition, retention, and reactivations. Acquiring new customers is critical to maintaining growth; retention is typically quite weak, but there will be a core of regular users; and reactivations are lost customers (i.e., those who have purchased before to come back), encouraged often by discounts. Web traffic, app data, and Google Trends tend to have a good relationship with customer numbers.
 - **Orders per customer** is the number of times the average customer orders in a period. It is a signal of usage and behavior change, as higher orders per customer would signal more consistent usage and good product-market fit. Currently, HelloFresh achieves roughly four orders per customer per quarter, which suggests that people aren't on average using the product all the time (as expected and partly driven by the mix effect of customers).
 - **Average order value** is a factor of order size (meals per order, revenue per meal, and any add-ons). Meals per order has stayed flat around eight, which suggests that the most common box size is four meals for two people (in line with their target customer of a working couple with kids). Revenue per meal has been

BERNSTEIN

increasing as some inflation (not all) is passed on, some add-ons are added to the boxes, and delivery fees are increased. There are lots of moving parts to revenue per meal (including the mix effect of higher and lower value propositions such as EveryPlate and Factor 75). AOV is net of discounts (with discounts not being disclosed).

■ **AEBITDA = revenue – procurement – fulfillment – marketing & SG&A**

□ **Procurement costs** (35-40% of revenue) are the COGS that go into the meal kit, including both the cost of food and the cost of packaging. We like to look at procurement costs on a percentage basis and a per order basis, as it helps understand movements in top line and underlying trends. There is an argument that procurement costs as a percentage should decrease because of buying scale, but we're cautious, given that most meal kit companies are still subscale vs. supermarkets. Inflation is also a key driver here as food prices rise, which can be in part offset by management decisions on ingredients and recipes.

□ **Fulfillment costs** (~35-40% of revenue) include the cost of picking, packing, dispatching, and fulfilling the order. It is difficult to model in detail due to lots of moving parts of new fulfillment facilities, efficiency and capacity in existing fulfillment centers, and parcel rates. Fulfillment costs should increase with inflation and parcel spot rates, and become more efficient as sites increase capacity and automation is introduced.

□ **Marketing & SG&A** (~20% of revenue) is mainly composed of marketing spend (>15% of sales) and general costs (~4-5% of revenue). Marketing spend includes both acquisition and retention marketing, but does not include discounts, which are netted off revenue (not disclosed). Marketing spend is likely to remain high, as the business is a high churn model, which requires constant customer engagement and promotion to drive demand. SG&A should stay relatively flat, but HelloFresh has recently hired a significant number of data analysts to increase their capabilities, which could put pressure on margins.

■ Although P&L and unit economics might be simple, the business model is hard.

□ **HelloFresh operates on a high discounting model** where new customers are given 40-60% off to get them signed up, and reactivated customers are prompted with very regular discounts (often toward the end of the quarter) to sign up. We think this devalues the brand, encourages discount chasing, and creates an unhealthy customer base. It also means that HelloFresh acquires a large number of customers who aren't in its TAM (i.e., students), who are given money to eat for free. It also means that the reliability of active customer numbers is lower due to customers using multiple accounts to get the discounts. For example, I recently had a door-to-door marketer come to my house and offer me a discount. I said I had bought before so I wouldn't be eligible, and they encouraged me to use a different email address.

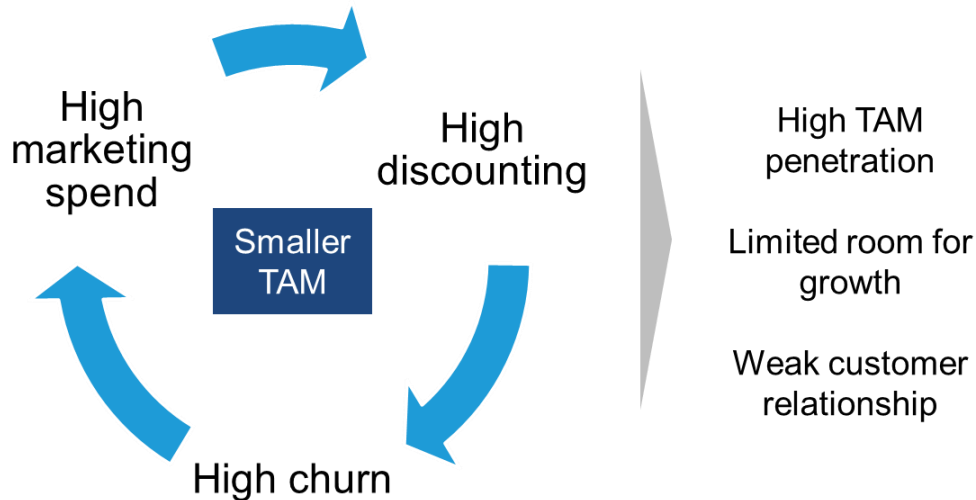
□ **High churn**, where 90% of customers don't buy by Q4 because they come for the discounts, find the product too expensive at full price, and the product doesn't fit their lifestyles. This means that more discounting and more marketing spend are required to acquire more customers. Reactivations are portrayed as a good thing

BERNSTEIN

(i.e., getting customers to come back), but we think that they are discount-driven and that customers churn just as quickly.

- **As a result, high marketing spend** is required to consistently acquire and reactivate customers, and will be needed in the long term without a significant improvement to the underlying customer relationship, retention, and discounting. Marketing would become less effective as the TAM is churned through, and HelloFresh needs to acquire more customers (who are less like their target customers and less affluent).
- **High variable costs mean that there is limited fixed operating leverage.** Marketing spend and COGS grow with revenue, and while there are some potential efficiencies in procurement (e.g., better processes in warehouses), the business doesn't scale that efficiently.

EXHIBIT 23: **Meal kits are a difficult business model**



Source: Bernstein analysis

+ THE INDUSTRY

- **Meal kits were born out of the D2C explosion in 2015-17** when many D2C business models received significant amounts of funding to disrupt the CPG and food retail landscapes. Dollar Shave Club (now owned by Unilever, covered by Bruno Monteyne) was the prime example. They were mainly subscription business models aimed at fragmenting the traditional weekly shop, often with some form of vertical integration.
- **The D2C market "consolidated," as did the meal kit market, not due to structural consolidation but due to failure.** Many of these D2C businesses were overhyped with huge growth potential to build a brand that could capture consumer spending. However, many failed by running out of cash due to a high discounting, high churn, and high marketing spend business model with a product that didn't fit with consumers' needs. **It is still easier, cheaper, and quicker to go to a supermarket and buy all the products together.**

BERNSTEIN

- However, HelloFresh is constantly under attack from the "attack of the ants." There are hundreds of small meal kit providers that pop up in markets all over the world to disrupt the segment. They often target new segments (e.g., vegan) or new models (ready meals or cook-it-yourself). This puts pressure on HelloFresh to constantly innovate and spend on discounting and marketing to avoid being attacked by newer, more interesting solutions.
- HelloFresh is one of the survivors through strong execution, a push toward profitability, and a well-timed entry into the US market. It is one of the lucky ones of the D2C boom that managed to continue growing and fund itself to profitability. It was also opportunistic in that it was able to grow in the US while Blue Apron (not covered) was struggling, therefore capturing customers from a competitor and boosting performance.
- **HelloFresh has a strong global market share, but it doesn't matter.** We are often asked about HelloFresh's market share of the meal kit market, and it simply doesn't matter. Consumers aren't switching from HelloFresh to another meal kit provider (by and large). They are churning from meal kits (or HelloFresh) and trading back to supermarkets.
- **Discretionary or staple?** We are often asked whether HelloFresh is a discretionary product that competes with restaurants and food delivery or a staple that competes with grocers. We think it is a staple because you have to cook it and because of the frequency of use (3x+ per week). Many people justify the high cost of the product by saying it competes more with restaurants, but it does not consider that the majority of people might spend £20/\$30 a month on one food delivery as a treat, and it is very difficult to spend \$60 on a meal kit box. We would expect customers who churn to return to supermarkets rather than restaurants.
- However, **meal kits do meet many consumer trends**, making them an attractive trend-driven investment. They are a convenient, digitally enabled, and healthy option focusing on the provenance of items and encouraging more interesting eating. We don't dispute the fact that they meet many consumer trends, but we think this is offset by the challenges of the business model and the small TAM.
- **In a recession or consumer spending squeeze, we would expect meal kits to struggle**, given the high cost of the product. We would expect trading down to supermarkets as inflation squeezes budgets. The only saving grace is discounting, which we would expect to help drive additional acquisition, but long-term retention rates will suffer.
- **The threat of meal kits to food retailers is minimal.** Meal kits remain a tiny part of the market. HelloFresh's revenue was \$3.3Bn in the US in FY21 vs. a grocery market that is close to \$1Tn, leading to a total market share of <0.3%. Grocery is a highly price-sensitive category and very difficult to execute on (high volume, low margin, and challenging supply chain). We think meal kits will struggle to gain significant share. While some food retailers (e.g., Kroger) have purchased meal kit companies, this is more in a test & learn approach to D2C and digital grocery, and they remain a small part of overall sales.

BERNSTEIN

- **On the flip side, food retailers pose a significant threat to meal kit companies.** The risk of disintermediation is high. Food retailers typically have strong new product development (NPD) capabilities, and if they saw a significant opportunity in meal kits, it would not be hard to replicate the product and put it on their shelves at a significantly lower price. For example, Ahold Delhaize has already created meal kit-like products. This also takes out the significant cost of fulfillment, which is a challenge to unit economics. Also, Kroger has brought its meal kits to stores (see Exhibit 24).

EXHIBIT 24: **Kroger's Home Chef brand in-store proposition**



Source: Company photo

EXHIBIT 25: **Ahold Delhaize – beef bourguignon meal kit**



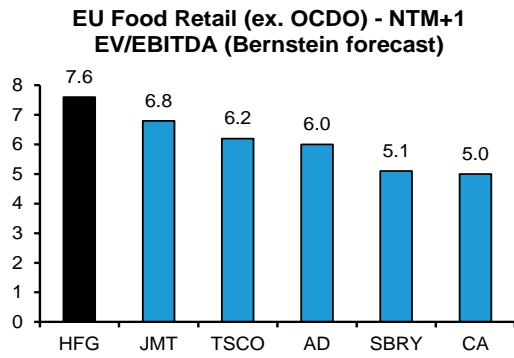
Source: Company photo

+ VALUATION

- We approach valuation using a three-part methodology and use an average of PE, EV/EBITDA, and DCF. We value HelloFresh based on its profitability, given its relative maturity to other "new food businesses" such as food delivery. One of the key positives that investors highlight about HelloFresh is its ability to generate cash and profits; therefore, we think it's reasonable to value it on these metrics.
- Compared with food retailers, HelloFresh looks expensive relative to peers, given its EBITDA and EPS growth trajectory. We think EBITDA growth will be stifled by a tough demand outlook (high inflation leading to trade down, potential recession, and post-pandemic reset) and pressures to profitability (investment strategy, inflation on COGS, ramping production facilities, and higher marketing spend to support growth).

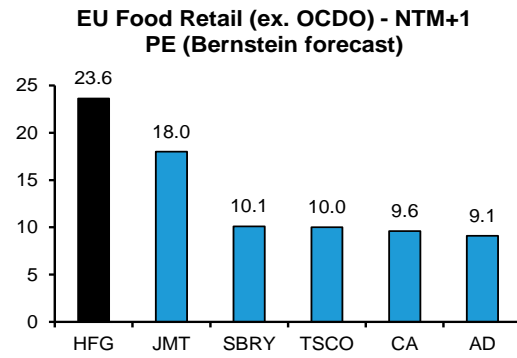
BERNSTEIN

EXHIBIT 26: EU Food Retail NTM+1 EV/EBITDA



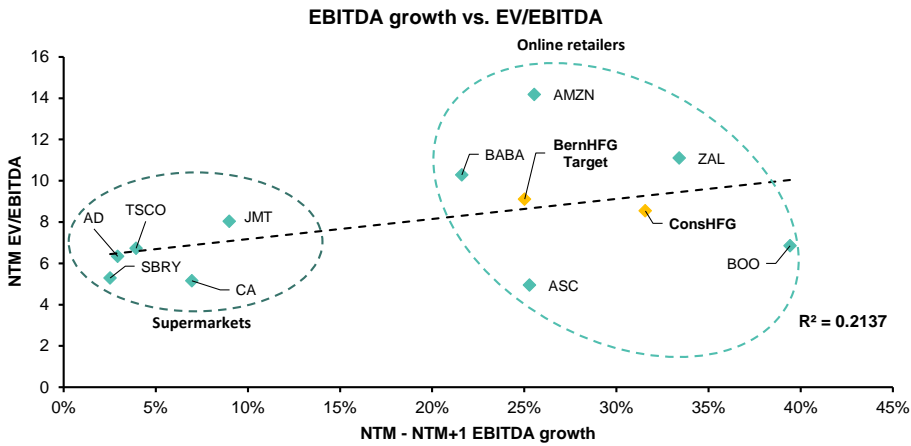
Source: Bloomberg, and Bernstein estimates and analysis

EXHIBIT 27: EU Food Retail NTM+1 PE



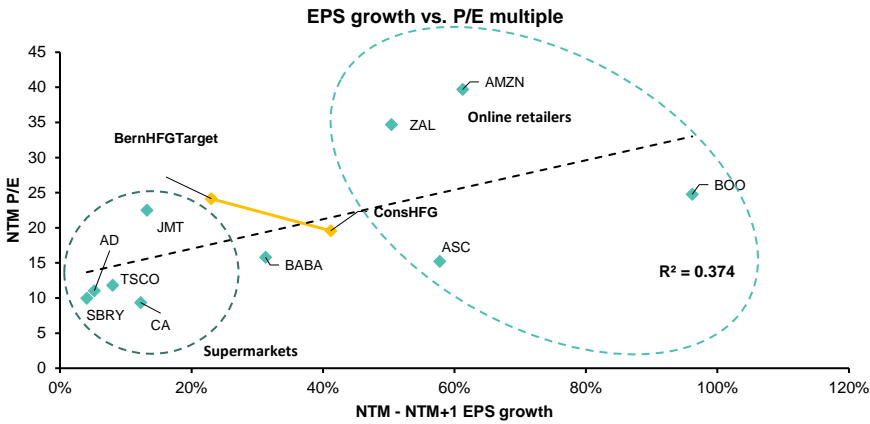
Source: Bloomberg, and Bernstein estimates and analysis

EXHIBIT 28: HFG vs. peers on EV/EBITDA



Source: Bloomberg, and Bernstein estimates and analysis

EXHIBIT 29: HFG vs. peers on PE



Source: Bloomberg, and Bernstein estimates and analysis

BULL VS. BEAR

Laying out arguments from both sides

+ OVERVIEW

Of any name in our coverage, we have the most polarized discussions about HelloFresh. Investors are typically either completely bought into the long-term shift in consumer habits, the power of the business model, and the huge opportunity of the growth levers, or they are left perplexed by high churn, high marketing spend, high discounting, and a very expensive product, which brings into question the TAM and TAM penetration, as well as both post-pandemic and long-term growth and margins. Below, we outline what we understand to be the bull case and the bear case, and provide our response.

- **Bull case:** HelloFresh is the strongest executor globally in the meal kits space with strong top line growth and profitability over 2020 and 2021, which is expected to continue. It is profitable and cash generative. Meal kits meet many consumer trends, and the long-term growth opportunity is huge (e.g., grocery, new products, and new geographies).
- **Bear case:** The business model is hard (high churn, high discounting, and high marketing spend), and the product is expensive. The TAM is smaller than management claims and is almost 40% penetrated. Growth levers aren't material and add complexity to the business. Post-pandemic demand will be squeezed, and inflation pressures top line and margins.

+ BULL CASE

- **Strong growth during the pandemic with stickier, better cohorts:** HelloFresh demonstrated strong growth through the pandemic with >100% growth in FY20 and ~60% growth in FY21 (see Exhibit 30). The pandemic has accelerated the pace of consumer take-up, and the quality of customer acquisition during the pandemic has been stronger. As a result, retention metrics have improved and more consumers have changed their eating habits, which is expected to stick post-pandemic (see Exhibit 32). There is latent demand post-pandemic as HelloFresh was operating at full capacity for most of 2020 and was not actively recruiting new customers, suggesting there could be further growth post-pandemic.
- **Retention metrics are improving yoy, reactivations are good, and CAC payback is quick.** Retention metrics are improving by each cohort, and cohorts have stuck with the product during the pandemic (see Exhibit 32). Reactivation is a low-cost way of reengaging customers with the product and leads to greater engagement.

BERNSTEIN

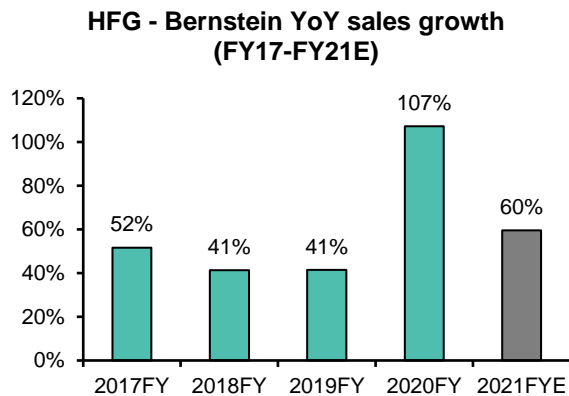
Payback of the CAC is quick as a result and improving, which demonstrates that discounting and the marketing strategy are going in the right direction.

- **Pricing is becoming more attractive and is opening the product to a wider audience.** Over time, HelloFresh has not passed on as much inflation and, therefore, the product is becoming more affordable in real terms relative to normal grocery shopping. This widens the TAM along with cheaper alternatives such as EveryPlate (see Exhibit 35).
- **Execution has been the strongest of peers, and HelloFresh has a high market share:** Many D2C meal kit companies have failed due to lack of demand and funding, and weak execution. Listed peers such as Blue Apron (not covered) have struggled with top line demand and profitability over the past couple of years. However, HelloFresh has come out dominant with a strong US market share, significant scale (5-6x larger than peers), and the majority share of the global meal kit market. Its strong ability to execute and innovate has put it in a dominant position, and the flywheel benefits only increase. The company has scale buying benefits, scale logistics benefits, and a digital food network infrastructure capable of delivering food across many countries.
- **HelloFresh is one of the only profitable and cash-generative "new" food companies:** It became profitable in 2019 (0.9% AEBITDA margins), and generated 12.6% margins and nearly €500Mn FCF in FY20. Recently announced share buybacks reinforce management's conviction in the business, and there is room for further buybacks and cash return in the future.
- **Meal kits meet many emerging consumer demands and trends:** The growth of meal kits and HelloFresh fits within many longer-term secular consumer trends such as the increasing digitalization of food; the need for provenance, convenience, and helping the time-poor; a desire to eat healthier; and a desire to reduce food wastage. Millennial consumers will likely become increasingly affluent over the next 5-10 years and have families, for which HelloFresh is perfectly suited.
- **Long-term growth opportunity is huge:** The TAM is underpenetrated, and there is room to grow by: (1) monetizing the existing customer base; (2) increasing penetration of the core product; and (3) expanding the TAM through new products. We often hear that HelloFresh will be the CPG company of the next 100 years (akin to Nestlé, covered by Bruno Monteyne). Management says that it is only currently serving a fraction (<0.45%; see Exhibit 33) of its TAM's meal consumption. New brands (GreenChef and EveryPlate) are ramping well, and new brands such as Factor 75 and new geographies are ramping quickly and made up 25% revenue in Q3-21. Plus, there's a huge opportunity to improve the existing proposition (quicker lead times, more recipes, and customization) as well as boost AOV with add-ons, customization, and grocery.
- **Grocery opportunity is huge.** Cracking the multi-billion-dollar grocery market globally could provide material upside. HelloFresh can do this by capturing more meal occasions and providing simple, convenient ordering of add-on products to the box, thereby consolidating a household's grocery spending. It can do this by moving toward becoming a "food solutions" group that encompasses meal kits, ready meals, and individual SKUs by HelloFresh Market (see Exhibit 36).

BERNSTEIN

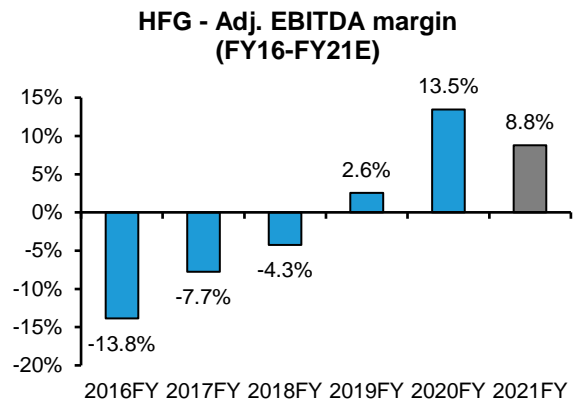
- **Investments for growth in production facilities and in technology and data teams set the business up for future growth.** Given the capacity constraints during the pandemic, new production facilities will likely enable HelloFresh to capture the latent demand it couldn't serve during 2020 and 2021. The investments in technology and data could enable HelloFresh to be at the forefront of customer experience, enable new growth levers such as grocery, and reduce costs by optimizing market spend (acquisition and retention).
- **TAM expansion provides compelling growth in the medium term** with the option to launch new brands, ready meals, and the core proposition into new markets. HelloFresh recently entered Norway and Italy, which will boost growth, and further entered Japan during 2022, opening a new region of untapped growth (see Exhibit 37 and Exhibit 38). The new brands and ready meals are expected to bolster the offer in existing markets and help in the move toward a food solutions group.
- **ESG is a huge boost.** HelloFresh helps consumers reduce their food wastage and has a clear focus on providing a sustainable food solution. It is planning on reducing its carbon footprint by 60% (2022 vs. 2019), reducing food waste by 50% (2022 vs. 2019), and becoming the first global carbon-neutral meal kit company. It is working across upstream and downstream areas as well as its operations to optimize for sustainability (see Exhibit 39 and Exhibit 40). For example, it has worked hard to reduce ice and introduce linerless boxes. As a result, it has a dedicated ESG board subcommittee, sustainability targets in management remuneration, and strong disclosure on ESG.
- **Management has been a strong executor and has a strong vision for the future of the business.** The CEO and CFO are well-liked and have steered the HelloFresh business through periods of very strong growth. They have brought HelloFresh to profitability, been sensible about capital allocators, and have a clearly identified and wide-reaching growth strategy. They have consistently beat and raised on guidance, surpassing expectations.

EXHIBIT 30: **Strong revenue growth demonstrated before and during the pandemic**



Source: Company reports, and Bernstein estimates and analysis

EXHIBIT 31: **Profitability has steadily increased**



Source: Company reports, and Bernstein estimates and analysis

BERNSTEIN

EXHIBIT 32: **Retention rates by cohort are increasing YoY**



Source: Company reports

EXHIBIT 33: **Significant upside potential for TAM penetration, with <0.45% penetration today**



Note: ¹Assumes 2.5 heads per household with 10 weekly meals from home over 52 weeks; ²Delivering 1 billion meals annually

Source: Company reports

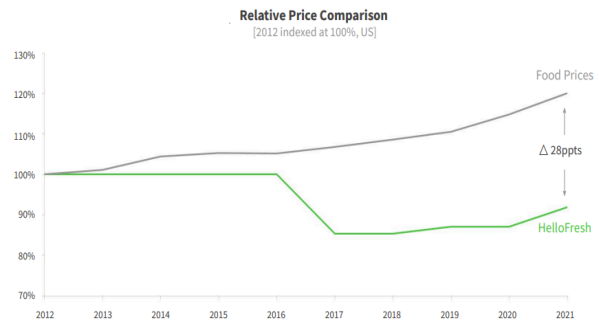
EXHIBIT 34: **Management claims very low TAM penetration across both segments**

	US	International
TAM*	77m	99m
Active Customers	3.5m	3.5m
Current Penetration	4.5 %	3.5 %

*Total addressable market

Source: Company reports

EXHIBIT 35: **Pricing relative to grocery shopping has come down over time**

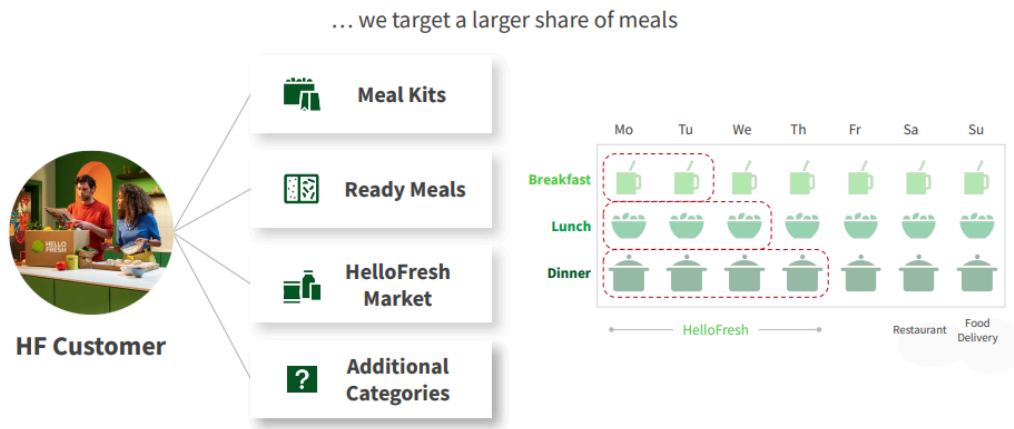


Source: Company reports

BERNSTEIN

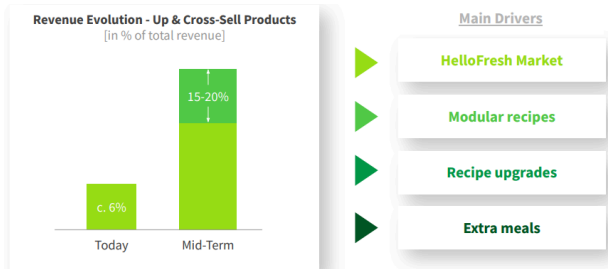
EXHIBIT 36: Creation of a food solutions group could provide significant upside

By moving towards a Food Solutions Group, we aim to play a pivotal role in that new world...



Source: Company reports

EXHIBIT 37: Upsell and cross-sell products are expected to make up 15-20% revenue in the future



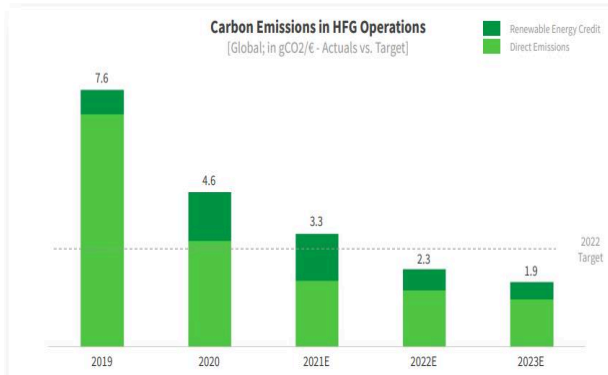
Source: Company reports

EXHIBIT 38: TAM levers already make up 25% revenue in Q3-21



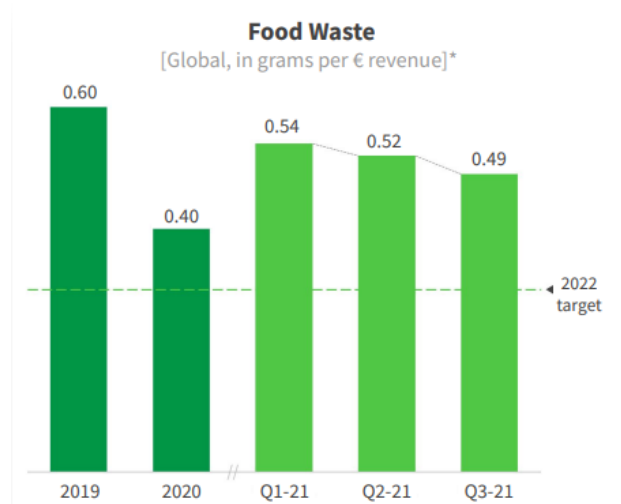
Source: Company reports

EXHIBIT 39: Carbon emissions are coming down



Source: Company reports

EXHIBIT 40: Food waste is low and reducing



Source: Company reports

BERNSTEIN

BEAR CASE

- **Structural Underperform:** We remain cautious on HelloFresh from a structural perspective with challenges to the business model, an expensive product with a small TAM, and very high TAM penetration.
 - **Business model is hard, leading to a revolving door of customers in and customers out.** High discounting (~20% on average with high introductory discounts of >50% and reactivation of 40% off on multiple boxes) devalues the brand and creates weak customer relationships. Churn is high at 90% of customers churned by Q4, and we don't see any improvement in retention rates. We think most of the cohort improvement is driven by one-off improvements from the pandemic as well as increasing reactivation rates, which we think are driven by high discounting, and customers tend to churn just as quickly when they are reactivated. Marketing spend is high at ~15%, and we expect this to continue at a high level over the next five years.
 - **Product is expensive and TAM is smaller.** A HelloFresh box is very expensive as it is essentially a commoditized product with a very high markup. When looking at an average meal, a HelloFresh meal is ~1.6-2.4x as expensive as cooking from scratch or a ready meal (see Exhibit 49). There is nothing wrong with an expensive product, but we think this significantly limits the potential TAM for HelloFresh. When you look at food spending in the US by income quintile, for an average family, a HelloFresh box would make up 74% of weekly spending for just three meals and two people, leaving only \$22 for 18 other meals, snacks, and other family members (see Exhibit 42). Even for the most affluent (top quintile), a HelloFresh box would make up 46% of weekly food spending. Whilst there is more elasticity in food spending in the top quintile, we think a HelloFresh box is unaffordable for the middle quintile, which the company includes in its TAM.
 - **TAM penetration is high.** As a result of high churn, we think HelloFresh is working its way through its TAM at a rapid rate and runs the risk of hitting the brick wall of TAM saturation. When surveying US consumers, ~40% of the top earners have used a meal kit product (see Exhibit 41), and when we look at our bottom-up proprietary retention analysis, we think HelloFresh has worked its way through >16 million customers in the US, leading to a TAM penetration of >35% in the US (see Exhibit 43 and Exhibit 47). We think this puts the longer-term growth runway of HelloFresh at risk.
- **Short-term Underperform:** We remain Underperform in the shorter term over 2022 as we expect post-pandemic demand to be weaker as consumers return to normal habits and higher inflation to encourage consumers to trade down (as they do with other grocery items) to supermarkets, discounters, and private label. As a result, we think margins will be squeezed further as a result of inflation hitting logistics and food costs as well as slower growth hurting newly ramped production facilities.
 - **Post-pandemic demand is in question.** As consumers return to normal activities, we expect HelloFresh to be a post-pandemic loser as people start eating out more and pressure on time shifts consumers back to simpler, quicker meals and/or

BERNSTEIN

ready meals. The comps are tough from the high growth rate in 2020 and 2021, and with heavy churn and a potential relapse in retention metrics, we think continued strong growth will be difficult. We model +16% YoY growth in FY22 vs. company guidance of 20-26%.

- **Higher inflation will pressure both consumers and the cost lines of the P&L.** As higher food inflation hits consumers in the US and Europe (along with energy prices and other consumer products increasing too), we expect this to hurt HelloFresh. Given the high cost of the product relative to grocery products (which tend to be the most price-sensitive of consumer categories, given the large proportion of household earnings they make up), we expect consumers to trade down to cheaper alternatives such as traditional grocery store shopping and private label items. Furthermore, we expect inflation to hit the HelloFresh P&L significantly as price costs increase on food (and HelloFresh have limited buying power) and logistics costs continue to creep up (which make up 40% sales). This will pressure margins.
- **Margins squeezed by mistimed growth investments.** HelloFresh took multiple margin hits over the last year, explained by management as investments for growth. We are very cautious as we think these are mistimed. It is opening several new production facilities, which drag on margins due to the need to ramp up the facilities in terms of demand and efficiency, as well as doubling the size of its technology and data teams, which increases SG&A. Given the uncertain demand trajectory, we think management has overegged the pudding and been too aggressive on investments.
- **Longer-term Underperform:** Over the long term, we remain cautious on consensus expectations for strong growth (+15.5% revenue CAGR for 2021-26) and margin expansion (+100 bps) due to the structural challenges of the business model, weak product-customer fit, limited growth levers, and additional complexity of the business. We model +10.5% revenue CAGR and +50 bps expansion.
- **Growth vs. margins dilemma:** At the core of HelloFresh, there is an affluent set of customers who love the product and buy it at full price. We expect they make up all the EBITDA of the business. The problem with consensus expectations is that we think it is going to be very difficult over the five-year horizon to both growth at a fast rate and expand margins. We think HelloFresh cannot have its cake and eat it too — it could choose to grow quickly at the expense of margins or retrench to grow slower but become more profitable. Historically, the focus has been on growth, but with higher TAM penetration and post-pandemic challenges, we think this will become tougher. We think a strategy of slower, more targeted growth with a highly profitable customer base could be attractive in the long run.
- **Customer feedback & product-market fit is weak:** We don't think the HelloFresh product is changing consumer habits. Churn is at 90% and NPS from our US survey is at -29 (where you should expect it to be at least positive). The meal kit product is not shifting consumer behavior away from grocery shopping toward pre-portioned meal kit shopping, and when we tried the product ourselves, it was an okay experience, in that, the recipes were interesting and the food was good quality, but packaging wastage is strong, the recipes took a long time to prepare,

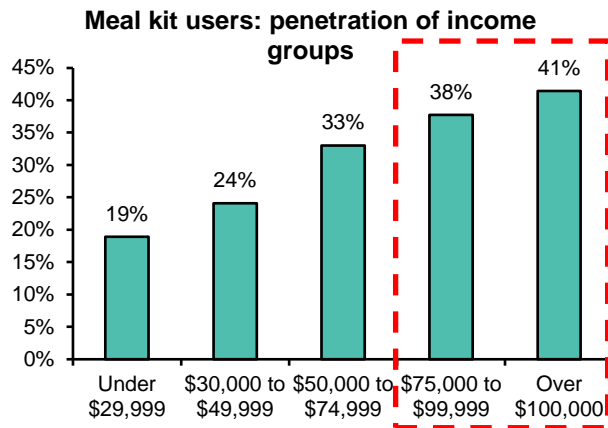
BERNSTEIN

and we found the product expensive. This perspective was reinforced by the consumers that we surveyed in the US, meaning that there is likely to be limited long-term uptake of the meal kit concept.

- **Discounting will continue to be strong and discount-driven reactivations could provide boosts to quarterly numbers but risks to long-term stability.** Deeply discounted trials are capital-destructive, and we think on average HelloFresh only achieves a CLTV:CAC of 0.8x, suggesting that it is effectively paying people to eat food over a three-year lifetime. We think the increasing number of reactivations (likely driven by discounts) demonstrates the weaker top line customer acquisition, and we typically receive reactivation emails toward the end of a quarter (useful for boosting quarterly growth). We think these discounts devalue the brand, encouraging customers to only buy the product at a discount. We question whether on the longer term, this discount-led strategy can continue within the context of weak customer feedback and question how many times customers will continue to reactivate at a discount before churning again.
- **Growth levers will provide only limited growth at a significant cost** (see Exhibit 50). Attempts to reduce lead times and add more recipes aim to improve customer perception and thereby increase retention, but we think that within the context of a very expensive product, this will have a limited effect on the overall TAM. New meal kit brands such as EveryPlate are cannibalistic and add additional cost through complexity and marketing spend. New geographies are a good expansion route, but the list of opportunities gets smaller and less interesting (e.g., Norway is small), new product lines such as Factor 75 will provide a short-term boost to growth, but the overall TAM is very small, given the very expensive nature of the product. On new "meal occasions," we struggle to see the size of the prize and rationale for breakfast and lunch — they may add to AOV, but we struggle to see HelloFresh being competitive with alternatives (e.g., toast and cereal for breakfast, which are quicker and cheaper). And on the grocery opportunity, we struggle to see how HelloFresh can compete on price and range vs. a typical grocer when grocery operations add significant complexity (stockholding, shrink, inventory management, and additional picking) while boosting AOV only slightly. We also struggle to see how HelloFresh can compete with increasingly quick grocery options when the lead times are still five to seven days in most markets. **Although management has identified the future as a "food solutions" group, we think it is just attempting to recreate a grocery store but in a less efficient, less convenient, and more expensive way.**
- **Complexity of the business changes investment case from asset-light to high Capex.** We question how complex the business has become or is becoming. Previously, HelloFresh ran a simple business model where 15-30 recipes were packed in a box a week in advance and shipped to the consumer. This model (despite high discounting, churn, and marketing spend) had perks with high levels of inventory, control, and labor forecasting, which helped reduce cost. However, this is changing. For example, it is spending more Capex than ever before, setting up in-house logistics in the US (which we can never see competing effectively vs. a parcel carrier), and adding significant complexity with grocery, new brands, and recipe customization.

BERNSTEIN

EXHIBIT 41: High TAM penetration: ~40% high earners had used a meal kit



Note: Sample = 327

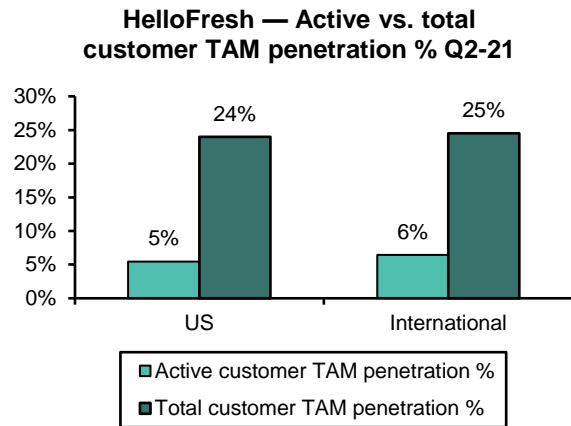
Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 42: HelloFresh box is unaffordable for the third quintile of families and challenging for the fourth quintile

US food spending by income quintile	Food spending at home per week	HFG box (three meals, two people)
Lowest quintile	\$54	117%
2nd quintile	\$71	89%
3rd quintile	\$85	74%
4th quintile	\$100	63%
Highest quintile	\$137	46%

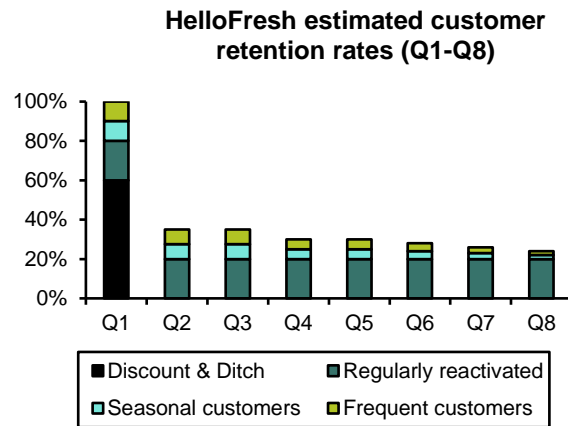
Source: USDA, US Census Bureau, company website, and Bernstein analysis

EXHIBIT 43: Based on our retention deep-dive, penetration of management's TAM is ~25%



Source: Company reports, and Bernstein estimates (all data) and analysis

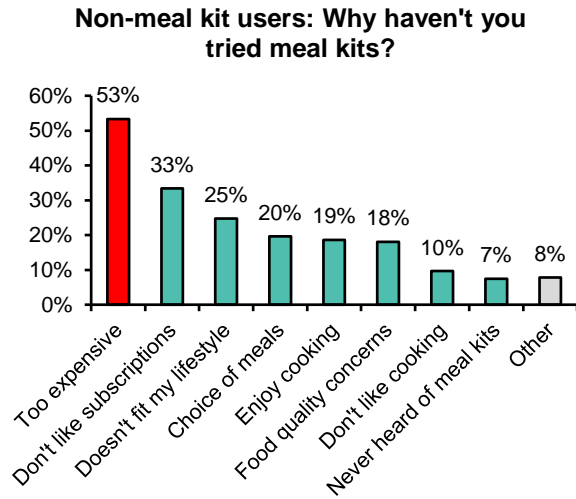
EXHIBIT 44: Churn is high, with 90% of customers leaving by Q4



Source: Bernstein estimates (all data) and analysis

BERNSTEIN

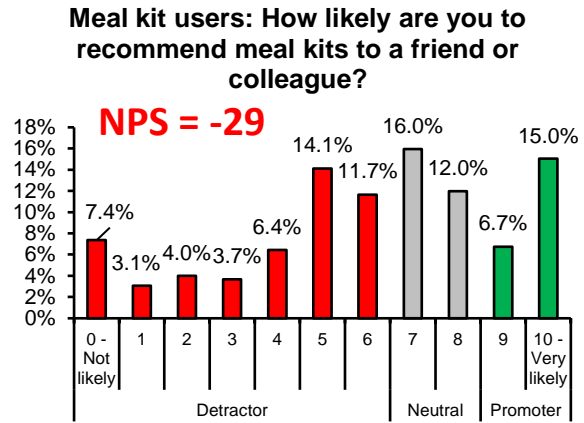
EXHIBIT 45: **53% of non-meal kit users said they were too expensive**



Note: Sample = 763

Source: Survey Monkey Panel and Bernstein analysis

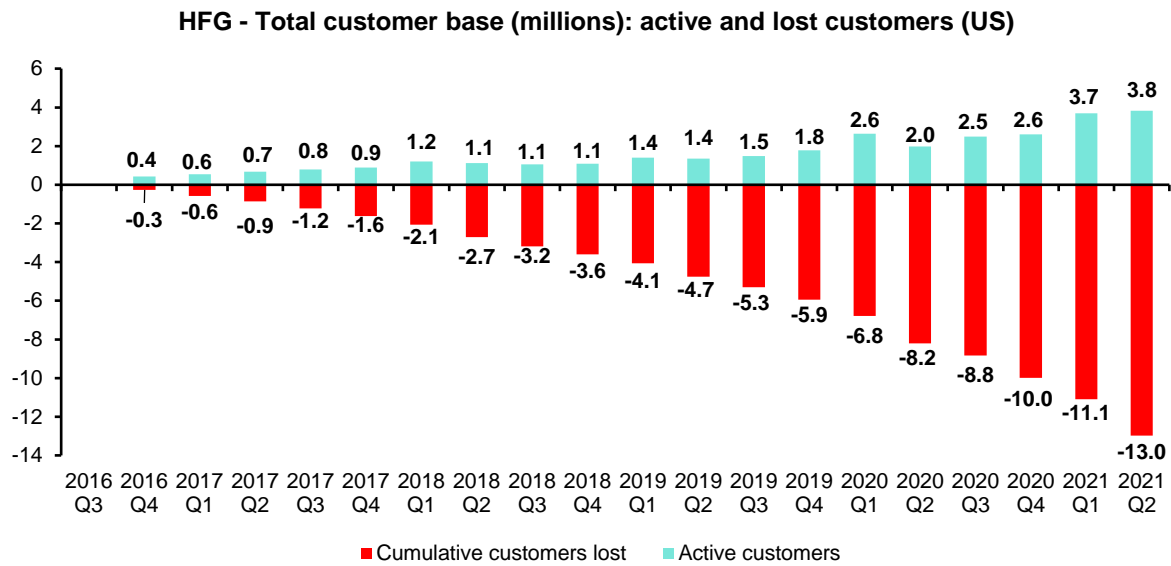
EXHIBIT 46: **Net promoter score of meal kit users is very poor at -29 (should be at least positive)**



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

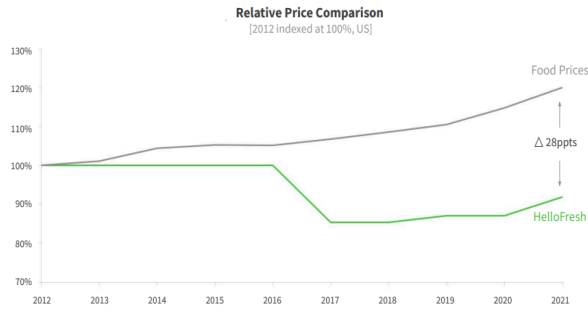
EXHIBIT 47: **13 million customers have been acquired and lost in the US, trying HelloFresh and not sticking with the product over the last four years; we question the long-term trajectory for growth**



Source: Company reports, and Bernstein estimates (all data) and analysis

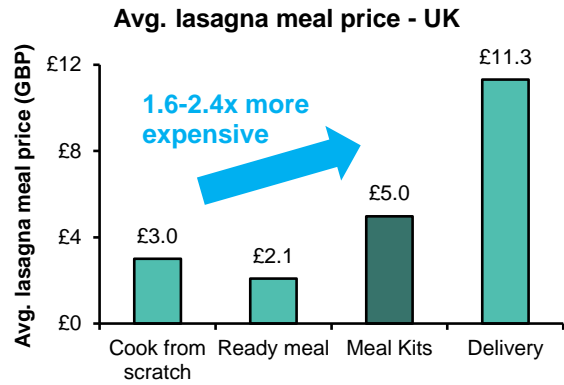
BERNSTEIN

EXHIBIT 48: HFG hasn't passed on price increases and therefore has reduced price relative to other foodstuffs, but it is not good value



Source: Company reports

EXHIBIT 49: Meal kits are 1.6-2.4x the cost of cooking from scratch or ready meals



Source: Company websites, and Bernstein estimates (all data) and analysis

BERNSTEIN

EXHIBIT 50: **We think new geographies and product lines have the greatest business benefit**

Lever	Initiative	What is it?	Business benefit	Complexity	Bernstein perspective
TAM penetration	Quicker lead times	Go from 4-5 day lead times to 2-3 days, speeding up delivery to customer and cut off times	Low	Easy	Quicker lead times would increase competitiveness vs. grocers, but 2-3 days is still uncompetitive. This would reduce the effectiveness of the supply chain & inventory/labor forecasting.
	More recipes	Increase from 35 recipes to 50-100 recipes and full market rollout of all brands	Low	Medium	More recipes would help order frequency and may attract some new customers (e.g. vegan). It adds to complexity of operations in handling combinations.
	Value	Become more competitive on price reducing price vs market by -25 to 40% vs. the 2016 baseline (2021 at -20 to -30%)	High	Hard	Reducing prices would open up the TAM but create significant challenges for unit economics. Price gap is significant vs. grocers.
TAM expansion	New meal kit brands	Rollout GreenChef (premium offer) and EveryPlate (reduced cost offer)	Low	Hard	New brands are cannibalistic, require more marketing spend, and the operations are duplicated with dedicated sites to each brand. Limited synergies, and the same TAM.
	New geographies	Expand into new markets such as Italy and Norway (both in 2021), and Japan (2022)	High	Medium	New markets are attractive as an organic growth source. Italy and Norway are small. Japan will be challenging, given no experience in Asian markets or with Japanese cuisine.
	New product lines	Continue expansion of RTE (ready to eat) products through Factor 75 and YouFoodz; Factor 75 to launch in a new market in 2022	High	Medium	High growth rates in short term due to low levels of sales today. TAM is very small, given very high cost of the product, requires more labour to prepare, complexity of ops is increased, and sites are duplicated.
Additional monetization	New meal occasions	Focus on getting greater share of weekly meal occasions (e.g., breakfast and lunch)	Low	Easy	Meal kits have limited appeal to consumers due to cost and take time to prepare. On breakfast, we question the value added by a meal kit compared with cheap options such as cereal or toast. On lunch, we question the value/time trade off vs. sandwiches and salads.
	Grocery product additions	Rollout of HelloFresh Market to 4 new markets (as well as US) with private label and ~1000 SKUs. Market is effectively a grocery offering of ready meals, and "solution-oriented" items	Low	Hard	We don't think HelloFresh can compete on range, price, or convenience vs. grocers. Adding 1,000 SKUs to the warehouses will increase food waste, add complexity to picking, and require significant investment in technology (e.g. WMS/IMS/OMS).
	Recipe customization	Driving additional AOV and orders by allowing customers to swap ingredients, upgrade ingredients, and add ingredients to meal kits	Low	Medium	Increases complexity of operations (e.g. not just a single pick of individual recipes) whilst driving limited incremental AOV growth.

Source: Company reports and Bernstein analysis

HELLOFRESH CUSTOMERS: GOODBYE FRESH CUSTOMERS

Proprietary deep dive into customer database and churn

+ OVERVIEW

HelloFresh **discloses very little information on its customers**. We get active customer numbers each quarter and sporadic information on retention rates. Therefore, we build a proprietary **bottom-up view of the customer database** using five customer types and three retention rates. We deconstruct existing disclosure and triangulate our analysis. We find that **HelloFresh is burning through its TAM at a rapid pace (2-4% US TAM each quarter), churning 70% of customers** by Q4 post-purchase, and propping up top line growth with **reactivations**, which are discount-driven and do not create healthy customers.

- The **quality of HelloFresh's customer database is weak**. It is not a SaaS business. Customer churn is high, customers are not delighted and are switching their behavior from grocers to meal kits. The business is **heavily reliant on new or reactivated customers** each quarter (>55% of customers per quarter), which means that marketing spend needs to stay high. **Reactivations are not a good thing and are driven by discounts**. The customers have already churned once, and they churn just as quickly post-reactivation. As a result, HelloFresh is **powering through its TAM**. According to management's TAM, **penetration is at 24-25%, including lost customers** vs. 4-5% active customer penetration. However, we think its TAM is too generous at 70 million US households and limit it to the top two quintiles of earners (48 million households). Based on **Bernstein TAM, penetration is at 35% in the US**.
- We think HelloFresh will struggle with keeping both high growth and EBITDA margin expansion expectations due to its **difficult business model, smaller TAM, and post-pandemic weakness**.

+ THE RED QUEEN'S RACE

Disclosure is poor. We only receive active customer numbers in the US and International segments each quarter, and sporadic disclosure of retention metrics, which we have pieced together to peel the onion on customer behavior to create our analysis.

- **Churn is high**. Only 30% of customers are retained in the fourth quarter after they purchase. 70% of customers discounted and ditched in the year, and 66% of the customers retained are reactivations (i.e., haven't purchased in the quarter before). HelloFresh is not delighting customers and converting them to the meal kit model.

BERNSTEIN

- **This is not Amazon** (covered by Mark Shmulik) **Prime or a SaaS business**. Retention is not as strong, the product has physical constraints, and the TAM is limited due to the expensive nature of the product. We should not use SaaS metrics such as net revenue retention to look at HelloFresh.
- **The Red Queen's Race is not a fun game, and the quality of customers is weak**. Customers aren't sticking with the products. >55% of customers are new or reactivated each quarter; reactivations are not a good thing. Just like Alice in Lewis Carroll's Through the Looking Glass, HelloFresh is being forced to run faster to acquire more customers, lose them, and reactivate them to maintain growth expectations without really getting anywhere.
- **Burning through the TAM at a rapid rate, and the ceiling is closing in**. If you include lost customers, **TAM penetration is at 24-25% of the HelloFresh TAM**. We think the TAM is too high at 70 million households. If you reduce it to the top two quintiles of earners (48 million households), **penetration is at 35%**.
- **Reactivations are not a good thing**. They drive ~60-100% of new customers each quarter, but are driven by discount-led activity and do not reflect a strong, healthy engagement with customers. Customers discount and ditch on a recurring basis, and they churn at similarly high rates to new customers.
- **Payback is slow**. CAC is high at €100-€200, and payback is 6-10 months. The investment in new customers is high, most of whom churn by Q4 post-purchase. This excludes the cost of discounts and brings into question the effectiveness of marketing spend when most customers are being recruited through reactivations each quarter.
- **Disclosure should be improved**. We would like if HelloFresh reported on three things: (1) **Organic growth** (i.e., on a like-for-like basis, excluding new countries or new products); (2) **Net new customer additions** (i.e., customers who have never ordered before); and (3) **Discounts**, to show the true cost of customer acquisition.

METHODOLOGY NOTE

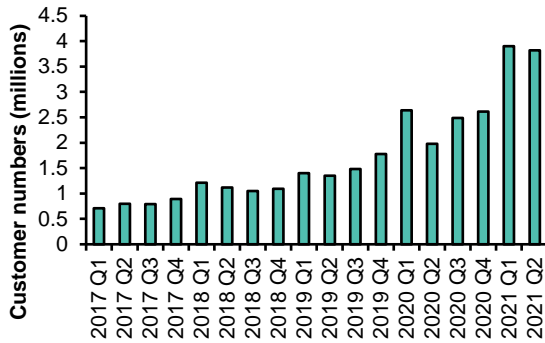
To achieve the above analysis, we breakdown the active customer numbers into five customer types and use three retention rates. We flow these assumptions through HelloFresh's data for 2017 to 2021 within a closed loop (i.e., no customers can leave the system). We run this analysis twice on the US segment and on the International segment. We sense check and triangulate our analysis against the disclosed net revenue retention figures against reported revenue (using bottom-up calculations) and disclosed CAC payback.

BERNSTEIN

+ SUMMARY IN CHARTS

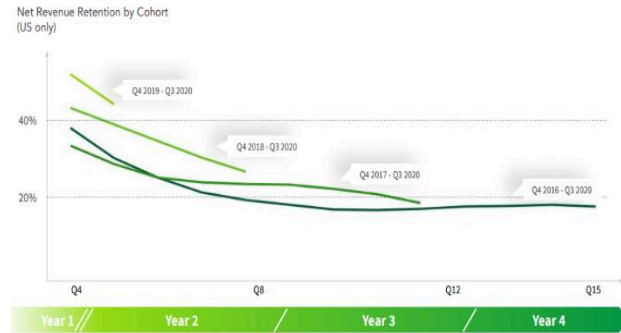
EXHIBIT 51: **Disclosure is limited, with only active customers disclosed at a segment level...**

HFG - US active customers (Q1-17 to Q2-21)



Source: Company reports and Bernstein analysis

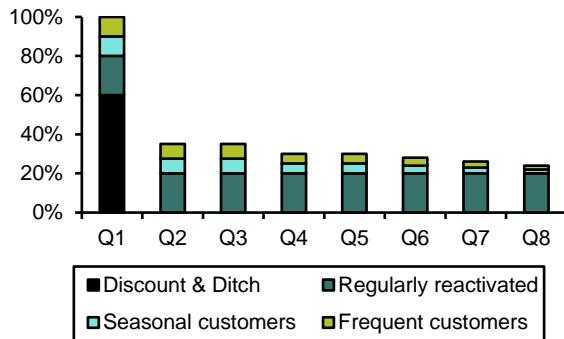
EXHIBIT 52: **...and we need to piece together sporadic data points to understand how customers evolve**



Source: Company reports and Bernstein analysis

EXHIBIT 53: **Churn is high based on our calculation, with only 30% of customers retained in Q4; two-thirds of retained customers have been reactivated**

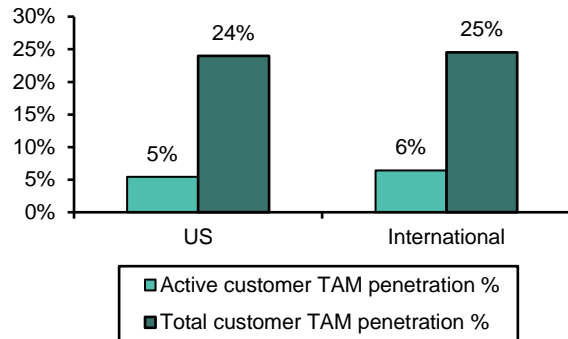
HelloFresh estimated customer retention rates (Q1-Q8)



Source: Bernstein estimates (all data) and analysis

EXHIBIT 54: **Due to high churn, including lost customers, HelloFresh has worked its way through 24-25% of customers**

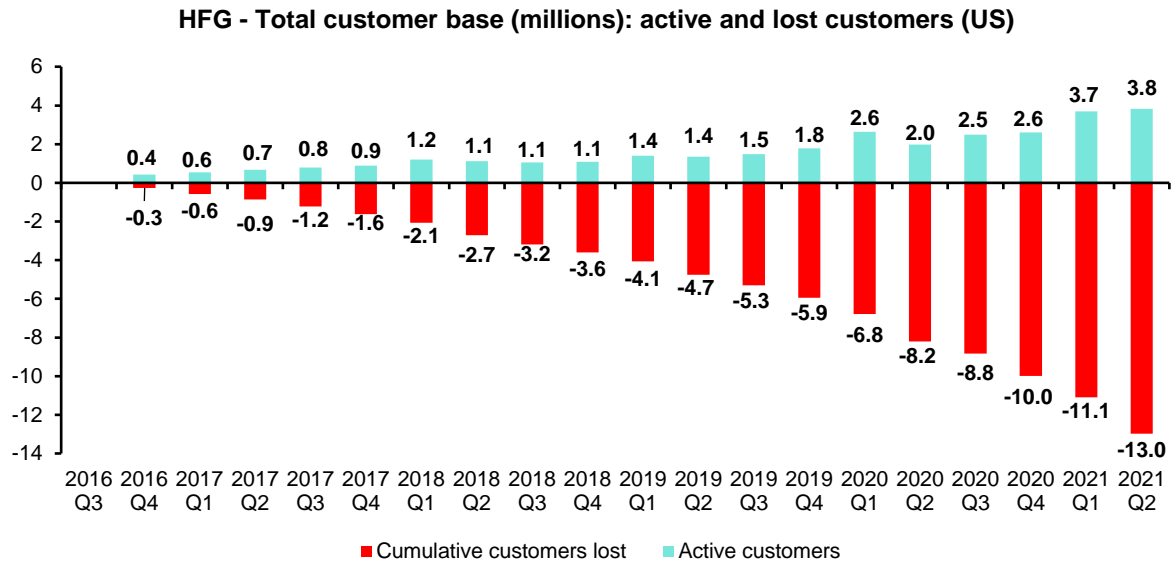
HelloFresh — Active vs. total customer TAM penetration % Q2-21



Source: Company reports, and Bernstein estimates (all data) and analysis

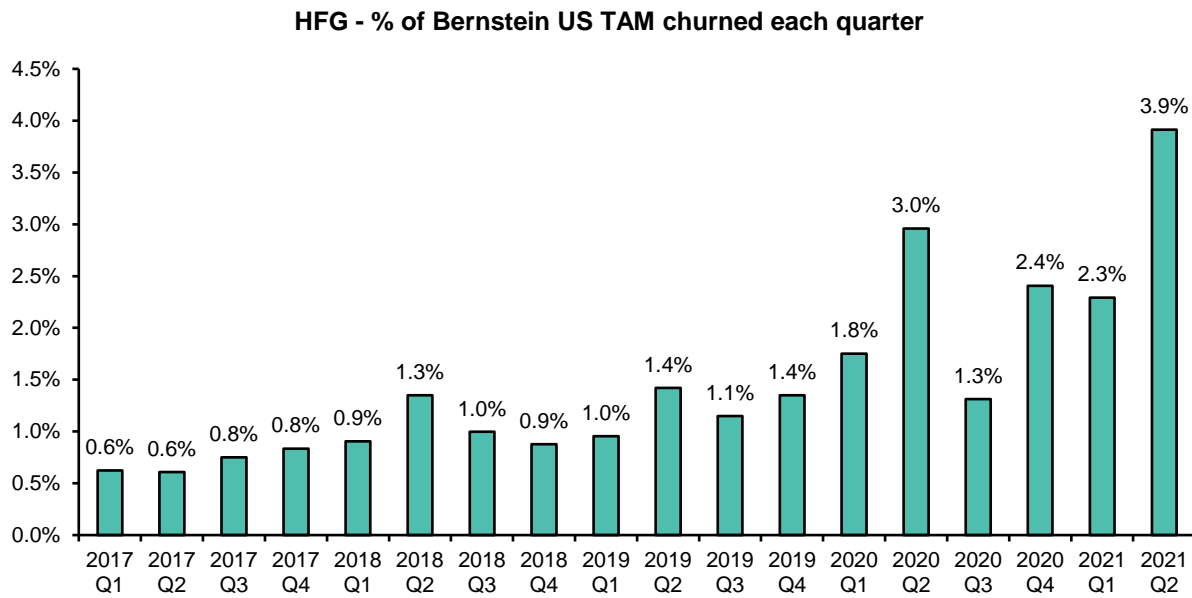
BERNSTEIN

EXHIBIT 55: 13 million customers have been acquired and lost in the US, who tried HelloFresh and didn't stick with the product over the last four years



Source: Company reports, and Bernstein estimates (all data) and analysis

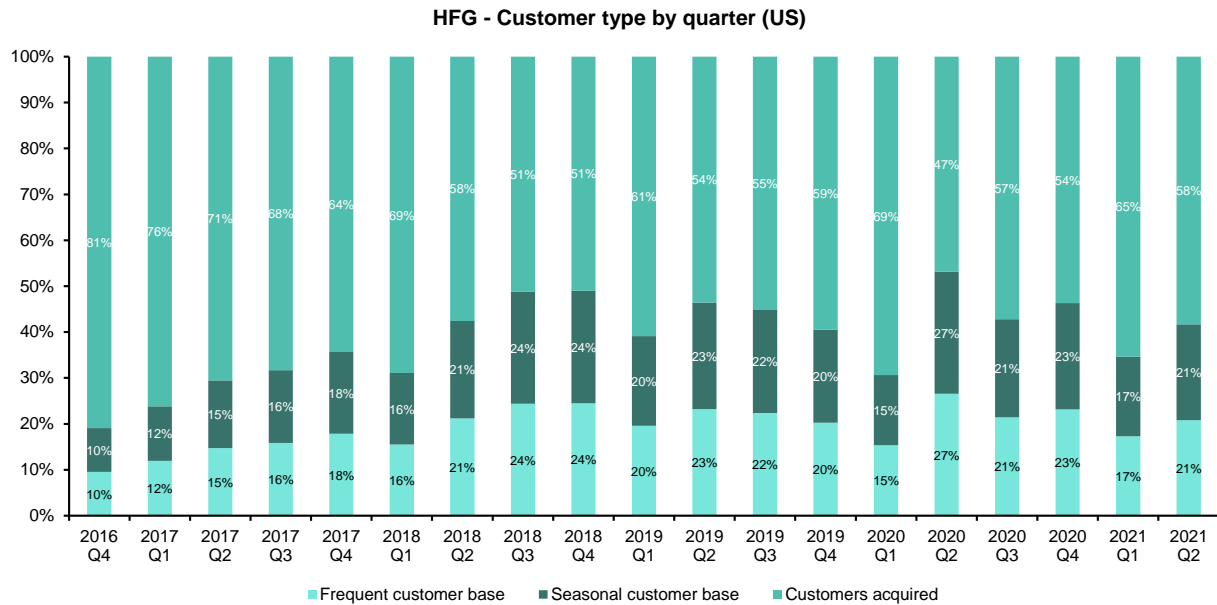
EXHIBIT 56: HelloFresh is churning through an increasing % of the TAM each quarter...



Source: Company reports, and Bernstein estimates (all data) and analysis

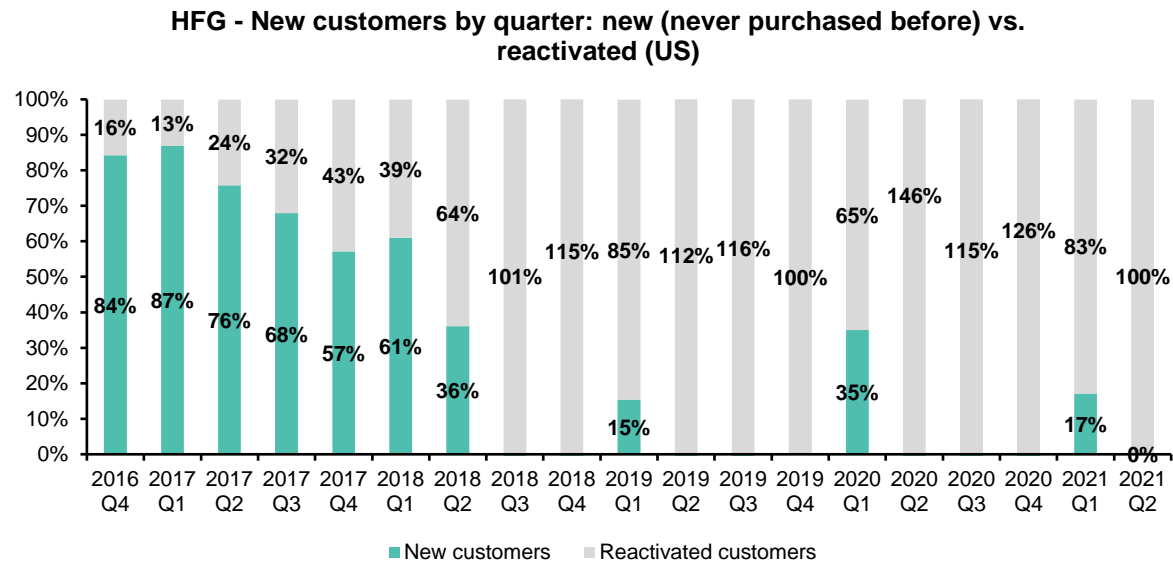
BERNSTEIN

EXHIBIT 57: ...and needs to continue to acquire or reactivate customers each quarter; majority of the customers didn't purchase the quarter before, challenging the business model



Source: Company reports, and Bernstein estimates (all data) and analysis

EXHIBIT 58: Reactivations are critical, but driven by discounting behavior, they are not a good thing



Source: Company reports, and Bernstein estimates (all data) and analysis

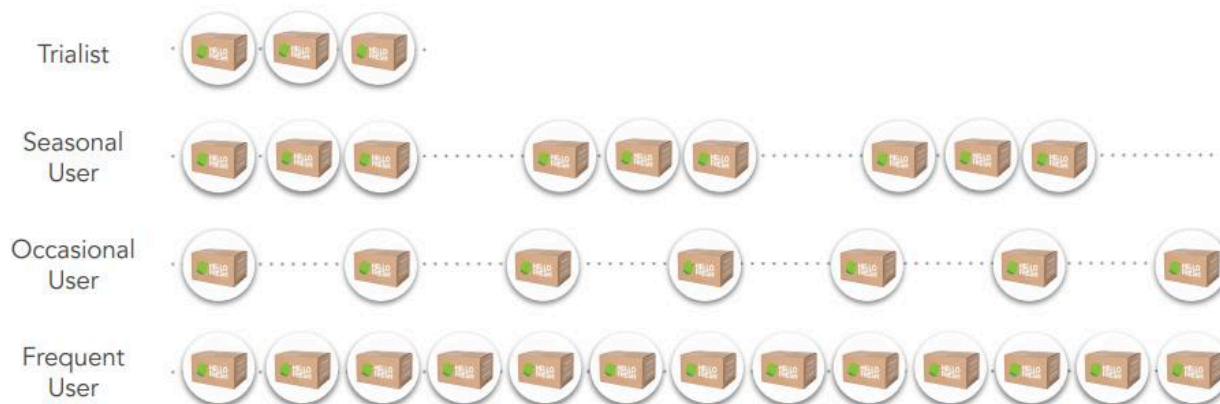
BERNSTEIN

+ NOT ALL CUSTOMERS ARE ALIKE: BREAKING DOWN CUSTOMER TYPES

One thing to bear in mind when breaking down customer databases and understanding retention is that not all customers are alike. Customers behave differently depending on their individual habits and needs. This is supported by HelloFresh's relatively light subscription model. Subscribing to HelloFresh is not like signing up to a gym membership or a phone contract where one will end up being locked in for 12 months or longer. With a HelloFresh subscription one can sign up, stop, or reactivate as needed.

HelloFresh has identified four different groups of customers: **Trialists, Seasonal Users, Occasional Users, and Frequent Users** (see Exhibit 59). The dream customers are frequent customers who buy weekly (perhaps with a few gaps for holidays) and at full price. Seasonal and Occasional Users will engage with the product on a more flexible basis, perhaps choosing to subscribe for a few weeks in January for a healthy, easier option, or reengaging when they're reminded of the product. Trialists are the worst customers as they sign up for a short period of time (maybe four weeks), take advantage of heavy discounts, and then decide the product isn't for them. Their lifetime value will be very challenged by high customer acquisition costs, high levels of discounting, and low contribution.

EXHIBIT 59: HelloFresh customer breakdown

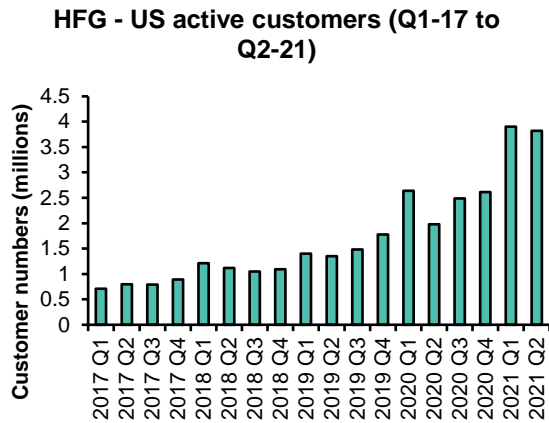


Source: Company reports and Bernstein analysis

We get **very limited disclosure on HelloFresh's customer database** and only receive active customer numbers (see Exhibit 60 and Exhibit 61). In this chapter, we break down active customer numbers across the US and International segments based on our understanding of the business, our experience with subscription businesses, and the information provided by the company. We use HelloFresh's active customer numbers as the basis of our analysis. An active customer is a uniquely identified customer who has received at least one box within the preceding three months (including new customers, free or discounted boxes, and lapsed customers).

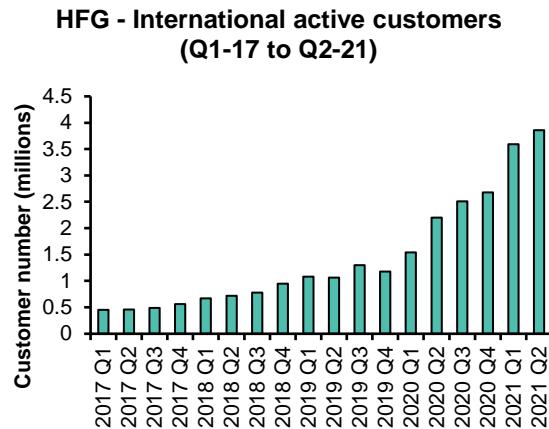
BERNSTEIN

EXHIBIT 60: HelloFresh US active customers



Source: Company reports and Bernstein analysis

EXHIBIT 61: HelloFresh International active customers



Source: Company reports and Bernstein analysis

BERNSTEIN PROPRIETARY CUSTOMER TYPES METHODODOGY

As we receive very limited information on customer segments, we break down the customer database as follows in Exhibit 62. We then use the five different customer types and our retention rates (outlined in the next section) to flow the numbers through the closed customer database over the last four years to understand the health of the customer database in more detail. We can understand how many truly new customers are acquired vs. how many are reactivations of lost customers (likely driven by discounts), and what the recurring customer base might look like.

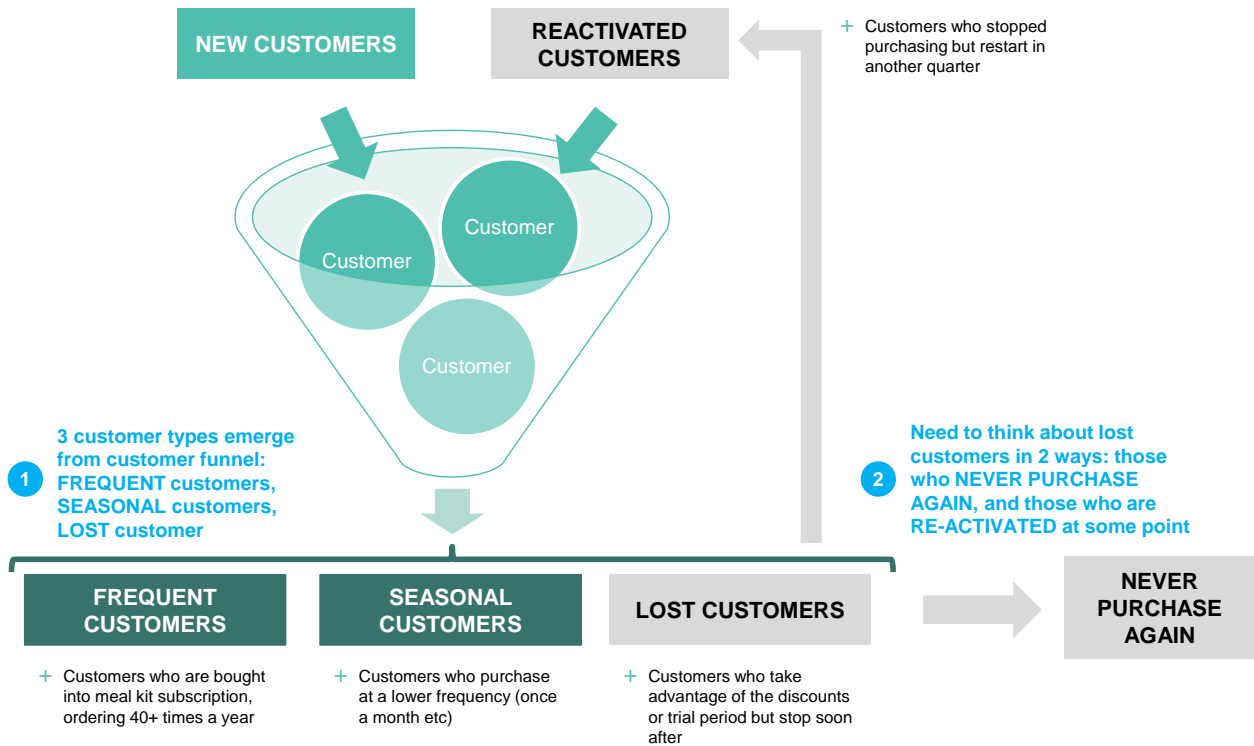
- **New customers:** We define new customers as truly net new customers who have never engaged with HelloFresh. We calculate this in each period as the total number of active customers minus the frequent and seasonal customer base from the previous quarters, and the reactivated customers.
- **Frequent customers:** Frequent customers are the best customers who we expect are shopping 40+ times per year (taking away a few weeks for holidays and other events). They have fundamentally shifted their shopping and eating habits toward the meal kit subscription model. We calculate frequent customers based on a retention rate relative to their original cohort (i.e., 7.5% of the cohort is still composed of frequent customers in any quarter).
- **Seasonal customers:** Seasonal customers purchase at a lower frequency (e.g., once a month) as they enjoy engaging with the product, but it doesn't fit with their lifestyle on a full-time basis or might cost too much. We think there will be a relatively large cohort of seasonally active customers (who may or may not be attracted by discounts). Versus HelloFresh's taxonomy, we bundle together seasonal and occasional customers for

BERNSTEIN

simplicity of our model. We calculate seasonal customers based on a retention rate relative to their original cohort.

- **Lost customers:** These customers are the inverse of trialists (in HelloFresh's taxonomy). They are the customers who typically try the product, using a heavy discount for two-to-four boxes, and decide that the product isn't for them. They stop purchasing with any regularity but may be reactivated. We calculate the number of lost customers from a particular cohort by subtracting the number of frequent, seasonal, and reactivated customers from the original cohort number.
- **Reactivated customers:** Reactivated customers are those who have stopped shopping with HelloFresh but start shopping again, often prompted by retention marketing efforts and heavy discounting to lure them back. We calculate this by applying a reactivation rate to the total cumulative lost customer base in any given quarter.

EXHIBIT 62: Bernstein customer breakdown



Source: Bernstein analysis

BERNSTEIN

+ RETENTION, RETENTION, RETENTION

The other piece of the puzzle that we need to understand alongside customer types is the retention or churn rate. We prefer to talk about retention rates of different customers, so we use that terminology below. Again, we have received very limited data on retention rates apart from a few snippets in Capital Markets Day presentations over the last few years. For a subscription business like HelloFresh, we would welcome further disclosure on retention rates from management. To date, we have received two different metrics: **net revenue retention and reactivation**.

Net revenue retention — churn is high, and HelloFresh is not a SaaS company: As shown in Exhibit 63, this is the percent of revenue from the original cohort that is retained or spent again in subsequent quarters. **Net revenue retention sits at around 30-50% in Y1** for HFG and declines to around 20% by Y3 of a particular cohort. On the face of it, we think this is **very high churn with 50-70%** of revenue lost within the first year. We don't think this is a fair or useful metric — HelloFresh is not a SaaS business, and its customer dynamics are very different. We would prefer disclosure of customer retention. In the next section, we deconstruct what net revenue retention means and how it might apply to customer numbers.

Net revenue retention is typically a metric used by **SaaS businesses** to measure the total revenue from customers over their lifetime. We don't think this is a very useful or fair metric for HelloFresh. HelloFresh is a highly discount-led business, so at a very simple level, if it acquires 10 customers at a 50% discount, it needs to retain only five (50% retention rate) of them at full-price to achieve a 100% net revenue retention.

EXHIBIT 63: HelloFresh net revenue retention disclosure



Source: Company reports

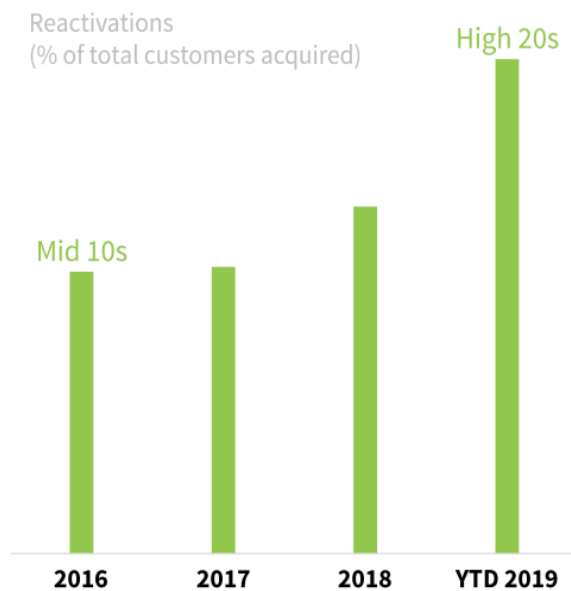
BERNSTEIN

Reactivation rates — reactivated customers are not a good thing: As shown in Exhibit 64, HelloFresh shows that reactivation **increased YoY from the mid-10s in 2016 to the high-20s by 2019**. Management is positive about reactivated customers, as they require lower marketing spend and demonstrate the flexibility of the model (i.e., seasonal customers can become occasional customers and vice versa).

However, **we do not like reactivated customers** as they are customers who have lapsed and decided that HelloFresh is not for them, and then are **reactivated by discounts**. We have been signed up to HelloFresh for several months and keep getting emails like that shown in Exhibit 65, which give lapsed customers heavy discounts across four boxes (40% off on two boxes, 20% off on two boxes). **This level of heavy discounting does not create a sustainable, healthy customer base.** Reactivation artificially stimulates demand and props up customer numbers. As the business grows, we expect an increasing number of new customers being reactivated customers in any quarter rather than demonstrating true net new customer growth.

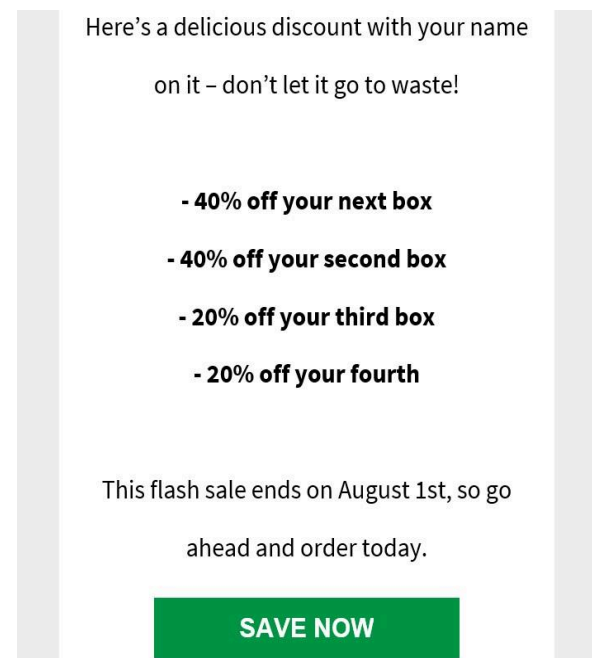
As a result of high reactivation costs, we question the **need for, and the efficiency of, the high marketing spend**. Management even highlights that reactivated customers show the same behavior as new customers but with lower marketing spend. This is portrayed as a good thing, but it makes us concerned for two reasons: (1) **new customers churn very quickly, which suggests reactivated customers do, too**; and (2) it virtually costs nothing to reactivate a customer with an email (apart from some production costs of imagery). However, they **fail to consider the reactivation discounts** as they're not included in marketing spend but are netted off revenue. Given the high and increasing levels of reactivation, you question where the millions of marketing spend are going and how efficiently they are being used.

EXHIBIT 64: HelloFresh reactivation rates



Source: Company reports

EXHIBIT 65: HelloFresh reactivation email



Source: Company emails

BERNSTEIN

BREAKING DOWN NET REVENUE RETENTION

Net revenue retention is not an appropriate measure of retention for HelloFresh. It is a SaaS metric. Having broken down HelloFresh's net revenue retention, we calculate that **~35% net revenue retention is around 25-30% customer retention**, and this **masks the high 70-75% churn of customers in the first 12 months** — most of whom we think "discount & ditch" after taking advantage of the free trials. This is concerning when you put it in the context of a smaller TAM and high marketing spend.

To derive the customer retention rate metrics to apply to the customer database, we break down and back calculate from the disclosed net revenue retentions to sense check our retention rates. We based our retention rates on our experience working with similar subscription businesses, the analysis of net revenue retention, and other industry sources. To do this, we create four types of customers with revenue, order frequencies, and discounting behavior to understand both customer retention rates (our preferred metric) and net revenue retention rates (HelloFresh disclosed figures). We apply these across both a one-year and two-year time horizon to see how the numbers stack up relative to each other.

All customers in this analysis are **recruited on the same day and sign up using a discount code**, enabling 50% off on box one and 35% off on boxes two, three, and four. This is a fairly standard discount offer for HelloFresh, and although some customers will be acquired at full price, we would expect the majority of customers to sign up with a discount (given the high availability of discounts on their website, on forum, on banner advertising, flyers, and magazine pull-outs).

- **Discount & ditch customers:** These customers take advantage of the initial discount offer and never shop again. They pay £84.50 (net of discounts) but have received £65 of discounts as well as initial marketing acquisition costs.
- **Regularly reactivated:** These customers take advantage of the initial discount offer and stop purchasing but are reactivated twice in the first six months with further discounts. For the two reactivations, we assume two different offer types: (1) 40% off on two boxes, followed by 20% off on two more boxes; and (2) 30% off on two boxes. After the first six months, they stop purchasing. In total, they pay £229 (net of discounts) but have received £145 of discounts.
- **Seasonal customers:** These customers are acquired with an initial discount but decide to engage with HelloFresh on a seasonal basis at full price. We assume that they buy on average twice a month for the whole 12-month period. These customers are much more profitable as they spend £909 but only receive discounts of £65.
- **Frequent customers:** These customers are the best customers and shop with HelloFresh every week in the 12-month period, spending over £1,700 with discounts of only £65.

BERNSTEIN

We use these customer types and cohorts, and apply them to two scenarios to sense check our retention rates.

SCENARIO 1: 50-PERSON
COHORT ON A MONTHLY BASIS

34% net revenue retention (in line with HelloFresh's disclosed numbers) is actually a 24% customer retention (see Exhibit 66). **76% of customers churn within the first 12 months** while 40% of customers just use the discounted trial and never purchase again. Using a 50-person cohort, we use these different customer types to calculate Q1 to Q4 net revenue retention and customer retention.

This scenario also shows how **regular reactivation, which we are cautious about, can prop up net revenue retention and customer retention**. For simplicity and given the 50-person cohort, we assume that 18 of these customers are reactivated through discounts at the same time. This boosts retention to 60% and net revenue retention to 76% in a particular month and, if timed correctly, reactivations can skew measurements of active customers as well.

After purchasing in Q1-21, we received consistent email reactivations, which timed well with the beginning of quarters. We received our first offers on April 12 and April 26 (first month of Q2) and our second set of offers on July 13 and July 20 (first month of Q3). This might be coincidental, but it feels as though **discount-led reactivations are used to grow customers early in the quarter**.

SCENARIO 2: 100-PERSON
COHORT ON A QUARTERLY
BASIS

36% net revenue retention is 30% customer retention (see Exhibit 67). **However, two-thirds of those retained customers are reactivated**. We build our customer database at a quarterly level, so we sense check our retention rates on a quarterly basis with a slightly larger cohort (100 customers) to understand the impact. We get to 36% net revenue retention in Q4 and 19% in Q8, in line with HelloFresh's numbers (see Exhibit 63). When we translate this into customer retention, we get 30% customer retention in Q4 and 24% in Q8, but this is supported by reactivations. Using these calculations, our average spend per customer ends up at around £120-£175 or €135-€200, which is broadly in line with the €180 spend per customer achieved in Q2-21.

BERNSTEIN

EXHIBIT 66: Scenario 1 – 50-person cohort on a monthly basis

Customer No.	Customer Type	Orders in 1st year	Discount	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	Total revenue	Cost of discounts	
1	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
2	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
3	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
4	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
5	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
6	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
7	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
8	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
9	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
10	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
11	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
12	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
13	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
14	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
15	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
16	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
17	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
18	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
19	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
20	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46	
21	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
22	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
23	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
24	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
25	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
26	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
27	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
28	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
29	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
30	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
31	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
32	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
33	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
34	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
35	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
36	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
37	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
38	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54	
39	Seasonal at full price, twice a month		16 50% off first + 35% off next 3	£84.50	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£909	-£65.46	
40	Seasonal at full price, twice a month		16 50% off first + 35% off next 3	£84.50	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£909	-£65.46	
41	Seasonal at full price, twice a month		16 50% off first + 35% off next 3	£84.50	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£909	-£65.46	
42	Seasonal at full price, twice a month		16 50% off first + 35% off next 3	£84.50	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£909	-£65.46	
43	Seasonal at full price, twice a month		16 50% off first + 35% off next 3	£84.50	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£909	-£65.46	
44	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46	
45	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46	
46	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46	
47	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46	
48	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46	
49	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46	
50	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46	
Total revenue				£4,225	£1,425	£3,163	£1,425	£2,294	£1,425	£1,425	£1,425	£1,425	£1,425	£1,425	£1,425	£1,425	£22,503	-£4,714
Revenue retention				100%	34%	75%	34%	54%	34%	34%	34%	34%	34%	34%	34%	34%		
Actual retention				100%	24%	60%	24%	60%	24%	24%	24%	24%	24%	24%	24%	24%		
Total cost of discounts				-£4,714														

Source: Company website, and Bernstein estimates and analysis

EXHIBIT 67: Scenario 2 – 100-person cohort on a quarterly basis

Number of customers	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Discount & Ditch	60	0	0	0	0	0	0	0
Regularly reactivated	20	20	20	20	20	20	20	20
Seasonal customers	10	7.5	7.5	5	5	4	3	2
Frequent customers	10	7.5	7.5	5	5	4	3	2

Revenue	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Discount & Ditch	£5,070							
Regularly reactivated	£966	£966	£966	£966	£966	£966	£966	£966
Seasonal customers	£2,345	£1,687	£1,687	£1,125	£1,125	£900	£675	£450
Frequent customers	£3,844	£3,374	£3,374	£2,249	£2,249	£1,800	£1,350	£900
Total revenue	£12,225	£6,027	£6,027	£4,340	£4,340	£3,665	£2,990	£2,315
Net revenue retention %	100.0%	49.3%	49.3%	35.5%	35.5%	30.0%	24.5%	18.9%
	£122.25	£172.20	£172.20	£144.66	£163.47			

Customer retention rates	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Discount & Ditch	60%	0%	0%	0%	0%	0%	0%	0%
Regularly reactivated	20%	20%	20%	20%	20%	20%	20%	20%
Seasonal customers	10%	8%	8%	5%	5%	4%	3%	2%
Frequent customers	10%	8%	8%	5%	5%	4%	3%	2%
Total retention	100%	35%	35%	30%	30%	28%	26%	24%

Source: Company websites, and Bernstein estimates and analysis

BERNSTEIN

BERNSTEIN CUSTOMER DATABASE INPUT METRICS

By breaking down retention metrics, we use three assumptions to drive our customer database analysis and feed our customer numbers as outlined in Exhibit 62. We simplify our inputs into: **(1) Total active customers reported by HelloFresh; and (2) Three retention rates (frequent, seasonal, and reactivation)**. We flow this through from Q4 2016 to Q2 2021 and segment our customers into five different groups: **(1) Frequent customers; (2) Seasonal customers; (3) Reactivated customers; (4) Net new customers; and (5) Lost customers**.

Our retention rate metric assumptions are as follows:

- **Frequent & seasonal customers:** We assume a **decaying retention rate from 10% in Q1 to 2% by Q8** in line with our analysis in Exhibit 67. Although there is likely to be different behavior between these two groups depending on the cohort, we hold the retention rates the same, as customer decay tends to be broadly similar across customer groups.
- **Reactivated:** We assume a constant **20% reactivation** rate of the cumulative lost customer base. Once reactivated, these customers flow through the same assumptions (based on HelloFresh's statement that reactivated customers behave like new customers).

We then apply our assumptions to the reported HelloFresh customer database on a quarterly basis from 2016 to understand how the customer profile has evolved.

US CUSTOMER DATABASE ANALYSIS

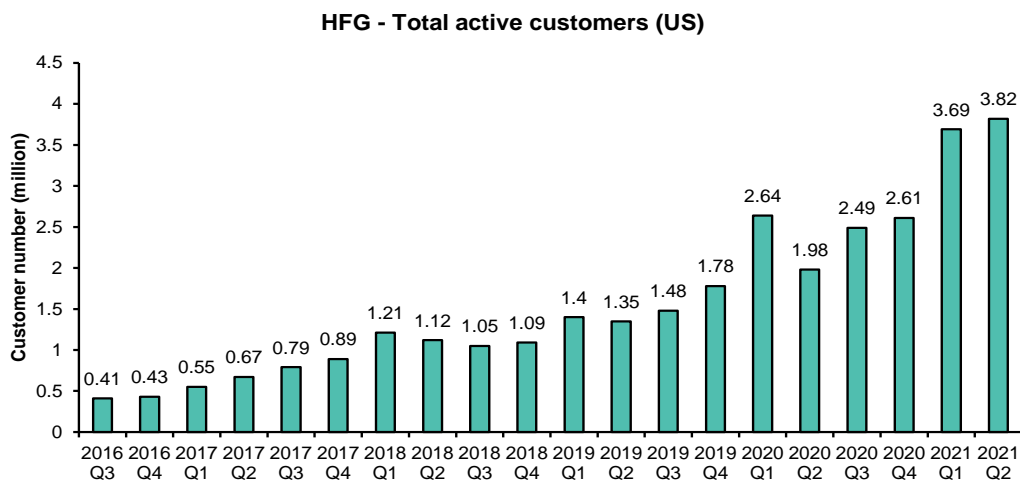
-
- **3.8 million active customers in the US in Q2-21** (see Exhibit 68), up from two million in Q2-20 with strong growth in H1-21, supported by varying restrictions across the US.
 - **42% of customer base is recurring at 1.6 million customers** (see Exhibit 69), supported by frequent and seasonal customers.
 - **Due to poor retention rates, lost customers totaled 13 million in Q2-21** (see Exhibit 70) which, when added to 3.8 million active customers, creates a total customer base of 16.8 million. This is **24% of the TAM** as identified by HelloFresh (70 million households), which is concerning as HelloFresh is powering its way through its own addressable market, challenging future growth rates.
 - **Each quarter, about 50-60% of customers need to be new** (i.e., not purchased in the quarter before), leading to high expectations of re-activation or customer acquisition (see Exhibit 63). Without a material improvement in retention rates, it is hard to believe that marketing spend and discounting can reduce over time, as these are still being put to work.
 - **However, reactivations made up 100% of the need for new customers in Q2-21** (see Exhibit 72). This has been the case for most of 2019 and 2020. If you assume that

BERNSTEIN

reactivations are 20% of the cumulatively lost customer database, this means that most (if not all) are reactivated lost customers (prompted by discounts) rather than true net new acquisitions. This means that you have to assume that retention rates or reactivation rates are significantly lower in those quarters than we assume in order to make the model work.

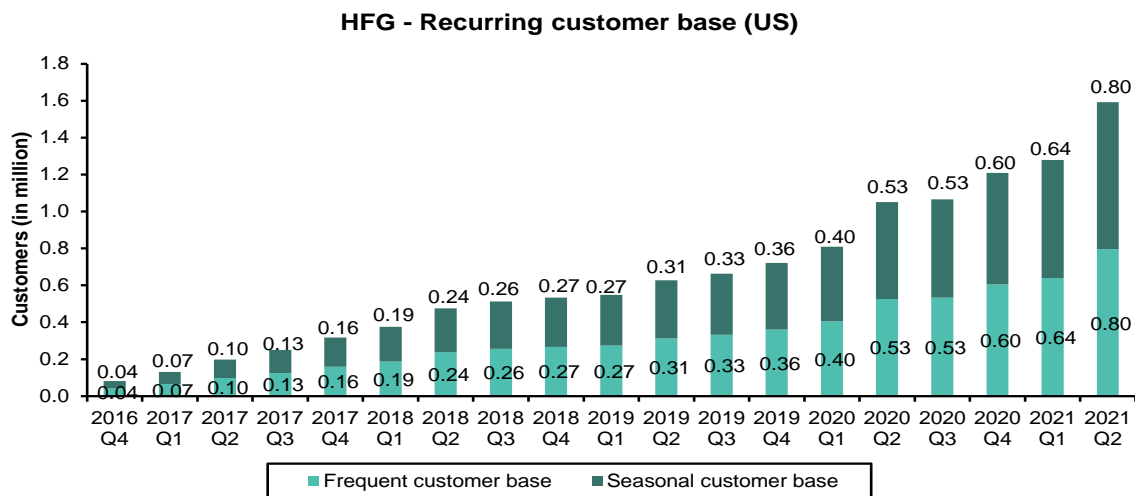
- **Sense checking** our analysis, we use assumptions on AOV, order frequency, and discounting for our different customer types. We get to around **+/-10% on reported revenue** for the last four quarters and **+/-20% for the last 12 quarters**. Given the number of assumptions being fed into the analysis, we think that our scenario analysis is broadly in the right direction.

EXHIBIT 68: **3.8 million active customers in Q2-21, up from 2 million in Q2-20**



Source: Company reports, and Bernstein estimates (all data) and analysis

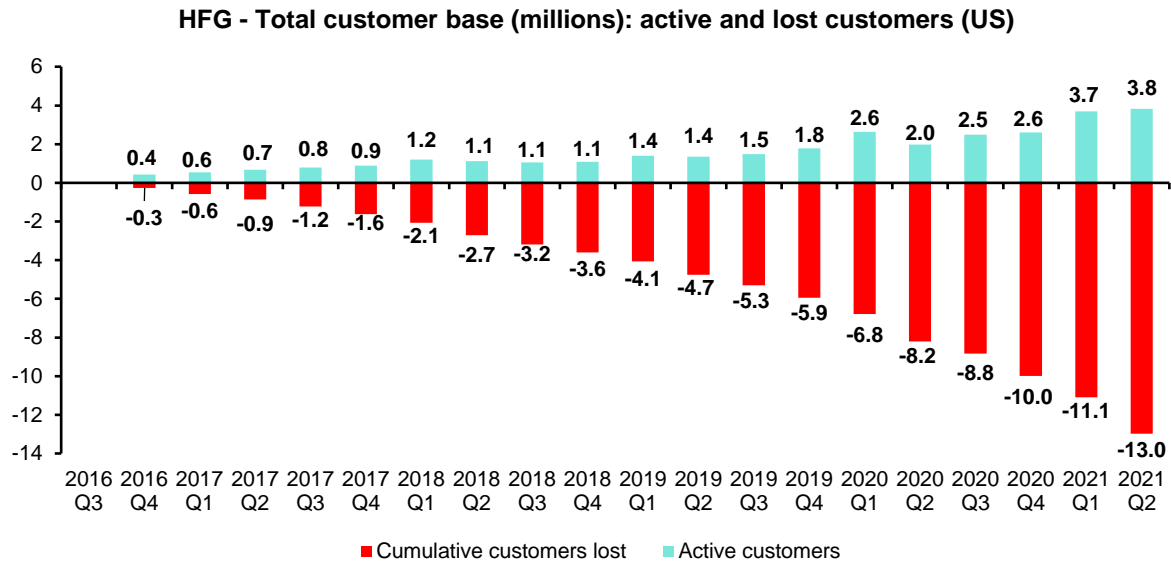
EXHIBIT 69: **We expect the recurring customer base was around 1.6 million in Q2-21**



Source: Company reports, and Bernstein estimates (all data) and analysis

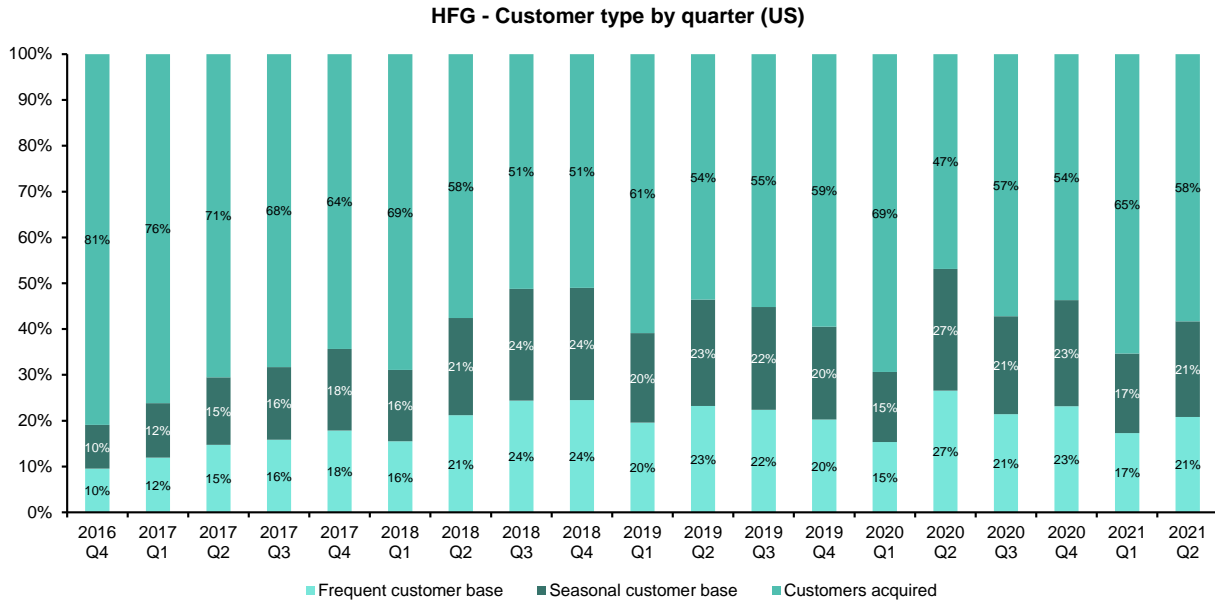
BERNSTEIN

EXHIBIT 70: **Total customer base of 17 million, of which 77% is lost customers (13 million)**



Source: Company reports, and Bernstein estimates (all data) and analysis

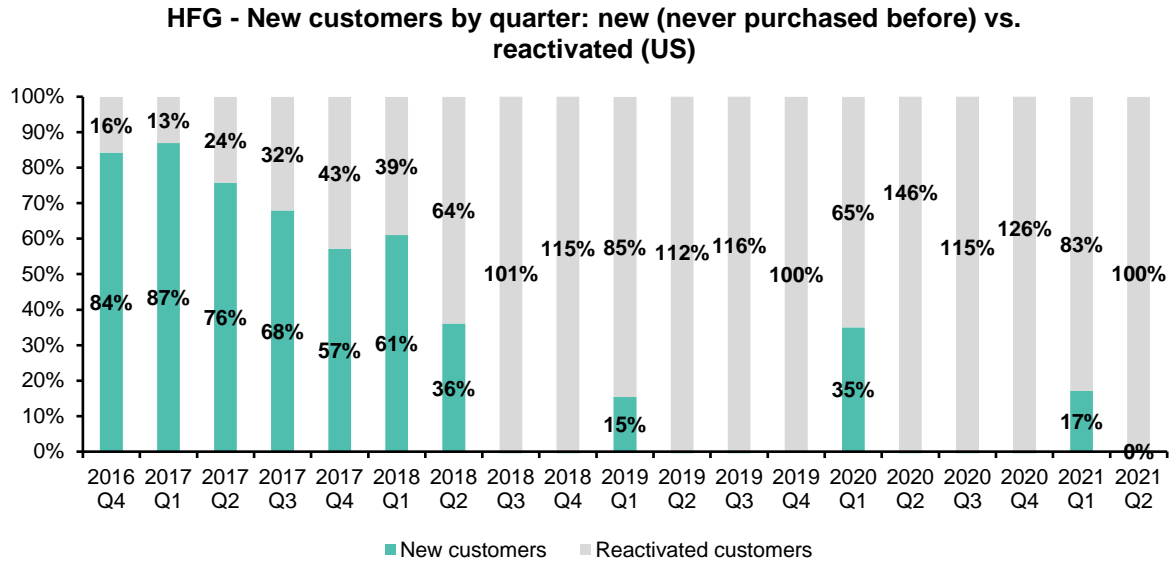
EXHIBIT 71: **Majority of customers (58%) in Q2-21 were acquired (or reactivated), while 42% were recurring**



Source: Company reports, and Bernstein estimates (all data) and analysis

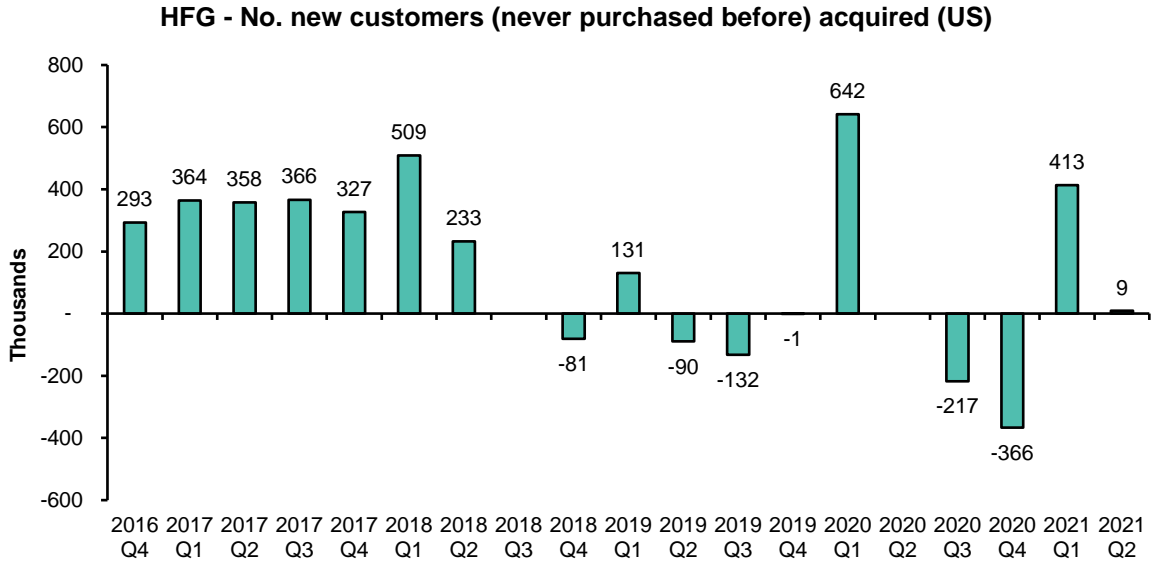
BERNSTEIN

EXHIBIT 72: **However, using a 20% reactivation rate, HFG is highly dependent on reactivated customers**



Source: Company reports, and Bernstein estimates (all data) and analysis

EXHIBIT 73: **Retention rates or reactivation rates must be lower to enable new customers**



Source: Company reports, and Bernstein estimates (all data) and analysis

BERNSTEIN

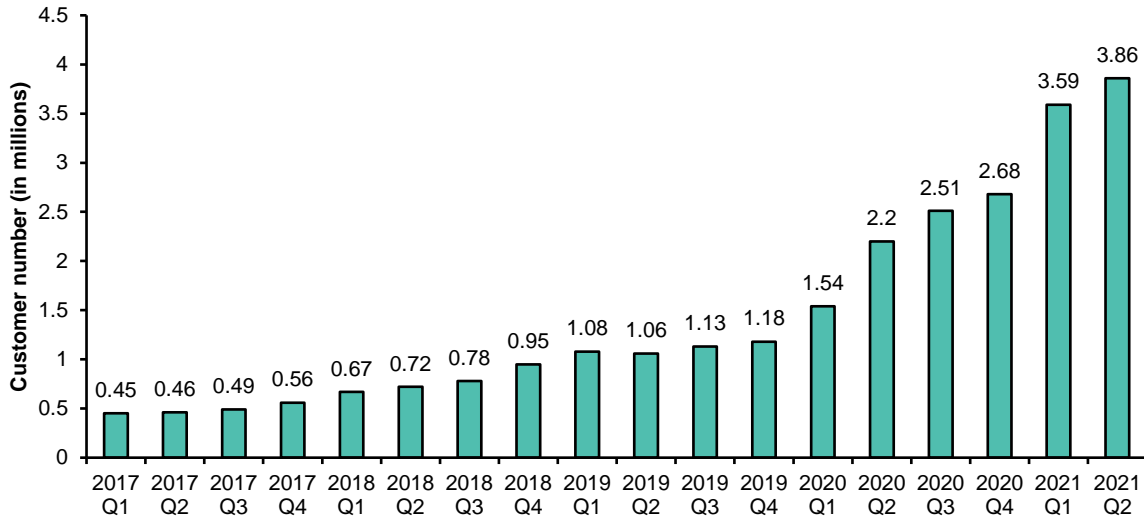
INTERNATIONAL CUSTOMER
DATABASE ANALYSIS

- **3.9 million active customers in the International segment in Q2-21** (see Exhibit 74), up from 2.2 million in Q2-20 with strong growth in H1-21, supported by additional lockdowns and pandemic-induced restrictions in many markets.
- **38% of customer base — 1.5 million customers — is recurring** (see Exhibit 75), supported by frequent and seasonal customers.
- **Due to poor retention rates, lost customers totaled 11 million in Q2-21** (see Exhibit 76), which, when added to 3.9 million active customers, creates a total customer base of 15 million. This is **25% of the TAM** as identified by HelloFresh (60 million households), which is concerning as HelloFresh is powering its way through its own addressable market, challenging future growth rates.
- **Each quarter, about 60%+ of customers need to be new** (i.e., not purchased in the quarter before), leading to high expectations of reactivation or customer acquisition (see Exhibit 77). Without a material improvement in retention rates, it's hard to believe that marketing spend and discounting can reduce over time, as these are still being put to work.
- **However, reactivations made up 60-80% of the need for new customers in Q2-21** (see Exhibit 78). This has been the case for most of 2019 and 2020. Assuming that reactivations are 20% of the cumulatively lost customer database implies that most customers are reactivated lost customers (prompted by discounts) rather than true net new acquisitions.
- **Over the last four or five quarters, CAC was around €100-€200** (see Exhibit 80). This CAC is high assuming that it loses 70% of customers after year 1, and that it doesn't include discounts. Assuming a 9% EBIT on a €50 AOV at €150 CAC and no further discounts, **customers need to order around 33 times to pay back the CAC, which is about eight months.**
- In Exhibit 81 and Exhibit 82, we show the sensitivity of CAC and payback. We get to a bottom-up figure payback of around 6-10 months vs. a company-reported 5-9 months.
- **Sense checking** our analysis in Exhibit 83, we use assumptions on AOV, order frequency, and discounting for our different customer types. We get to around **+/-5% on reported revenue** for the last four quarters and +/-15% for the last 12 quarters. Given the number of assumptions being fed into the analysis, we are happy with the bottom-up sense check that the numbers are broadly in the right direction.

BERNSTEIN

EXHIBIT 74: **3.9 million active customers in Q2-21, up from 2.2 million in Q2-20**

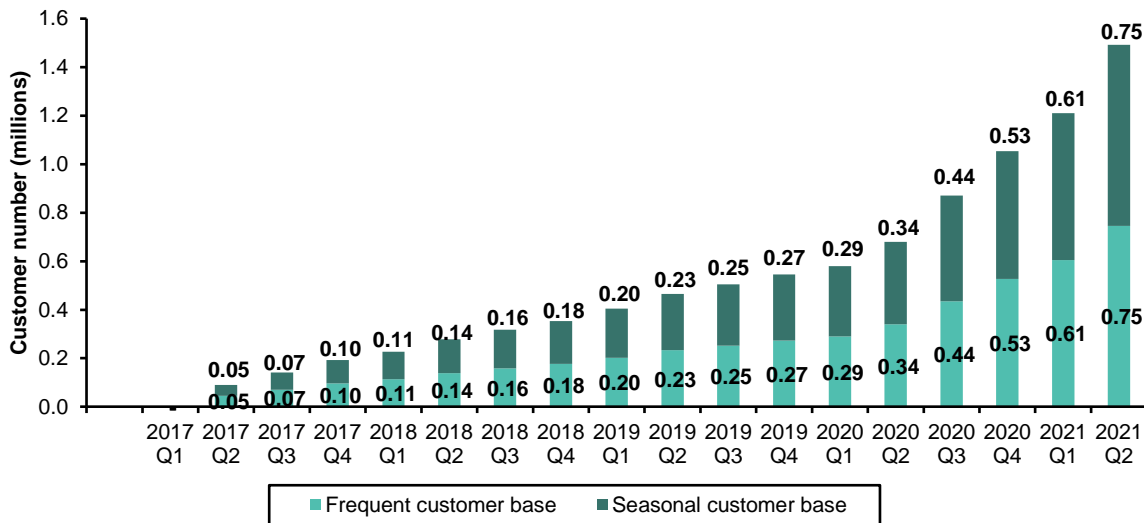
HFG - Total active customers (International)



Source: Company reports, and Bernstein estimates (all data) and analysis

EXHIBIT 75: **We expect the recurring International customer base to be around 1.5 million in Q2-21**

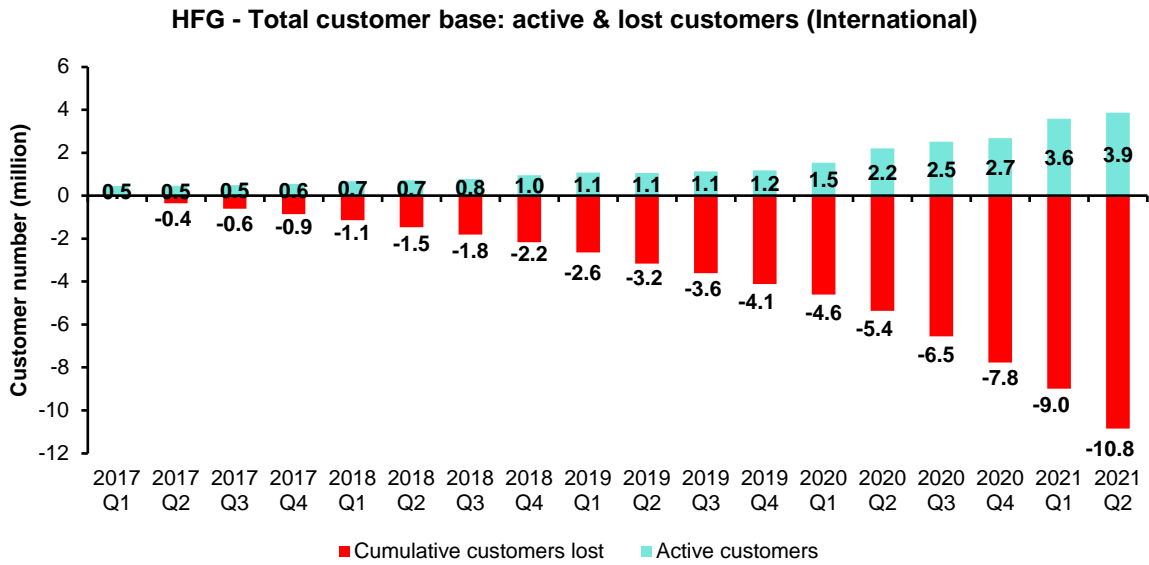
HFG - Recurring customer base (International)



Source: Company reports, and Bernstein estimates (all data) and analysis

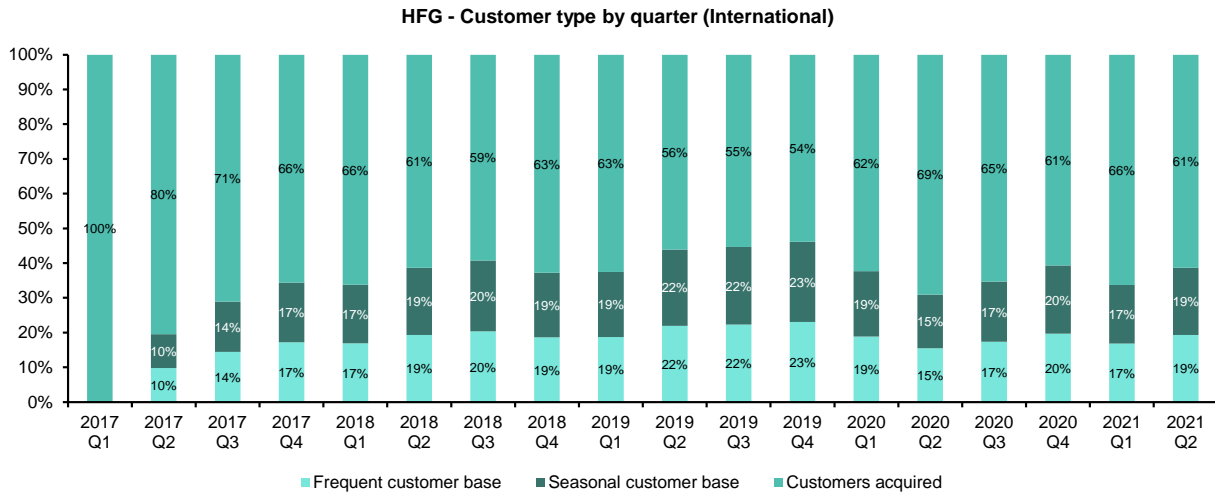
BERNSTEIN

EXHIBIT 76: **Total customer base of 15 million, of which 73% (11 million) comprises lost customers**



Source: Company reports, and Bernstein estimates (all data) and analysis

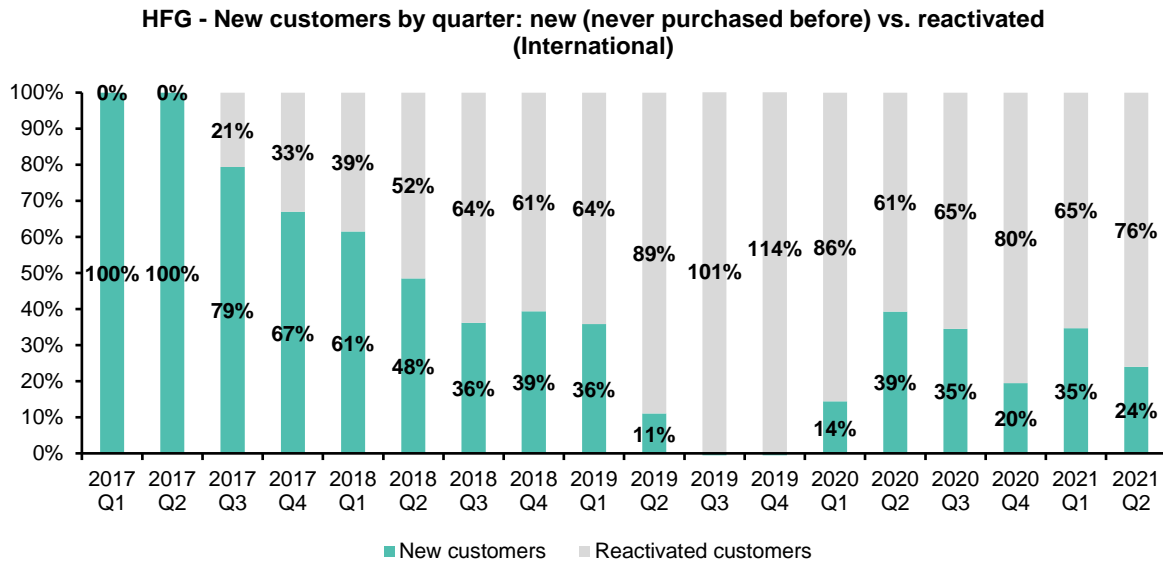
EXHIBIT 77: **Majority of customers (61%) in Q2-21 was acquired (or reactivated) while 38% was recurring**



Source: Company reports, and Bernstein estimates (all data) and analysis

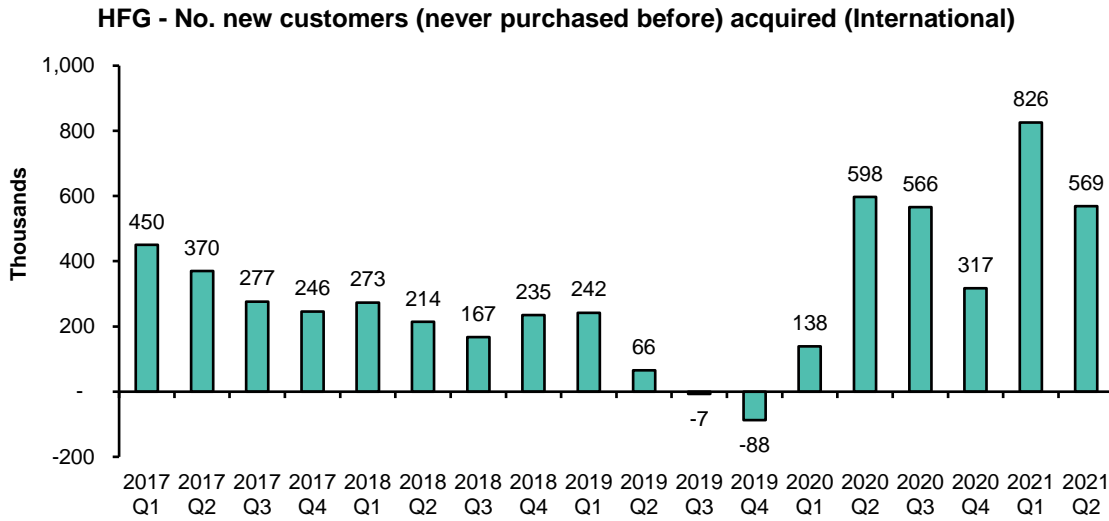
BERNSTEIN

EXHIBIT 78: **However, using a 20% reactivation rate, HFG is highly dependent on reactivated customers**



Source: Company reports, and Bernstein estimates (all data) and analysis

EXHIBIT 79: **In the international segment, there is more consistent new customer acquisition**

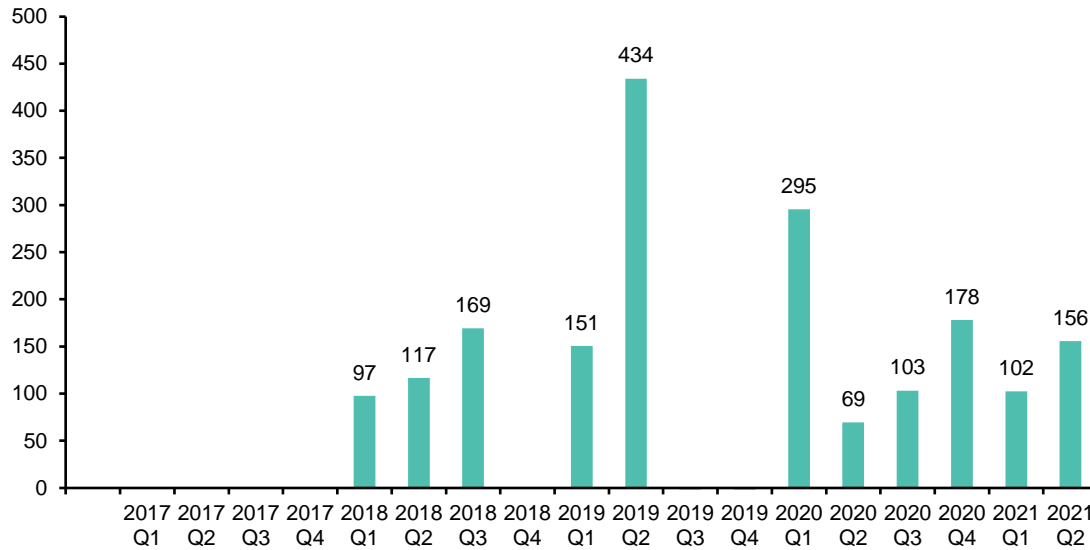


Source: Company reports, and Bernstein estimates (all data) and analysis

BERNSTEIN

EXHIBIT 80: **Customer acquisition cost appears to be around €100-€200 in the last four quarters**

HFG - Customer Acquisition Cost (CAC) per new new (never purchased) customer (International)



Note: Periods without data are where either marketing spend data was not available, or based on our analysis, no net new customers were acquired.

Source: Company reports, and Bernstein estimates (all data) and analysis

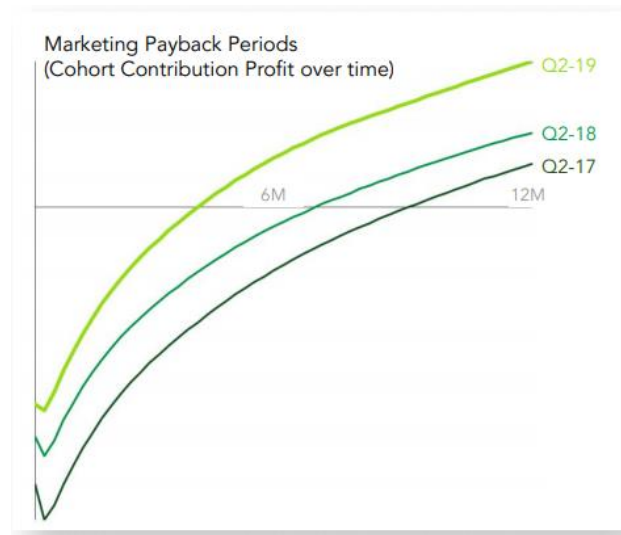
EXHIBIT 81: **Payback between 6 and 10 months based on our calculations**

Average order value € 50
EBIT margin 9%
Contribution per order € 4.5

CAC	Order numbers	Payback months
€ 75	17	4
€ 100	22	6
€ 125	28	7
€ 150	33	8
€ 175	39	10
€ 200	44	11

Source: Bernstein estimates and analysis

EXHIBIT 82: **Company reported payback is between five and nine months**

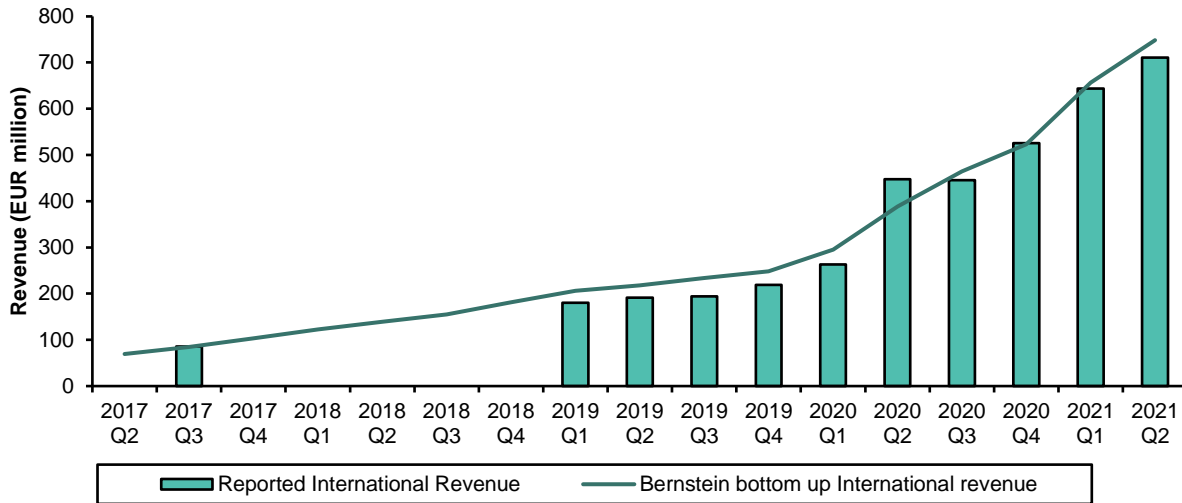


Source: Company reports

BERNSTEIN

EXHIBIT 83: Comparing our bottom-up calculations vs. reported revenue, we are within +/-5% for the last four quarters and between +/- 15% for the last 12 quarters

HFG - Bottom up Bernstein International revenue vs. reported revenue (Q2-17 to Q2-21)



Source: Company reports, and Bernstein estimates (all data) and analysis

BERNSTEIN

HEAVY DISCOUNTING, TRADING DOWN RISK, AND HIGH LOGISTICS COST EXPOSURE

How HelloFresh fares in an increasingly inflationary environment

OVERVIEW

- **Pricing power is critical in a commoditized food ecosystem**, particularly in an increasingly inflationary environment. HelloFresh is effectively a commoditized product (raw ingredients in a box) that charges a significant 60-140% mark up and has weak customer relationships (>90% churn in Y1). **HelloFresh's pricing power is weak**. As food inflation rises, it will not be able to pass on price increases **on an already expensive product**, which is **devalued by discounting and pressured by rising logistics costs**. So far, HelloFresh has not increased any box prices, but has passed on some logistics inflation.
- **Trading down from an expensive, commoditized meal kit product is a material risk**. HelloFresh is an expensive commoditized product, taking up ~75% of the median US family's spending on food. An inflationary environment highlights the pricing differential, and consumers will trade down to reduce the overall impact of their spending. New tiers (e.g., EveryPlate) are still expensive, and will be cannibalistic and encourage trading down.
- **Frequent, deep discounting devalues the brand and reduces pricing power**. Discounting is high with deep introductory offers (40-60% off) and frequent reactivation emails (40% off on up to five boxes). **Average discounts are around 20-25%, and trial offers are loss-making (up to -28%)**. This devalues the brand, as consumers expect discounts, and challenges the brand premium on a commoditized product. Plus, there is the risk that the 2022 customer cohort is worse, as discounted consumers, who would never be able to afford the full-price product, sign up.

TRADING DOWN

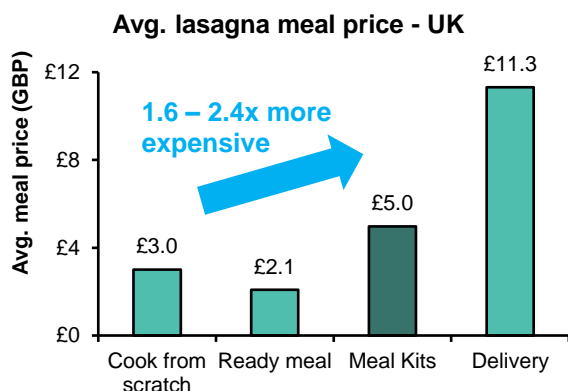
HelloFresh is a commoditized product and is increasingly at risk from trading down in today's inflationary environment. A HelloFresh box contains raw food ingredients, repackaged in a box with a recipe, charging a 60-140% markup. As we outlined in our recent note on inflation,¹ consumers are savvy, and during periods of inflation, change their behavior to avoid cost inflation. Consumers switch to private label and discounts, and out of expensive categories. Grocery is a tightly budgeted category, and increases in grocery and petrol prices can hurt family' budgets. We see HelloFresh as a loser in an inflationary environment, as consumers look to manage their spending on food.

¹ See [EU Food Retail & Delivery: Inflation is good, is mostly passed on and grows profit pool](#).

BERNSTEIN

- **It's expensive, and inflation highlights the pricing differential vs. grocery stores.** Meal kits are not cheap. Looking at the price of a lasagna meal in Exhibit 84, a meal kit meal would cost around £5 per person per meal vs. cooking from scratch or a ready meal at between £2-£3, suggesting a 60-140% mark up on the meal. If you then compare this vs. an average UK family spending (2.4 people), a HelloFresh box would take up 56% of weekly spending for three meals, leaving only £28 for 18 meals, plus all home and personal care expenses (see Exhibit 85). As food prices creep up, we find it **difficult to believe HelloFresh will be further able to raise meal kit prices without affecting consumer demand**. The boxes are already expensive, and we see downside risk from consumers trading down to traditional grocery store shopping, instead of meal kits.
- In the US, HelloFresh boxes are expensive. **Even for a top quintile family, a HelloFresh box for three meals would take up 46% of at-home weekly food spending, leaving \$74 for 18 meals.** This doesn't consider the fact that these households might have more than two people in them, and the box to cover the whole family might be even more expensive. Even if you look at an average HelloFresh box (three meals, two people, \$63), it's tough to imagine anyone outside the top two quintiles of income earners being able to afford it (earning more than \$75k per household per year). This means the US TAM is at least 30% smaller than management claims. Management claims 70 million households in the US, but we think the product only really applies to the top two quintiles of earners (i.e., >\$75k per year), which reduces the TAM to ~48 million households. This means the TAM penetration of active customers is closer to 8.1% (in our numbers) vs. 5.6% (in management numbers).
- **New tiers such as EveryPlate widen the TAM, but are still expensive at 59% of median family food spending.** EveryPlate will widen the TAM slightly with a product that is 42% cheaper than HelloFresh's core offer at \$50 (see Exhibit 87). However, even at \$50, this would take up 59% of the third quintile's spending, leaving \$35 to cover 18 meals! We are also concerned that **additional price tiers are both cannibalistic and cost more to market**, while not fundamentally overcoming the challenges of the business model. As prices creep up, it would be fair to expect core HelloFresh customers to start to trade down to EveryPlate to reduce the overall meal kit cost.

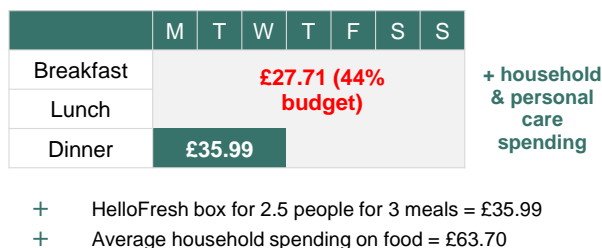
EXHIBIT 84: **Meal kits are 60-140% more expensive than cooking from scratch or ready meals**



Source: Company websites and Bernstein analysis

EXHIBIT 85: **An average UK family buying HelloFresh would be left with £28 to cover 18 meals and other expenses**

Average UK food budget



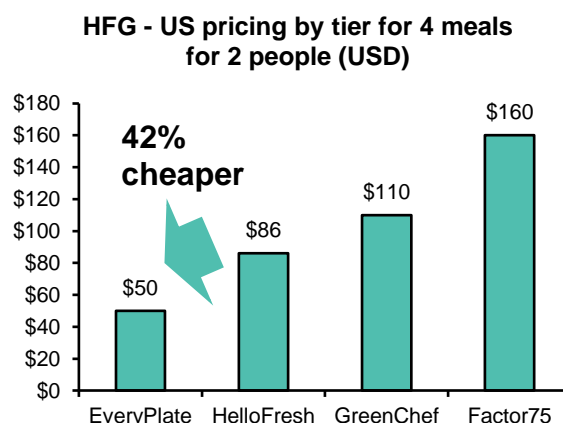
Source: Office for National Statistics (ONS) and Bernstein analysis

EXHIBIT 86: **Even for the highest quintile of earners (US), a HFG box takes up 46% of weekly food spending**

US food spending by income quintile	Food spending at home per week	HFG box (three meals, two people)
Lowest quintile	\$54	117%
2nd quintile	\$71	89%
3rd quintile	\$85	74%
4th quintile	\$100	63%
Highest quintile	\$137	46%

Source: USDA, US Census Bureau, company websites, and Bernstein analysis

EXHIBIT 87: **Even the EveryPlate offering, which is 42% cheaper, would take up 59% of median food spending**



Source: Company websites and Bernstein analysis

DISCOUNTING

Discounting is a key part of HelloFresh's strategy and diminishes its pricing power with consumers. In fact, we think many customers sign up to HelloFresh at deep discounts (50% off on first box and then 35% off on the next three boxes) and then ditch the product due to the higher cost vs. grocery shopping. HelloFresh offers both **deep discounts and frequent discounts**, which we think reduces the value of the product in consumers' minds and pushes them to consistently buy on discounts. We think nearly all new customers are buying on heavy trial discounts, and most reactivated customers in a quarter are being prompted through discounting.

BERNSTEIN

INTRODUCTORY OFFER
DISCOUNTING

Discount depth is typically between **20-65%**. For a trial offer, US first boxes are at 65% off (see Exhibit 88 and Exhibit 89), and in the UK, the first box is at 50% off plus 35% off on the next three (see Exhibit 98). We have received several flyers through the post, which show a discount of 60% on the first box plus 40% on the next three boxes (see Exhibit 90). Although this level of discounting is meant to entice customers to try the product and change their behavior, we think it has three negative impacts. It: (1) devalues the full price of the product with heavy discounting; (2) attracts non-core customers, who will never pay full price; and (3) doesn't seem to drive strong customer retention, with 90% of customers not purchasing regularly after Q4.

Within an inflationary environment, **HelloFresh also runs the risk of acquiring weaker cohorts of customers who are searching for discounts and sign up without having the ability to pay full price for the product.** 2022 cohorts could be materially weaker than 2020 and 2021 cohorts.

EXHIBIT 88: **US trial offer of 14 free meals...**



Source: Company website

EXHIBIT 89: **...equals 65% off on the first box**

2. Customize your plan size

Number of people: 2 4

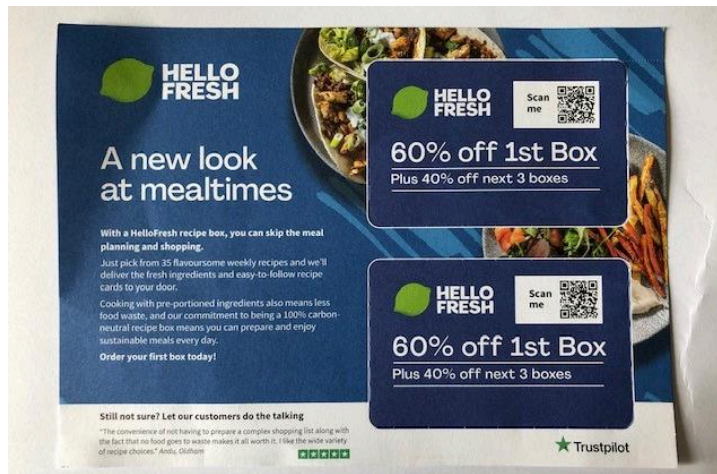
Recipes per week: 2 3 4 5 6

Meat & Veggies
4 meals for 2 people per week
8 total servings

Box price	\$75.92
Price per serving	\$9.49 \$4.74
Shipping	\$9.99 FREE
Total	\$85.91 \$37.88

Source: Company website

EXHIBIT 90: **We have received many HFG flyers for 60% off**



Source: Company flyer

BERNSTEIN

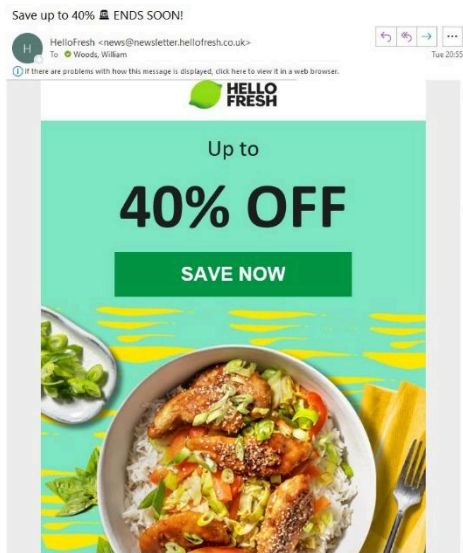
REACTIVATION DISCOUNTING

We are **more concerned about reactivation discounting**. We think many of HelloFresh's active customers have been reactivated through heavy discounted offers pushed via email, and that many new customers acquired each quarter just purchase for one quarter and then ditch. HelloFresh even says that reactivated customers behave in the same way as new customers. Full pricing is almost meaningless for HelloFresh, as many customers are buying on heavy, consistent discounts.

Reactivations are not a good thing! This means that you are effectively paying to re-recruit customers who already decided the product is not for them. HelloFresh disclosed that reactivations were **increasing from the mid-10s in 2016 to the high-20s (in % terms) in its 2019 Capital Markets Day presentation** (see Exhibit 93). We think this highlights the smaller nature of the TAM, the poor quality of retention, and the wastage of marketing spend on poor customers. The company even highlights that these reactivated customers show the same economics as "new" customers (i.e., likely to churn pretty quickly) and cost less to acquire (demonstrating the diminishing efficiency of its marketing spend).

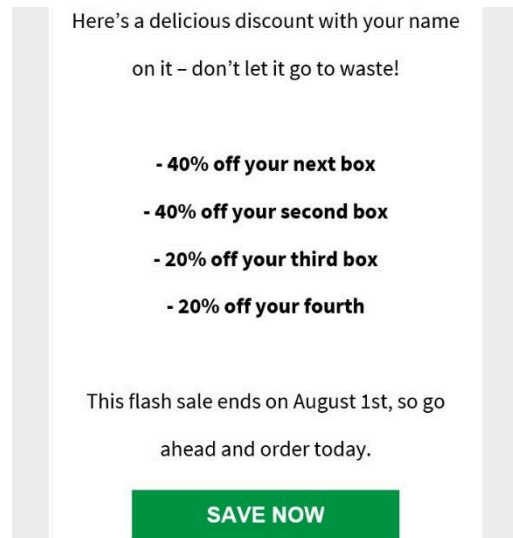
We have received many **discount-led reactivation emails** since we tried the product in Q1 2021 (see Exhibit 91, Exhibit 92, and Exhibit 94). On average, the discounts start at 40%. Between March and October 2021, we have received seven emails (almost one a month) trying to get us to reactivate with 40% off on two to five boxes. Although this email flow is trying to get us to change our behavior, it is effectively devaluing the brand and putting customers off repurchasing at full price. Anecdotally, we have read of customers who have two accounts in a household and cancel and reactivate each quarter on different accounts to take full advantage of heavily discounted food. HelloFresh even decided to post a letter to me with an even deeper discount with 40% off on two boxes, and 20% off on seven boxes subsequently (see Exhibit 95).

EXHIBIT 91: **Reactivation emails with heavy discounts**



Source: Company emails

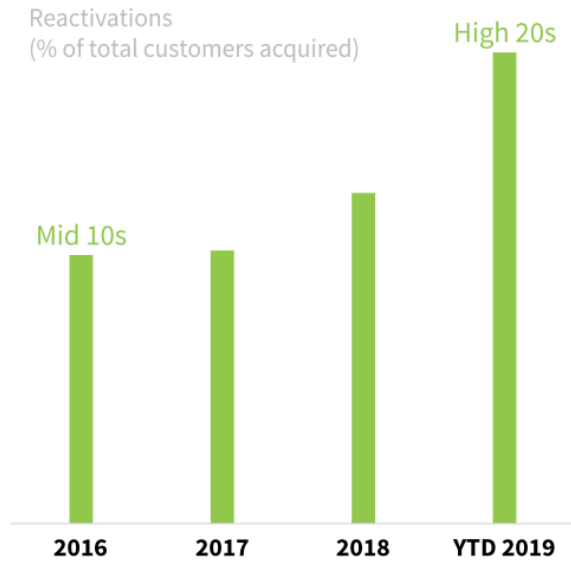
EXHIBIT 92: **Not just 40% off one box, but discounts on four boxes**



Source: Company emails

BERNSTEIN

EXHIBIT 93: HelloFresh reactivation rates



Source: Company reports

EXHIBIT 94: HelloFresh reactivation emails

Date	Action	Discount
Order 1	27/01/2021	60%
Referral email	04/02/2021	Unlimited £20 off vouchers for friends
Order 2	10/02/2021	40%
Referral email	15/02/2021	Free box for referrals
Order 3	24/02/2021	40%
Order 4	03/03/2021	40%
Re-activation discount	12/04/2021	2 x 30% off
Re-activation discount	26/04/2021	2 x 40% and 2 x 20% off
Re-activation discount	13/07/2021	2 x 40% and 2 x 20% off
Re-activation discount	20/07/2021	2 x 40% and 2 x 20% off
Re-activation letter	August	2 x 40%, 7 x 20% off
Re-activation discount	17/09/2021	40% off 5 boxes
Re-activation discount	24/09/2021	2 x 40% and 3 x 20% off
Re-activation discount	01/10/2021	40% off 5 boxes

Source: Company emails and Bernstein analysis

EXHIBIT 95: HelloFresh even starts sending mails when you haven't purchased for a while



Source: Company

UNDERSTANDING HFG DISCOUNTING

We calculate HelloFresh's average discount to be 16-23% in H1-21 (see Exhibit 96 and Exhibit 97). HelloFresh refuses to disclose any information about the depth and frequency of discounting. Discounts are netted off revenue and not included in marketing spend, so the total impact is obfuscated. However, from the disclosure on orders, meals, and revenue, we can back-calculate from order economics into the level of discounting. Taking the number of orders, meals, and revenue by segment, we can calculate the average revenue per meal and meals per order. We can compare this to the average price charged to a customer per meal for a similar box and then calculate the discount relative to full price. We land at -20% to -23% discounting in H1 2021 in the US and International segments (see Exhibit 96 and Exhibit 97), which is +500 bps to +800 bps higher compared with traditional supermarket discounting on grocery.

BERNSTEIN

EXHIBIT 96: **US segment discounts average 20-23%**

US	2019FY	2020FY	H1-2021
Orders	21	39	31
Meals	138	278	232
Revenue	1025	2073	1649
Revenue per meal (EUR)	7.4	7.5	7.1
Revenue per meal (USD)	8.6	8.7	8.2
Meals per order	6.7	7.2	7.6
Full price box for 8 meals (incl. delivery) (USD)	85.9	85.9	85.9
Price per meal	10.7	10.7	10.7
Average discount %	-20%	-19%	-23%

Source: Company reports and Bernstein analysis

EXHIBIT 97: **International segment discounts average 16-20%**

International	2019FY	2020FY	H1-2021
Orders	17	36	30
Meals	143	323	261
Revenue	784	1676	1348
Revenue per meal (EUR)	5.5	5.2	5.2
Meals per order	8.5	9.1	8.8
Price per meal	6.5	6.5	6.5
Average discount %	-16%	-20%	-20%

Source: Company reports and Bernstein analysis

EXHIBIT 98: **Standard trial offer in pop-up on HFG UK website**

Source: Company website

If we sense check this vs. our retention analysis, we calculate with a **similar figure of -21% discounting on a cohort of 50 people** (see Exhibit 99). This supports our hypothesis that retention is low with high levels of churn of 70-80% by month 12, a seasonal cohort of 10% customers, and a frequent customer base of 12%. We assume in this calculation that everyone is acquired on a discounted trial offer, some customers are reactivated regularly with discounts, and then seasonal and frequent customers buy at full price.

BERNSTEIN

EXHIBIT 99: 50-person cohort on a monthly basis = discounts at 21%

Customer No.	Customer Type	Orders in 1st year	Discount	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	Total revenue	Cost of discounts
1	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
2	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
3	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
4	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
5	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
6	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
7	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
8	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
9	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
10	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
11	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
12	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
13	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
14	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
15	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
16	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
17	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
18	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
19	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
20	Discount & Ditch		4 50% off first + 35% off next 3	£84.50												£85	-£65.46
21	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
22	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
23	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
24	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
25	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
26	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
27	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
28	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
29	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
30	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
31	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
32	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
33	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
34	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
35	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
36	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
37	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
38	Regularly reactivated		4 50% off first + 35% off next 3	£84.50		£96.57		£48.29								£229	-£145.54
39	Seasonal at full price, twice a month		16 50% off first + 35% off next 3	£84.50	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£909	-£65.46
40	Seasonal at full price, twice a month		16 50% off first + 35% off next 3	£84.50	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£909	-£65.46
41	Seasonal at full price, twice a month		16 50% off first + 35% off next 3	£84.50	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£909	-£65.46
42	Seasonal at full price, twice a month		16 50% off first + 35% off next 3	£84.50	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£909	-£65.46
43	Seasonal at full price, twice a month		16 50% off first + 35% off next 3	£84.50	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£74.98	£909	-£65.46
44	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46
45	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46
46	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46
47	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46
48	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46
49	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46
50	Frequent		52 50% off first + 35% off next 3	£84.50	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£149.96	£1,734	-£65.46
			Total revenue	£4,225	£1,425	£3,163	£1,425	£2,294	£1,425	£1,425	£1,425	£1,425	£1,425	£1,425	£1,425	£22,503	-£4,714
			Revenue retention	100%	34%	75%	34%	54%	34%	34%	34%	34%	34%	34%	34%		
			Actual retention	100%	24%	60%	24%	60%	24%	24%	24%	24%	24%	24%	24%		
			Total cost of discounts			-£4,714											

Source: Company websites (prices for meal kit plans), and Bernstein estimates (all other data) and analysis

CUSTOMER ECONOMICS

If we use our trial experience as a benchmark (60% off + 3 x boxes at 40% off), although we paid €6.70, HelloFresh effectively paid us to eat at a -€45 EBIT when accounting for marketing spend and SG&A (see Exhibit 101). This further demonstrates the weakness in HelloFresh's pricing power, where it is giving away food for free on the idea that consumers will change their behavior and stick with meal kits. However, based on our retention analysis, this is not the case, with >90% customers churning post-purchase.

Given the high levels of markup (60-140%) on a commoditized food product, orders at a 40% discount are still contribution margin positive (12%) (see Exhibit 100). However, when accounting for marketing spend and SG&A on a per order basis, EBIT contribution is negative at -17%. Many reactivation offers that we receive are for 40% discounts, which suggest that HelloFresh is growing customers at the expense of profitability. Our analysis also reinforces our perspective that discounting is at around the 20-25% level. When we flow through procurement, fulfillment, and marketing & SG&A, we get to a 12% EBIT margin contribution. This is not too dissimilar to HelloFresh's contribution margin in H1 2021 of 10%. Exhibit 100 is slightly too generous on contribution margin, but less aggressive on marketing & SG&A spend.

BERNSTEIN

EXHIBIT 100: Given the high levels of markup, orders at 40% discount are still contribution margin positive at 12%, but EBIT margin negative (-17%)

Discount level	0%	20%	40%	60%
Full-price AOV (2 people, 4 recipes) - \$86 in USD	€ 74.1	€ 74.1	€ 74.1	€ 74.1
Discount	€ 0.0	-€ 14.8	-€ 29.6	-€ 44.4
Net AOV (reported revenue)	€ 74.1	€ 59.2	€ 44.4	€ 29.6
Procurement expenses per order	-€ 15.9	-€ 15.9	-€ 15.9	-€ 15.9
Fulfilment expenses per order	-€ 23.2	-€ 23.2	-€ 23.2	-€ 23.2
Contribution margin	€ 35.00	€ 20.19	€ 5.38	-€ 9.43
Contribution margin %	47%	34%	12%	-32%
Marketing spend per order	-€ 8.3	-€ 8.3	-€ 8.3	-€ 8.3
Marketing as % revenue	-11%	-14%	-19%	-28%
SG&A per order	-€ 4.7	-€ 4.7	-€ 4.7	-€ 4.7
SG&A as % revenue	-6%	-8%	-11%	-16%
EBIT	€ 22.00	€ 7.19	-€ 7.62	-€ 22.43
EBIT margin %	30%	12%	-17%	-76%

Source: Company reports, and Bernstein estimates (procurement, fulfillment, marketing expense and SG&A per order) and analysis

EXHIBIT 101: During our trial, we contributed €6.70 to HFG, but it effectively paid us to eat with a -€45 EBIT

My order contribution	Revenue	Contribution Margin	EBIT
1 60% off	€ 29.6	-€ 9.4	-€ 22.4
2 40% off	€ 44.4	€ 5.4	-€ 7.6
3 40% off	€ 44.4	€ 5.4	-€ 7.6
4 40% off	€ 44.4	€ 5.4	-€ 7.6
Total	€ 162.9	€ 6.7	-€ 45.3
	Margin %	4%	-28%

Source: Bernstein estimates and analysis

FULFILLMENT COSTS

On top of the challenges of trading down and heavy discounting, **HelloFresh has a greater exposure to logistics cost inflation** that it will struggle to pass on to consumers through higher delivery fees. Logistics costs are ~40% of sales (see Exhibit 102). The one-to-one nature of D2C products increases the variable cost base (i.e., logistics) at the expense of the distribution efficiencies of a large store, where consumers travel en masse to a store to pick up their own goods.

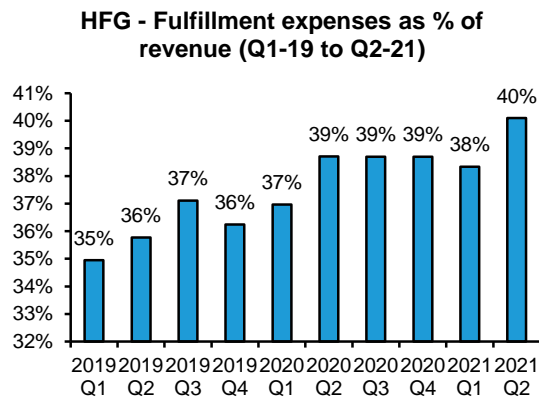
Logistics costs are on the rise and challenged by the structural shift to e-commerce (increasing the overall demand for parcels) and the one-off impact of the pandemic (supply chain challenges and faster shift to online). As outlined in Exhibit 103, in the UK, postal

BERNSTEIN

logistics CPI is increasing and outpacing overall CPI significantly at ~6% YoY inflation vs. 2-3% total CPI. **HelloFresh's fulfillment costs per order have also been rising, particularly in the US, by +20-30%** (see Exhibit 104 and Exhibit 105). For the most part, HelloFresh uses third-party couriers with whom it has limited scale and bargaining power.

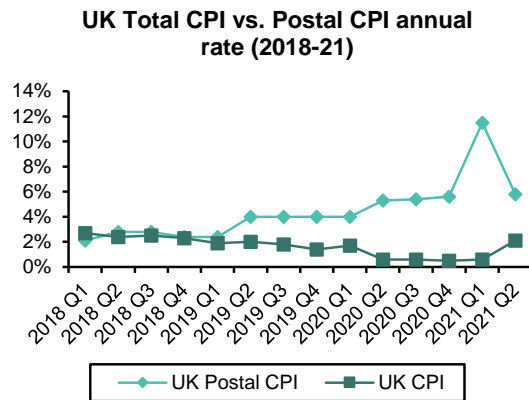
As a result of rising costs, HelloFresh has started increasing some delivery fees. In the UK, delivery fees have gone up by 30%, and in the US, delivery fees have gone up by US\$1 (11%). However, the big challenge is that **delivery fees are already relatively high** in most markets at US\$9.99 in the US and €4-€6 in Europe. This **averages at around 10% of the box price**, similar to food delivery but well above large-basket online grocery (2% fees as a percentage of basket size). Increasing delivery fees is likely to put some customers off purchasing and increase the pricing differential vs. traditional grocery.

EXHIBIT 102: **Group fulfillment expenses as a % of revenue increasing over time**



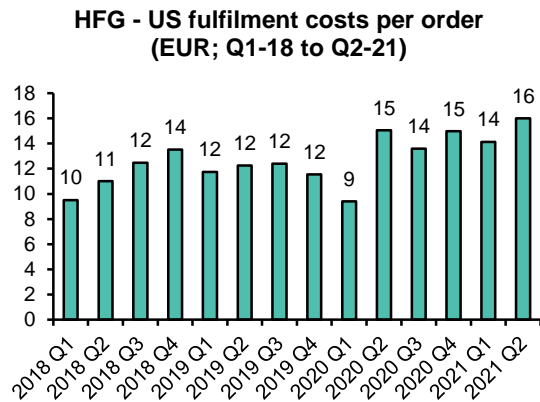
Source: Company reports and Bernstein analysis

EXHIBIT 103: **Logistics/postal costs are increasing rapidly vs. total CPI**



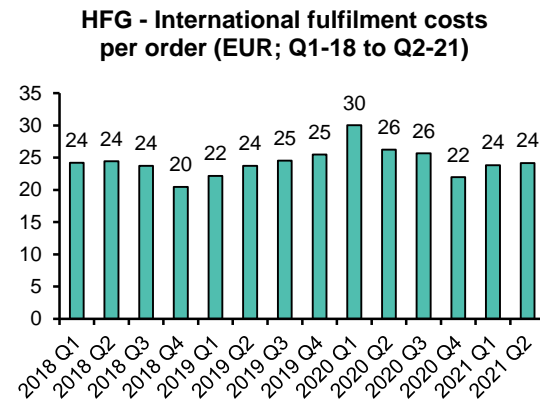
Source: ONS and Bernstein analysis

EXHIBIT 104: **US fulfillment costs have had a material step change by +20-30%**



Source: Company reports and Bernstein analysis

EXHIBIT 105: **International fulfillment costs peaked**



Source: Company reports and Bernstein analysis

BERNSTEIN

HELLOFRESH PRICING CHANGES At present, **HelloFresh is not generally raising prices to offset cost inflation**. We monitored prices across different subscription types and geographies, and noticed a few small changes over the last nine months.

- **UK:** During September 2021 to May 2022, while the unit price for all the subscription types remained the same, **delivery costs increased by £1 (25% increase)**, with HelloFresh likely passing on rising costs with its 3P logistics partner due to driver shortages and increased wage costs.
- **US:** The pattern is different, whereby delivery costs have remained the same, but **unit prices have changed slightly** (by \$0.5 per serving) between subscription types (see Exhibit 106). It increased the unit price for all types of meal plans except the smallest tier (two meals for two people), which is materially lower than US food inflation at ~10%.

EXHIBIT 106: **HelloFresh adjusted unit price across subscription types in the US, but it's well below inflation**

# people	# meals per week	Price per serving Sep-21	Price per serving May-22	Change	% change
2	2	\$ 11.99	\$ 11.99	\$ -	0.0%
2	3	\$ 9.49	\$ 9.99	\$ 0.5	5.3%
2	4	\$ 8.99	\$ 9.49	\$ 0.5	5.6%
2	5	\$ 8.49	\$ 8.99	\$ 0.5	5.9%
2	6	\$ 7.99	\$ 8.49	\$ 0.5	6.3%
4	2	\$ 8.99	\$ 9.49	\$ 0.5	5.6%
4	3	\$ 7.99	\$ 8.49	\$ 0.5	6.3%
4	4	\$ 7.49	\$ 7.99	\$ 0.5	6.7%
4	5	\$ 7.49	\$ 7.99	\$ 0.5	6.7%
4	6	\$ 7.49	\$ 7.99	\$ 0.5	6.7%

Source: Company website and Bernstein analysis

BERNSTEIN

CUSTOMER LIFETIME VALUE (CLTV)

HelloFresh effectively pays people to eat with a CLTV:CAC ratio of 0.8x

+ OVERVIEW

In this chapter, we look at the customer lifetime value (CLTV) of HelloFresh by building on and pulling together our previous work on retention, discounting, customer habits, and the P&L. We find that HelloFresh's CLTV:CAC ratio is weak at 0.8x vs. best practice of >4x.

- **HelloFresh's CLTV:CAC ratio is dismal at 0.8x.** Effectively, HelloFresh is paying people to eat and not earning back its customer acquisition cost (CAC). **Best-in-class businesses would have a CLTV:CAC ratio of >4x.** Instead, HelloFresh has a weak relationship with its customers with high levels of discounting, churn, and marketing spend. This means that **over three years, the lifetime value is only €59.** This builds on our work on retention (Chapter 5), pricing & discounting (Chapter 6), and customer surveys (Chapter 10) to inform our analysis, and we outline our assumptions below.
- The company has recently disclosed information on CLTV and CAC payback periods. This presents a much more positive view of a customer's value, **highlighting a positive contribution margin profit after order#2 and a payback period of <6 months.** **Our analysis doesn't contradict this analysis,** but the company fails to account for the full cost of marketing (15% of sales) and the cost of SG&A (4% of sales). Even at 40% discounts, a HelloFresh box is contribution margin-positive, given the high mark up on a commoditized product. **Excluding marketing spend and SG&A, we get to a CLTV:CAC ratio of 1.9x and the payback period would be <6 months, but the marketing spend as a percentage of sales would be 3%.**

+ BERNSTEIN CLTV

HelloFresh's CLTV:CAC ratio is dismal at 0.8x. It doesn't even recover the amount it spends to acquire customers over a three-year horizon. Best-in-class businesses would have a CLTV:CAC ratio of >4x. Instead, HelloFresh has a weak relationship with its customers with high levels of discounting, high churn and high levels of marketing spend. This means that **over three years, the lifetime value is only €59** when considering discounts, contribution margins, marketing, and retention. This compares to a CAC (customer lifetime value) of €75 driven by high levels of marketing spend, which the customers will never pay back. **Effectively, HelloFresh is paying customers to eat.**

BERNSTEIN

EXHIBIT 107: **Bernstein CLTV calculation: ratio to CAC is dismal at 0.8x**

	1st Order	Year 1	Year 2	Year 3	Notes
Gross revenue per order	€ 62	€ 62	€ 62	€ 62	Full price for 2 people, 3 meals in the US
Discount	-€ 37	-€ 19	-€ 12	-€ 12	Calculation
% discount	60%	30%	20%	20%	Bernstein calculation
Net / reported revenue per order	€ 25	€ 43	€ 50	€ 50	Reported AOV ~50 EUR
Frequency per year	1	16	16	16	Reported order frequency
Contribution margin %	27%	27%	27%	27%	Avg. achieved CM % over last few years
Retention marketing spend %		12%	12%	12%	Backcalculated based on CAC to achieve target marketing spend
SG&A %	4%	4%	4%	4%	Reported SG&A
Contribution	€ 11	€ 87	€ 87	€ 87	Calculation
Net retention rate		30%	25%	20%	Bernstein calculation
Net contribution	€ 7	€ 26	€ 22	€ 17	Calculation
Discount rate				8%	
3 year CLTV inc. discounting (NPV)				€ 59	Calculation
Customer Acquisition Cost (CAC)	€ 75				
CLTV:CAC				0.8x	Calculation
Total marketing spend modelled				15.1%	Reported marketing spend ~15%

Source: Company reports, and Bernstein estimates and analysis

In Exhibit 107, we break down the different assumptions used to calculate our CLTV of €59 and our CLTV:CAC ratio of 0.8x.

- **Gross revenue per order:** This is the full cost of a pre-discounts box, equivalent to a box for two people for three meals (most popular box type) in the US.
- **Discounting:** We assume high introductory discounts on first orders of 60%, diminishing to 20% by year 3 as customers are phased out of discount email bombardment by the company. Introductory trial offers are abundant (see Exhibit 115), and it's easy to get 50-60% off on the first box plus 20-40% off on subsequent boxes. This continues with regular emails, and we calculate that average discounting is around 20% (see Exhibit 113 and Exhibit 114). The model is not that sensitive to the product discount levels as we show in Exhibit 110. Even if HelloFresh offered no discounts, the CLTV:CAC would still only increase by +0.2 to 1.0x.
- **Net reported revenue per order:** €50 mature AOV, in line with reported metrics.
- **Frequency per year:** Broadly in line with reported metrics at 16x per year or 4x per quarter.
- **Contribution margin:** We aim for a contribution margin of 27%. This is slightly below the 2020 achieved contribution margin of 28%, but ahead of our FY21-FY24 estimates of 25-26%. This is driven by higher fulfilment costs, higher COGS, and limited price expansion.
- **Retention marketing and marketing spend:** Not all marketing spend goes on customer acquisition. There is significant marketing investment into retention marketing or reactivation marketing as well as non-targeted CAC spend (e.g., TV advertising). We assume this is around 12% of sales, which gets us to a total marketing spend of 15.1% of net revenue in line with their reported numbers for FY21.

BERNSTEIN

- **SG&A:** 4% is broadly in line with historical reported SG&A. This should go up into FY22 and beyond due to investments in technology and data teams, but we hold it flat.
- **Net retention rate:** Based on our deep dive, we have calculated a net retention rate of 30% in Y1, which reduces to 20% in Y3. This is based on a core of regular users (~10%) and reactivations of around 20%. As shown in Exhibit 111 and Exhibit 112, we model retention rates of ~30% by Q4 and ~20-25% by Q8. This is based on the disclosure by the company at its 2020 and 2021 CMDs.
- **Discount rate:** We use a discount rate of 8% based on the higher risk of HelloFresh and the structural challenges of the business model. However, the model is not that sensitive to the discount rate as we show in Exhibit 109, where a -200 bps change in the discount rate doesn't materially move the CLTV:CAC ratio.
- **CAC:** HelloFresh has never disclosed its CAC, but we calculate it to be around €75-€150 based on net new customer adds divided by marketing spend over time. We use €75 as guided by the company but also provide the sensitivity to CAC in Exhibit 108. Even at €25 and the same retention rates, the CLTV:CAC ratio is still only 2.4x (weak vs. best practice).

EXHIBIT 108: **Sensitivity to retention and CAC is strong; to believe in a best practice CLTV:CAC ratio, you need to believe CAC is divided by three and retention improves by +1000 bps**

CLTV:CAC		Retention rate								
		-1000bps	-500bps	-200bps	-100bps	0bps	100bps	200bps	500bps	1000bps
CAC	€ 25	1.5x	1.9x	2.2x	2.3x	2.4x	2.4x	2.5x	2.8x	3.2x
	€ 50	0.8x	1.0x	1.1x	1.1x	1.2x	1.2x	1.3x	1.4x	1.6x
	€ 75	0.5x	0.6x	0.7x	0.8x	0.8x	0.8x	0.8x	0.9x	1.1x
	€ 100	0.4x	0.5x	0.5x	0.6x	0.6x	0.6x	0.6x	0.7x	0.8x
	€ 125	0.3x	0.4x	0.4x	0.5x	0.5x	0.5x	0.5x	0.6x	0.6x

Source: Company reports, and Bernstein estimates (all data) and analysis

EXHIBIT 109: **Discount rate has a limited impact on the CLTV:CAC ratio**

Discount rate	3-year CLTV	CLTV:CAC
6.0%	€ 142	1.9x
6.5%	€ 141	1.9x
7.0%	€ 139	1.9x
7.5%	€ 137	1.8x
8.0%	€ 135	1.8x
8.5%	€ 134	1.8x
9.0%	€ 132	1.8x
9.5%	€ 130	1.7x
10.0%	€ 129	1.7x

Source: Company reports, and Bernstein estimates (all data) and analysis

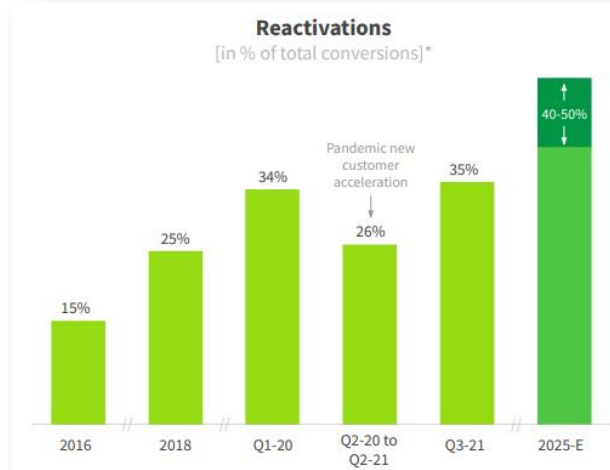
EXHIBIT 110: **Product discount levels also have a limited impact on the CLTV:CAC ratio**

Product discount %	3-year CLTV	CLTV:CAC
0%	€ 72	1.0x
5%	€ 69	0.9x
10%	€ 65	0.9x
15%	€ 62	0.8x
20.0%	€ 59	0.8x
25%	€ 56	0.7x
30%	€ 52	0.7x

Source: Company reports, and Bernstein estimates (all data) and analysis

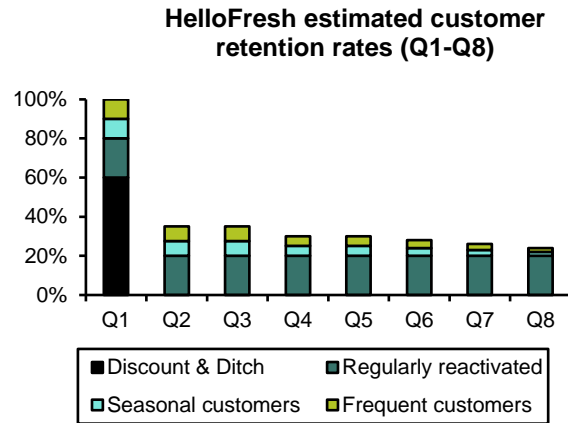
BERNSTEIN

EXHIBIT 111: **Reactivations are not a good thing, and are growing (driving the retention improvement)**



Source: Company reports

EXHIBIT 112: **We expect retention ex. reactivations to be low at ~10% in Q4**



Source: Bernstein estimates (all data) and analysis

EXHIBIT 113: **US segment discounts average 20-23%**

US	2019FY	2020FY	H1-2021
Orders	21	39	31
Meals	138	278	232
Revenue	1025	2073	1649
Revenue per meal (EUR)	7.4	7.5	7.1
Revenue per meal (USD)	8.6	8.7	8.2
Meals per order	6.7	7.2	7.6
Full price box for 8 meals (inc. delivery) (USD)	85.9	85.9	85.9
Price per meal	10.7	10.7	10.7
Average discount %	-20%	-19%	-23%

Source: Company reports, and Bernstein estimates (all data) and analysis

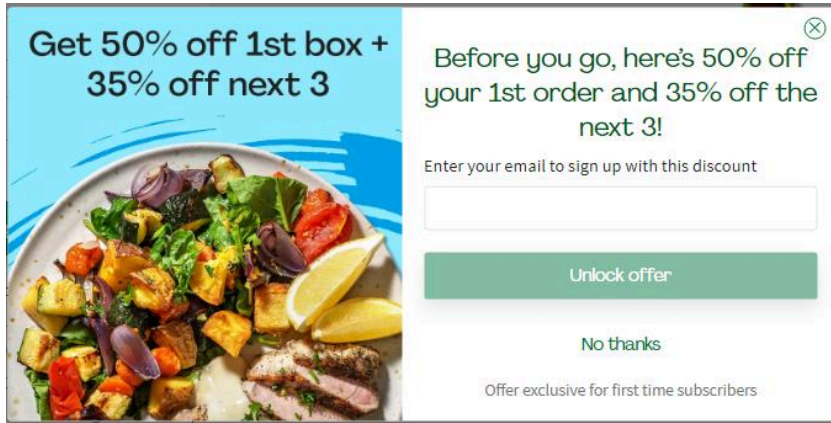
EXHIBIT 114: **International segment discounts average 16-20%**

International	2019FY	2020FY	H1-2021
Orders	17	36	30
Meals	143	323	261
Revenue	784	1676	1348
Revenue per meal (EUR)	5.5	5.2	5.2
Meals per order	8.5	9.1	8.8
Price per meal	6.5	6.5	6.5
Average discount %	-16%	-20%	-20%

Source: Company reports, and Bernstein estimates (all data) and analysis

BERNSTEIN

EXHIBIT 115: **Standard trial offer in pop-up on HFG UK website**



Source: Company website

ANOTHER WAY TO LOOK AT IT:
TRIAL CUSTOMER ECONOMICS

If we use our trial experience as a benchmark (60% off + 3 x boxes at 40% off), although we contributed €6.70, **HelloFresh effectively paid us to eat at a -€45 EBIT** when accounting for marketing spend and SG&A (see Exhibit 117). This further demonstrated the weakness in HelloFresh's pricing power, where it is giving away food for free on the idea that consumers will change their behavior and stick with meal kits. However, based on our retention analysis, this is not the case, with >90% of customers abandoning the product after purchasing.

Given the high levels of markup (60-140%) on a commoditized food product, **orders at a 40% discount are still contribution margin positive (12%)** (see Exhibit 116). However, when accounting for marketing spend and SG&A on a per order basis, **EBIT contribution is negative at -17%**. Many reactivation offers that we receive are for 40% discounts, which suggest that HelloFresh is propping up customer growth at the expense of profitability.

Our analysis below also reinforces our perspective that discounting is around the 20-25% level. When we flow through procurement, fulfilment, marketing, and SG&A, we get to a 12% EBIT margin contribution. This is not too dissimilar to HelloFresh's contribution margin in H1-21 of 10%. Exhibit 116 is slightly too generous on contribution margin, but less aggressive on marketing & SG&A spend.

BERNSTEIN

EXHIBIT 116: **Given the high levels of markup, orders at 40% discount are still contribution margin positive at 12%, but EBIT margin negative (-17%)**

Discount level	0%	20%	40%	60%
Full-price AOV (2 people, 4 recipes) - \$86 in USD	€ 74.1	€ 74.1	€ 74.1	€ 74.1
Discount	€ 0.0	-€ 14.8	-€ 29.6	-€ 44.4
Net AOV (reported revenue)	€ 74.1	€ 59.2	€ 44.4	€ 29.6
Procurement expenses per order	-€ 15.9	-€ 15.9	-€ 15.9	-€ 15.9
Fulfilment expenses per order	-€ 23.2	-€ 23.2	-€ 23.2	-€ 23.2
Contribution margin	€ 35.00	€ 20.19	€ 5.38	-€ 9.43
Contribution margin %	47%	34%	12%	-32%
Marketing spend per order	-€ 8.3	-€ 8.3	-€ 8.3	-€ 8.3
Marketing as % revenue	-11%	-14%	-19%	-28%
SG&A per order	-€ 4.7	-€ 4.7	-€ 4.7	-€ 4.7
SG&A as % revenue	-6%	-8%	-11%	-16%
EBIT	€ 22.00	€ 7.19	-€ 7.62	-€ 22.43
EBIT margin %	30%	12%	-17%	-76%

Source: Company reports, and Bernstein estimates (all data) and analysis

EXHIBIT 117: **During our trial, we paid €6.70 to HFG, but it effectively paid us to eat with a -€45 EBIT**

My order contribution	Revenue	Contribution Margin	EBIT
1 60% off	€ 29.6	-€ 9.4	-€ 22.4
2 40% off	€ 44.4	€ 5.4	-€ 7.6
3 40% off	€ 44.4	€ 5.4	-€ 7.6
4 40% off	€ 44.4	€ 5.4	-€ 7.6
Total	€ 162.9	€ 6.7	-€ 45.3
	Margin %	4%	-28%

Source: Company reports, and Bernstein estimates (all data) and analysis

BERNSTEIN

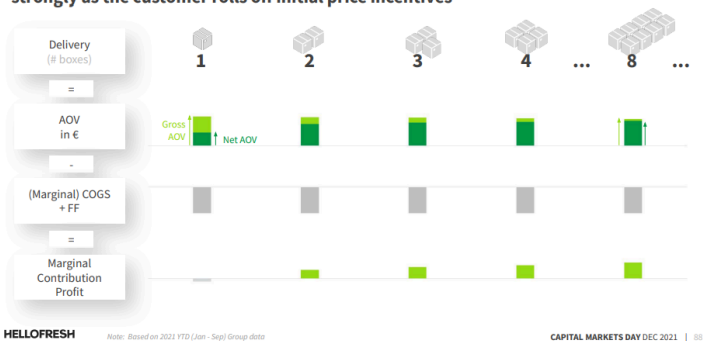
COMPANY CLTV CALCULATION

In its CMD presentation in December 2021, management also disclosed Exhibit 118 and Exhibit 119 as an attempt to show its positive customer economics. However, we remain unconvinced and do not think this disclosure contradicts our analysis. **The big problem is that HelloFresh looks at the issue at a contribution margin level, therefore failing to account for marketing & SG&A (20% of sales), and the CAC.**

- Exhibit 118 only **shows the profitability to the contribution margin level**, therefore failing to consider the high cost of marketing (15%) and SG&A (4%). It is not a particularly useful representation of customer profitability.
- **Even at 40% discount (potentially order#2), HelloFresh can still turn a profit at the contribution margin level** (see Exhibit 116), which shows that order#2 can still be heavily discounted and "profitable" at a contribution margin level. This is because it is selling a commoditized product at significant markups (60-140% more expensive), which leads to very strong gross margins. This means that Deliveries 2 and 3 in Exhibit 118, even if heavily discounted, will show a marginal contribution profit. It also means that Delivery 1 in its exhibit is shown to be at a discount of 50-60% on average, highlighting the high levels of discounting on the first order. We would also disagree that orders 2, 3, and 4 lead to improved marginal contribution profit when many of the introductory offers are 60% off on the first box and 40% off on the subsequent three boxes (with that offer, there would be no change to profit over orders 2, 3, and 4).
- **Exhibit 118 also fails to consider high churn levels**, which means that the cumulative lifetime value or cumulative marginal contribution profit is not as attractive, given that many customers drop out somewhere between their first and fourth order.
- Looking at the **CAC payback period**, disclosed in the 2021 CMD (see Exhibit 119), we also challenge the analysis because it again is only at a contribution margin level (omitting wider marketing spend costs and SG&A), the calculation of CAC is unclear (which marketing costs does it account for?), and the pandemic might've been a boost (significant operating leverage on marketing spend and capacity constraints). **We don't think this CAC payback period disagrees with our analysis. If we stripped out marketing spend and SG&A, our CLTV:CAC ratio would be 1.8x, but marketing spend as a percentage of revenue would only be 3.3%** (see Exhibit 120).

EXHIBIT 118: HelloFresh's "CLTV" disclosure fails to consider marketing, SG&A, and high levels of churn

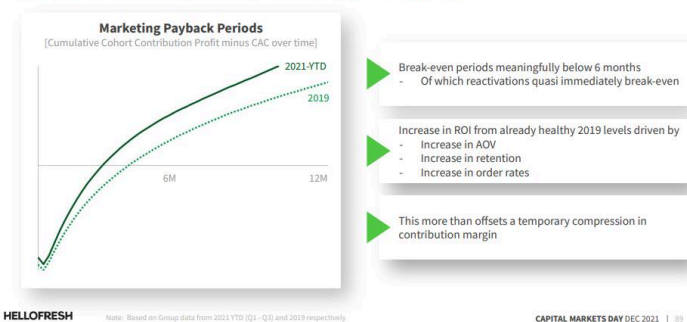
We realise a positive contribution profit from the 2nd order onwards, increasing strongly as the customer rolls off initial price incentives



Source: Company reports

EXHIBIT 119: Marketing payback periods are improving, but the pandemic has been a boost; the analysis only includes fulfillment and procurement expenses, and the CAC calculation is unclear

Our time to breakeven and ROI of our growth marketing expenditure has further improved vs. an already strong pre-pandemic benchmark



Source: Company reports

EXHIBIT 120: Excluding marketing spend & SG&A, CLTV:CAC ratio would be 1.8x, but this fails to account for significant costs

Gross revenue per order	€ 62	€ 62	€ 62	€ 62	Full price for 2 people, 3 meals in the US
Discount	-€ 37	-€ 19	-€ 12	-€ 12	Calculation
% discount	60%	30%	20%	20%	Bernstein calculation
Net / reported revenue per order	€ 25	€ 43	€ 50	€ 50	Reported AOV ~50 EUR
Frequency per year	1	16	16	16	Reported order frequency
Contribution margin %	27%	27%	27%	27%	Avg. achieved CM % over last few years
Retention marketing spend %		0%	0%	0%	Backcalculated based on CAC to achieve target marketing spend
SG&A %	0%	0%	0%	0%	Reported SG&A
Contribution	€ 13	€ 214	€ 214	€ 214	Calculation
Net retention rate		30%	25%	20%	Bernstein calculation
Net contribution	€ 7	€ 64	€ 54	€ 43	Calculation
Discount rate				8%	
3 year CLTV inc. discounting (NPV)				€ 135	Calculation
Customer Acquisition Cost (CAC)	€ 75				
CLTV:CAC				1.8x	Calculation
Total marketing spend modelled				3.3%	Reported marketing spend ~15%

Source: Company reports, and Bernstein estimates and analysis

WOULD YOU PAY 2X, 3X, OR 4X MORE TO EAT?

Putting HelloFresh's high price points into context

OVERVIEW

One of our key arguments against the long-term sustainability of HelloFresh is the relative expense of a meal kit vs. cooking from scratch and the limitations on the TAM. In this chapter, we look at the different recipes available over a five-week period and compare them to the cost of cooking from scratch. We're also often asked about our thoughts on the proposition in terms of recipes (variety and breadth) and the cost of the proposition, which we dive into in depth in this chapter.

- **Expensive and unaffordable.** HelloFresh is ~125-300%+ more expensive than cooking from scratch. On average, a HelloFresh meal for two people costs £3.90 to cook vs. £11.60 for the meal kit box. This limits the TAM to the top two quintiles of earners at a maximum and those who are least price-sensitive/elastic. Given the pressures on global consumer spending and the high cost of the product, we are very concerned about trading down over the next 12 months.
- **Gross margins are high but should be higher.** HelloFresh achieves a +65% gross margin vs. a supermarket at 25-30%. HFG's procurement costs are roughly £3.70 vs. £3.90 (retail price). Compared with a retailer's COGS, HelloFresh's are +35% higher than a grocer. This could present long-term upside, but inflation and discounting will pressure margins in the short term.
- **Reducing prices by not passing on inflation is not enough.** To open the TAM and be competitive vs. grocers, HFG prices would need to be reduced by 30-50%. We've had even more discounting — salespeople at the door (60% off), 15% off for a year, and low ROI tube advertising! Pushing discounts to prop up sales is not a good thing.
- **Value proposition is good.** Lots of new flavors and recipes each week. Number of repeat recipes is limited. More work could be done to vary themes (e.g., cheesy caramelized pork/chicken) and to bring in more dietary alternatives.

KEY CONCLUSIONS

In this chapter, we deconstruct the price of a HelloFresh box vs. the alternative of cooking from scratch (using ingredients bought from a supermarket). Our view that the long-term HelloFresh TAM is limited by affordability is reinforced by this analysis with **the cost of a HelloFresh meal being ~125-300%+ more expensive than cooking from scratch** (see Exhibit 122). Even if you were forced to buy whole items (e.g., one kilo of rice for a 200g recipe and a whole jar of redcurrant sauce for a serving), HelloFresh meals would still be more expensive on average at 20-30%+ (see Exhibit 123). **On average, a HelloFresh meal**

BERNSTEIN

costs £3.90 to cook from scratch vs. £11.60 for one meal for two people using a HelloFresh box (see Exhibit 121). This reinforces our view that HelloFresh is an expensive product, that the TAM is limited to the top two quintiles of the population at maximum, and that during a period of inflation, you would expect to see trading down to supermarkets as a way to save money and offset inflationary pressures. To become more affordable, HelloFresh has not historically passed on inflation as much as supermarkets, thereby making its product relatively more affordable over 2016-21. However, not passing on inflation is not enough to make the product more affordable. We think HelloFresh would need to reduce its prices by over 30-50% to become price competitive (which would significantly hurt margins). Price is the most important metric in grocery competition, and almost all excess returns on pricing are competed away in a traditional grocery model. We struggle to see HelloFresh's pricing strategy to be sustainable in the medium-to-long term.

- **Methodology:** We take the current HelloFresh meal box pricing of £33.48 for three meals for two people (£28.49 cost of box and £4.99 delivery cost). We then get to a cost per meal (i.e., for two people) of £11.16. We then take the ingredients and quantities as listed on the HelloFresh website and gather prices for similar items from Tesco's website. We take a mix of private label and branded products depending on the type of product. We don't take the economy private label price but typically aim for a mid-priced product. We create two measures: (1) adjusting for quantity used in the recipe (e.g., 50% of a 500g bag of rice to represent the 250g used in the recipe); and (2) buying whole items for recipes (e.g., attributing the full cost of a 500g bag of rice for a recipe that only uses 250g).

GROSS MARGIN AND BUYING SCALE ARE KEY TOPICS FOR MANY INVESTORS

Many would argue that over time, HelloFresh should be able to leverage its scale to improve its gross margin and compete with grocers more effectively. We remain unconvinced on a scale basis that the volume that a supermarket buys is significantly larger than HelloFresh. HelloFresh bought food worth only €1Bn in the US in FY21, whereas Kroger bought up to 40x as much. **HelloFresh is currently at ~65% gross margin vs. a supermarket at 25-30%.** We question why HelloFresh isn't making a higher gross margin when **its procurement costs per order are roughly £3.79 vs. the cost of buying the items at a supermarket of £3.90** (see Exhibit 124). If you assume that a supermarket is also making a 28% gross margin on its products, then **HelloFresh's COGS is approximately +35% more than a supermarket's COGS.** While this might suggest there is room to improve gross margin, we still think HelloFresh is not big enough to drive scale and has fragmented sourcing (e.g., small scale in Phoenix and New Jersey) (see Exhibit 124).

DISCOUNTING LEVEL APPEARS TO BE INCREASING

As a team, we're hypersensitive to any HelloFresh offer, but over the last few weeks, I've had a traveling salesperson turn up at my door to sell me 60% off and 35% off for a month, we've seen more tube advertising (which is low ROI above-the-line (ATL) advertising that D2C brands shouldn't engage in), and recently we got an offer through our work "perks" scheme to get 50% off and then 15% off for the next year (see Exhibit 127 and Exhibit 128). This level of discounting is clearly going to prop up the top line, but we don't think it is sustainable in the long term.

BERNSTEIN

- When I told the salesperson at the door that I had already signed up to HelloFresh and therefore the offer probably wasn't relevant, I was told that I **should just sign up with different email addresses**. They encourage many people to sign up multiple times to take advantage of the discounts. We think if you were to audit the HelloFresh customer base and the real number of gross adds, it would be potentially a lot lower. Good for the TAM (not quite as penetrated as expected), but bad for the health of the underlying customer base.

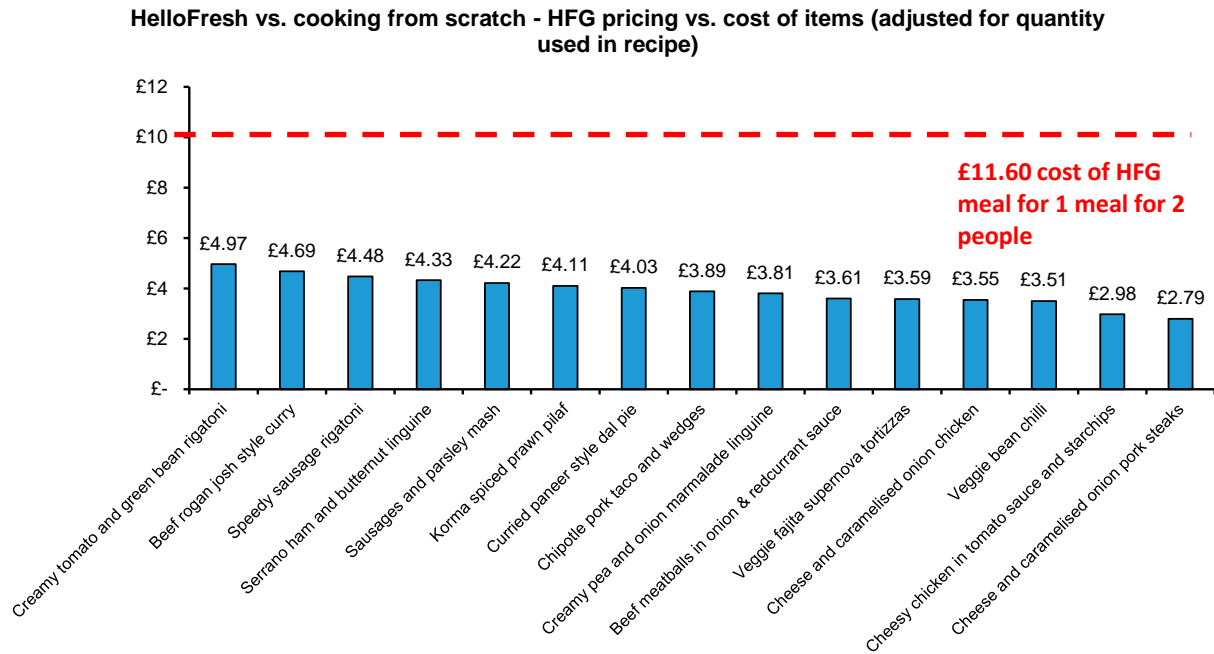
RANGE OF MEALS ON OFFER IS
RELATIVELY BROAD AND GOOD

There are 38 recipes on offer in the UK each week (see Exhibit 125), which we think offers customers a strong range of choice, and we don't think HelloFresh needs to extend this out to more recipes (at the expense of additional complexity). **Repeated meals are relatively limited, with only three to six meals (8-16% recipes) being repeated each week** (see Exhibit 125), which we think is important to keeping the proposition fresh and interesting. These are typically branded as "customer favorites" and are often on offer for several weeks running (e.g., for the five weeks that we looked at, the halloumi and roasted pepper rigatoni was on offer for all five weeks, and a Thai style pork rice bowl was on offer for four weeks).

- Although the number of repeated meals is relatively limited, when using HelloFresh for a long period, **several repetitive concepts are recycled** (see Exhibit 129). While we don't think this is necessarily a bad thing (in reality, if you were cooking for yourself/your family, you are likely limited to a small number of recipes that you repeat). However, we think when there is such a high premium for the product, that a choice fatigue can set in with many of the recipes being similar in nature. For example,
 - Cheese and caramelized onion pork steaks are replaced by cheese and caramelized chicken, which is basically the same. Or the cheesy Mexican style beef hash becomes the cheesy Mexican style spiced burger. Or the curried cottage pie becomes classic cottage pie.
 - Pasta fatigue: Of the 38 recipes on offer, seven or eight are typically pasta-based each week.
- The types of meals have expanded recently with several different varieties, which charge a premium vs. the standard offer. These categories allow for additional AOV expansion, but are limited by the TAM (given the relative expense of the product anyway), and add additional complexity with limited volume expected to be going through these recipes. The categories include Premium (£2.99 extra per serving), Street Food (£1.65-£2.99 extra per serving), Dinner & Dessert (£4.49 extra per serving), Gastropub (£2.99 extra per serving), Steak Night (£3.49-£3.99 extra per serving), Ultimate (£0.99-£1.49 extra per serving), and Premium Plus (£5.99 extra per serving).
- **Special meals: HelloFresh has several different meals on offer catering to different diets.** There are typically eight or nine vegetarian meals as well as six Weight Watchers meals. This is good because it opens the TAM to a wider range of customers. Adding more specialist dietary requirements could open the TAM further, but add significant complexity to the business.

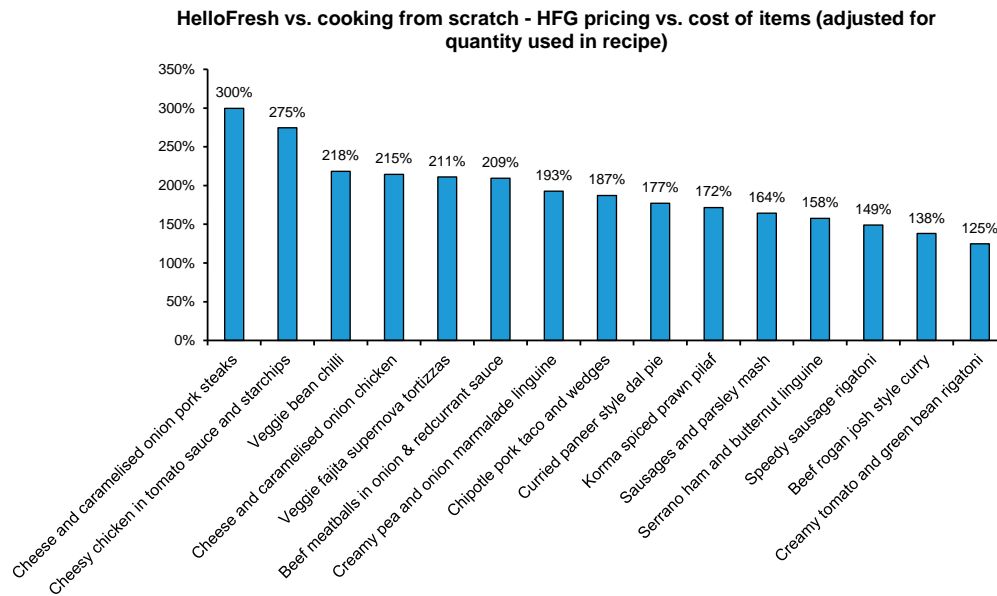
BERNSTEIN

EXHIBIT 121: **Cost of cooking from scratch for HelloFresh recipes**



Source: Tesco website, company website, and Bernstein analysis

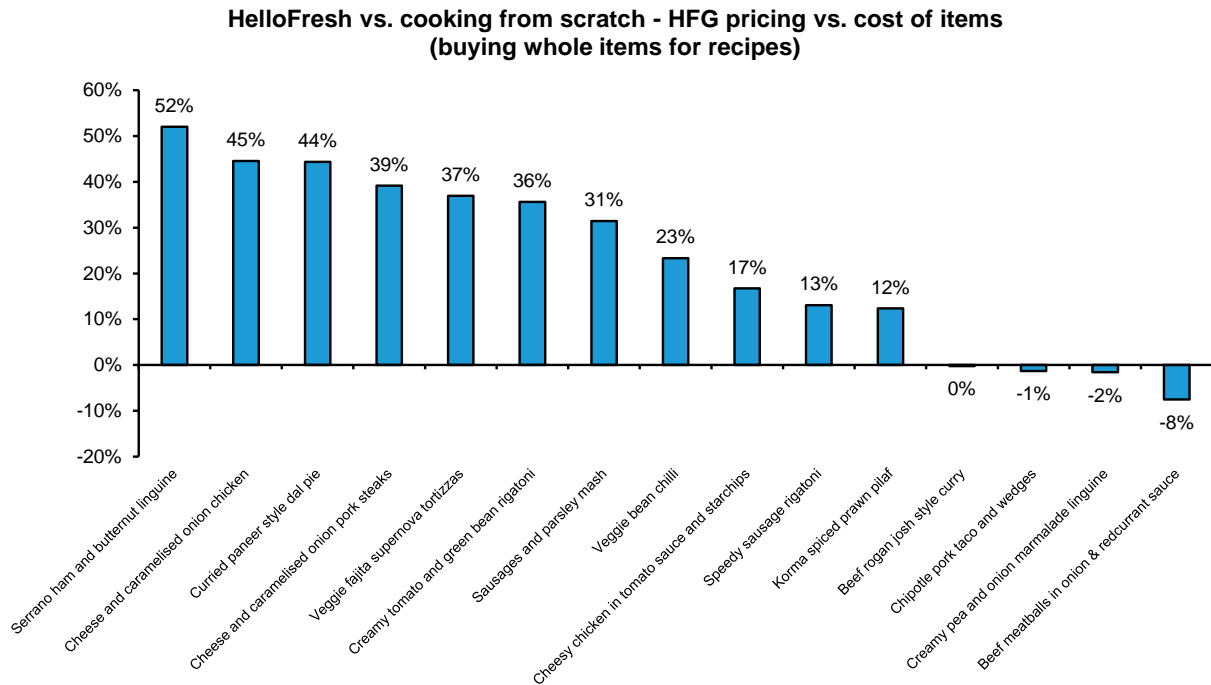
EXHIBIT 122: **Premium of HelloFresh meal vs. cooking from scratch (adjusted for recipe quantities)**



Source: Tesco website, company website, and Bernstein analysis

BERNSTEIN

EXHIBIT 123: **Premium of HelloFresh meal vs. cooking from scratch (buying whole items)**



Source: Tesco website, company website, and Bernstein analysis

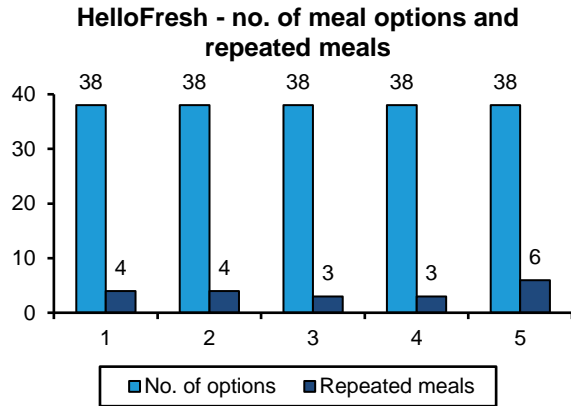
EXHIBIT 124: **HelloFresh COGS breakdown vs. retail COGS**

Metric	Value
Average HFG meal cost	£11.16
HelloFresh's cost of procurement	34%
COGS (HelloFresh)	£3.79
Bernstein bottom up (Retail pricing)	£3.90
HFG COGS vs. buying at a supermarket	-3%
Retail gross margin %	28%
Retail COGS	£2.81
HFG vs. retail COGS	35%

Source: Company website and Bernstein analysis

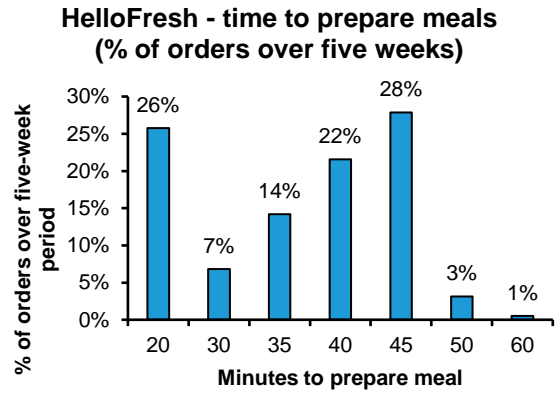
BERNSTEIN

EXHIBIT 125: HelloFresh – number of meals on offer and repeated meals



Source: Company website and Bernstein analysis

EXHIBIT 126: HelloFresh time to prepare meals



Source: Company website and Bernstein analysis

EXHIBIT 127: Perks at Work HelloFresh offer – 15% off on next 52 boxes!

Meal Kit Delivery Services

Healthy eating meets convenience - get amazing recipes with pre-measured ingredients delivered to your door.

Save 50% Off Your First Order and 15% Off Next 52 Boxes + Earn 3,500 WOWPoints

[Access Savings](#)

Source: Perks at Work email

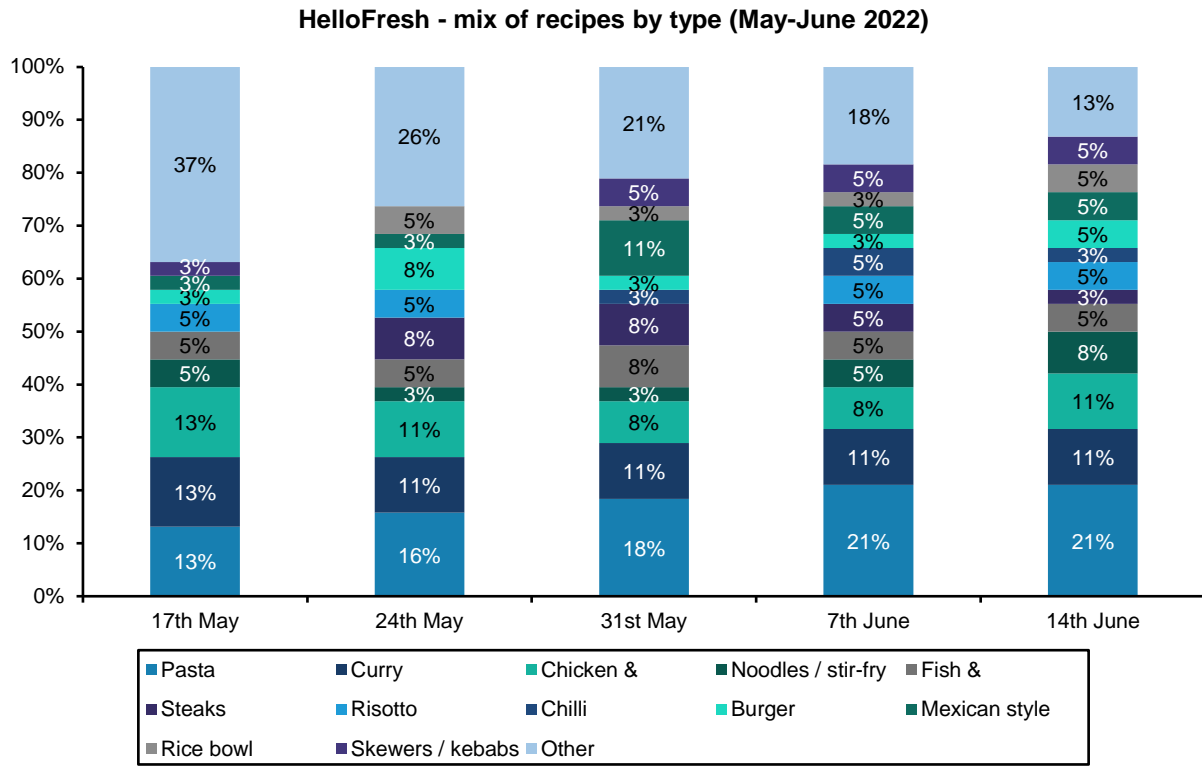
EXHIBIT 128: HelloFresh London tube advertising – 60% off and 35% off on next three boxes



Source: Bernstein photo

BERNSTEIN

EXHIBIT 129: HelloFresh recipes by type



Source: Company websites and Bernstein analysis

BERNSTEIN

EXHIBIT 130: Detailed HelloFresh ingredients by recipe and supermarket prices

Recipe	Ingredient	Weight	Price per ingredient	Item weight	% used in recipe	Weighted price
Cheese and caramelised onion chicken	Potatoes	450g	£1.19	1kg	25%	£0.45
Cheese and caramelised onion chicken	Green beans	150g	£0.77	220g	68%	£0.53
Cheese and caramelised onion chicken	Cheddar	30g	£2.50	400g	8%	£0.19
Cheese and caramelised onion chicken	Onion marmalade	40g	£1.00	295g	14%	£0.14
Cheese and caramelised onion chicken	Garlic	2	£0.25	Bulb	20%	£0.05
Cheese and caramelised onion chicken	Chicken fillet	2	£2.20	300g	100%	£2.20
Beef meatballs in onion & redcurrant sauce	Potatoes	450g	£1.00	1kg	45%	£0.45
Beef meatballs in onion & redcurrant sauce	Garlic clove	2	£0.25	Bulb	20%	£0.05
Beef meatballs in onion & redcurrant sauce	Italian style herbs	1 sachet	£1.00	18g	20%	£0.20
Beef meatballs in onion & redcurrant sauce	Panko breadcrumbs	10g	£2.00	180g	6%	£0.11
Beef meatballs in onion & redcurrant sauce	Beef mince	240g	£1.79	250g	100%	£1.79
Beef meatballs in onion & redcurrant sauce	Red onion	0.50	£0.21	1.00	50%	£0.11
Beef meatballs in onion & redcurrant sauce	Cheddar cheese	30g	£2.50	400g	8%	£0.19
Beef meatballs in onion & redcurrant sauce	Broccoli fillets	200g	£0.52	375g	53%	£0.28
Beef meatballs in onion & redcurrant sauce	Red wine stock paste	1 sachet	£1.30	4.00	25%	£0.33
Beef meatballs in onion & redcurrant sauce	Redcurrant jelly	25g	£1.50	340g	7%	£0.11
Sausages and parsley mash	Bell pepper	1	£0.48	1.00	100%	£0.48
Sausages and parsley mash	Red onion	1	£0.21	1.00	100%	£0.21
Sausages and parsley mash	Chantenay carrot	225g	£0.04	1.00	300%	£0.12
Sausages and parsley mash	Caribbean style jerk	1 sachet	£1.25	51g	20%	£0.25
Sausages and parsley mash	Caramelised onion sausages	4	£2.75	6.00	67%	£1.83
Sausages and parsley mash	Potatoes	450g	£1.00	1kg	45%	£0.45
Sausages and parsley mash	Chicken stock paste	10g	£1.19	4.00	25%	£0.30
Sausages and parsley mash	Mango chutney	1 sachet	£1.10	230g	10%	£0.11
Sausages and parsley mash	Flat leaf parsley	1 bunch	£0.47	30g	100%	£0.47
Korma spiced prawn pilaf	Basmati rice	150g	£1.85	1kg	15%	£0.28
Korma spiced prawn pilaf	Vegetable stock paste	10g	£1.19	4.00	25%	£0.30
Korma spiced prawn pilaf	Green beans	80g	£0.77	220g	36%	£0.28
Korma spiced prawn pilaf	Carrot	1	£0.48	1.00	100%	£0.48
Korma spiced prawn pilaf	Lime	0.5	£0.17	1.00	100%	£0.04
Korma spiced prawn pilaf	Coriander	1 bunch	£0.47	30g	100%	£0.47
Korma spiced prawn pilaf	King prawns	150g	£1.99	150g	100%	£1.99
Korma spiced prawn pilaf	Low fat natural yoghurt	75g	£0.85	500g	15%	£0.13
Korma spiced prawn pilaf	Onion marmalade	40g	£1.00	295g	14%	£0.14
Korma spiced prawn pilaf	Garlic clove	1	£0.25	Bulb	20%	£0.05
Korma spiced prawn pilaf	Korma style paste	1 sachet	£1.35	200g	20%	£0.27
Cheesy chicken in tomato sauce and starchips	Potatoes	450g	£1.00	1kg	45%	£0.45
Cheesy chicken in tomato sauce and starchips	Green beans	200g	£0.77	220g	90%	£0.77
Cheesy chicken in tomato sauce and starchips	Chicken breast	150g	£2.20	300g	50%	£1.10
Cheesy chicken in tomato sauce and starchips	Shallot	1	£1.20	400g	10%	£0.12
Cheesy chicken in tomato sauce and starchips	Garlic	2	£0.25	Bulb	20%	£0.05
Cheesy chicken in tomato sauce and starchips	Cheddar cheese	30g	£2.50	400g	8%	£0.19
Cheesy chicken in tomato sauce and starchips	Tomato passata	1	£0.45	1.00	1%	£0.00
Cheesy chicken in tomato sauce and starchips	Chicken stock paste	10g	£1.19	4.00	25%	£0.30
Cheese and caramelised onion pork steaks	Potatoes	450g	£1.00	1kg	45%	£0.45
Cheese and caramelised onion pork steaks	Pork steak	2	£1.50	4 (640g)	50%	£1.50
Cheese and caramelised onion pork steaks	Broccoli	1	£0.52	375g	100%	£0.52
Cheese and caramelised onion pork steaks	Mature cheddar cheese	30g	£2.50	400g	8%	£0.19
Cheese and caramelised onion pork steaks	Onion marmalade	40g	£1.00	295g	14%	£0.14
Speedy sausage rigatoni	Pork sausage meat	225g	£2.20	375g	60%	£1.20
Speedy sausage rigatoni	Wheat rigatoni pasta	180g	£0.75	500g	36%	£0.27
Speedy sausage rigatoni	Balsamic vinegar	1 sachet	£1.00	250ml	10%	£0.10
Speedy sausage rigatoni	Sun dried tomato paste	1 sachet	£1.30	1.00	20%	£0.44
Speedy sausage rigatoni	Finely chopped tomatoes	1 pack	£0.45	400g	100%	£0.45
Speedy sausage rigatoni	Chicken stock paste	10g	£1.19	4.00	25%	£0.30
Speedy sausage rigatoni	Baby spinach	100g	£0.93	250g	40%	£0.37
Speedy sausage rigatoni	Grated hard Italian style cheese	40g	£1.35	50g	100%	£1.35
Veggie bean chilli	Bell pepper	1	£0.48	1.00	100%	£0.48
Veggie bean chilli	Red kidney beans	1	£0.60	400g	100%	£0.60
Veggie bean chilli	Basmati rice	150g	£1.85	1kg	15%	£0.28
Veggie bean chilli	Mexican style spice mix	2 sachets	£1.25	44g	20%	£0.63
Veggie bean chilli	Tomato puree	1 sachet	£0.40	200g	20%	£0.08
Veggie bean chilli	Vegetable stock paste	10g	£1.19	4.00	25%	£0.30
Veggie bean chilli	Finely chopped tomatoes	1 pack	£0.45	400g	100%	£0.45
Veggie bean chilli	BBQ sauce	32g	£1.15	250ml	15%	£0.17
Veggie bean chilli	Soured cream	75g	£0.75	150ml	50%	£0.38
Veggie bean chilli	Baby spinach	40g	£0.93	250g	16%	£0.15
Creamy pea and onion marmalade linguine	Hazelnuts	25g	£2.50	250g	10%	£0.26
Creamy pea and onion marmalade linguine	Panko breadcrumbs	10g	£2.00	180g	10%	£0.20
Creamy pea and onion marmalade linguine	Linguine	180g	£0.75	500g	36%	£0.27
Creamy pea and onion marmalade linguine	Garlic clove	2	£0.25	Bulb	20%	£0.05
Creamy pea and onion marmalade linguine	Onion marmalade	40g	£1.00	295g	14%	£0.14
Creamy pea and onion marmalade linguine	Vegetable stock paste	10g	£1.19	4.00	25%	£0.30
Creamy pea and onion marmalade linguine	Crème fraiche	150g	£0.95	300ml	50%	£0.48
Creamy pea and onion marmalade linguine	Peas	120g	£0.55	900g	13%	£0.07
Creamy pea and onion marmalade linguine	Grated hard Italian style cheese	40g	£1.35	50g	100%	£1.35
Creamy pea and onion marmalade linguine	Chives	1 bunch	£0.70	20g	100%	£0.70
Creamy tomato and green bean rigatoni	Onion	1	£0.10	1.00	100%	£0.10
Creamy tomato and green bean rigatoni	Green beans	150g	£0.77	220g	68%	£0.53
Creamy tomato and green bean rigatoni	Premium tomatoes	125g	£1.70	250g	50%	£0.85
Creamy tomato and green bean rigatoni	Flat leaf parsley	1 bunch	£0.47	30g	100%	£0.47
Creamy tomato and green bean rigatoni	Garlic	1	£0.25	Bulb	20%	£0.05
Creamy tomato and green bean rigatoni	Lemon	1	£1.00	1.00	100%	£1.00
Creamy tomato and green bean rigatoni	Wheat rigatoni pasta	180g	£0.75	500g	36%	£0.27
Creamy tomato and green bean rigatoni	Courgette	1	£0.40	1.00	100%	£0.40
Creamy tomato and green bean rigatoni	Vegetable stock paste	10g	£1.19	4.00	25%	£0.30
Creamy tomato and green bean rigatoni	Crème fraiche	112.5g	£1.19	300ml	50%	£0.55
Creamy tomato and green bean rigatoni	Grated hard Italian style cheese	40g	£1.35	50g	100%	£1.35
Veggie fajita supernova tortillas	Corn on the cob	2	£1.19	2.00	100%	£1.19
Veggie fajita supernova tortillas	Bell pepper	1	£0.48	1.00	100%	£0.48
Veggie fajita supernova tortillas	Green pepper	1	£0.48	1.00	100%	£0.48
Veggie fajita supernova tortillas	Tomato puree	1 sachet	£0.40	200g	10%	£0.04
Veggie fajita supernova tortillas	Mexican style spice mix	1 sachet	£1.25	44g	20%	£0.25
Veggie fajita supernova tortillas	Cheddar cheese	30g	£2.50	400g	23%	£0.56
Veggie fajita supernova tortillas	Soft tortilla	4	£1.00	8.00	50%	£0.50
Veggie fajita supernova tortillas	Natural yoghurt	50g	£0.85	500g	10%	£0.09
Beef rogan josh style curry	Green pepper	1	£0.48	1.00	100%	£0.48
Beef rogan josh style curry	Garlic clove	2	£0.25	Bulb	20%	£0.05
Beef rogan josh style curry	Ginger	1	£0.53	1.00	100%	£0.53
Beef rogan josh style curry	Basmati rice	150g	£1.85	1kg	15%	£0.28
Beef rogan josh style curry	Flaked almonds	15g	£1.50	100g	15%	£0.23
Beef rogan josh style curry	Beef mince	240g	£1.79	250g	100%	£1.79
Beef rogan josh style curry	Rogan josh curry paste	1 sachet	£2.30	283g	20%	£0.46
Beef rogan josh style curry	Tomato passata	1 pack	£0.45	1.00	100%	£0.45
Beef rogan josh style curry	Chicken stock paste	10g	£1.19	4.00	25%	£0.30
Beef rogan josh style curry	Natural yoghurt	75g	£0.85	500g	15%	£0.13
Serrano ham and butternut linguine	Butternut squash	1	£1.20	1.00	100%	£1.20
Serrano ham and butternut linguine	Red onion	1	£0.21	1.00	100%	£0.21
Serrano ham and butternut linguine	Tenderstem broccoli	80g	£1.60	200g	40%	£0.64
Serrano ham and butternut linguine	Garlic clove	1	£0.25	Bulb	20%	£0.05
Serrano ham and butternut linguine	Serrano ham	4 slices	£1.19	80g	100%	£1.19
Serrano ham and butternut linguine	Linguine	180g	£0.75	500g	36%	£0.27
Serrano ham and butternut linguine	Chicken stock paste	10g	£1.19	4.00	25%	£0.30
Serrano ham and butternut linguine	Crème fraiche	150g	£0.95	300ml	50%	£0.48
Curried paneer style dal pie	Puff pastry	1/2 roll	£1.60	320g	50%	£0.80
Curried paneer style dal pie	Onion	1	£0.10	1.00	100%	£0.10
Curried paneer style dal pie	Carrot	1	£0.04	1.00	100%	£0.04
Curried paneer style dal pie	Garlic	2	£0.25	Bulb	20%	£0.05
Curried paneer style dal pie	Brown lentils	1 pack	£0.60	390g	100%	£0.60
Curried paneer style dal pie	Paneer	1 pack	£1.40	200g	100%	£1.40
Curried paneer style dal pie	Tomato puree	1 sachet	£0.40	200g	10%	£0.04
Curried paneer style dal pie	Pasanda style seasoning	2 sachets	£1.25	44g	20%	£0.25
Curried paneer style dal pie	Coconut milk	200ml	£0.90	400ml	50%	£0.45
Curried paneer style dal pie	Vegetable stock paste	10g	£1.19	4.00	25%	£0.30
Chipotle pork taco and wedges	Garlic	1	£0.25	Bulb	20%	£0.05
Chipotle pork taco and wedges	Tomato	1	£0.75	1.00	100%	£0.75
Chipotle pork taco and wedges	Lime	0.5	£0.17	1.00	100%	£0.17
Chipotle pork taco and wedges	Cheddar cheese	30g	£2.50	400g	8%	£0.19
Chipotle pork taco and wedges	Sweetcorn	150g	£0.45	200g	50%	£0.23
Chipotle pork taco and wedges	Potatoes	450g	£1.00	1kg	45%	£0.45
Chipotle pork taco and wedges	Pork mince	240g	£1.79	500g	48%	£1.08
Chipotle pork taco and wedges	Tomato puree	1 sachet	£0.40	200g	10%	£0.04
Chipotle pork taco and wedges	Chipotle paste	1 sachet	£1.35	95g	10%	£0.14
Chipotle pork taco and wedges	Chicken stock paste	10g	£1.19	4.00	25%	£0.30
Chipotle pork taco and wedges	Plain taco tortilla	4 units	£1.00	8.00	50%	£0.50

Source: HelloFresh website, Tesco website, and Bernstein analysis

BERNSTEIN

READY, STEADY, COOK – A MEAL KIT TASTE TEST

How meal kits from different providers compare

We often get asked: "Do you like the product?" Hence, we thought we'd test out a couple of the options available to us in the UK: HelloFresh, Gousto, and Mindful Chef. Of course, we signed up with heavy discounts, which were plentiful and, in this chapter, we walk through the process, identifying the pros and cons of meal kits, and share lots of pictures of our meals.

A meal kit service includes **pre-portioned ingredients for three to five different recipes packed into a box and delivered to home.** It's meant to be easier and more varied than what you might cook yourself. Plus, there are added benefits of saving time on deciding what to cook and less wastage. All the ingredients are perfectly portioned for each meal; therefore, you don't buy too much vs. a typical grocery shop.

EXHIBIT 131: **Why HelloFresh? Reduce food waste, extensive choice, and convenience and quality**

Why HelloFresh?



Reduce Food Waste

All of our ingredients are pre-portioned based on your recipes, so you'll have no wasted food or leftovers.



Extensive Choice

Each week, you'll pick your meals from our range of recipes, so variety is always on the menu.



Convenience and Quality

Select your meal plan and pick your recipes from home. We'll deliver the ingredients and recipe cards you need to your door.

Source: Company website

BERNSTEIN

KEY CONCLUSION

WHAT DID WE THINK?

Overall, we **liked the food and thought it was a bargain with the heavy levels of discounting**. The recipes that we chose were **newish or things we wouldn't typically cook**. However, the meals typically **took a lot longer to cook** than expected, with more **complexity and clean up** than typical weekday meals. As the food retail & delivery team, we like food and cooking, and meal kits didn't work for us during the week. Plus, while we were happy with value for money at a discounted level, at full price, **it's expensive and would add maybe 30% to the weekly shopping**.

There was relatively limited differentiation between the brands. Mindful Chef was the most differentiated with a slightly more premium, better-quality offering.

The big question after trying the products was the **trade-off between convenience and value** for the target audience. We found that we were spending more time each night cooking (and the recipes typically took longer than expected). If the argument for the TAM is to target more affluent, time-poor consumers, we don't think a meal kit solution solves that problem. Ultimately, we think there's a **contradictory customer proposition at the heart of meal kits**.

Verdict: Probably wouldn't use again.

BRAND/PRICE COMPARISON

HelloFresh and Gousto are broadly aligned on price, while Mindful Chef was more expensive.

HelloFresh: We got a box for three meals for two people at 50% discount, which cost £15.99 instead of £35.99 (£6 per serving).

Gousto: We paid £20.49 for four meals for two people with 50% off. Typically, a box for three meals for two people would be £34.99 (£5.80 per serving).

Mindful Chef: We paid £39 with a £10 discount code for three meals for two people. Typically, the box would cost around £49 (£8 per serving).

RECIPE LIST

HelloFresh: (1) Baharat roasted chantenay carrot salad; (2) Roasted pepper and mushroom linguine; and (3) Crispy Szechuan tofu

Gousto: (1) One-pot creamy chicken & vegetable fricassee; (2) Spicy chicken with green quinoa and avocado; (3) Ultimate bacon cheeseburger with rosemary salted fries; and (4) Joe's Popeye's Chicken with crispy potatoes

Mindful Chef: (1) Venison with roasted chestnuts, parsnips, and carrot; (2) Thai pork meatballs with courgetti soup; and (3) West Indian red pepper and fish curry with rice

BERNSTEIN

WHAT WE LIKED

Try new things: We both enjoyed cooking things that we might never have cooked at home before. Or at the very least, using spices and ingredients that we don't use on a daily basis. We had Zanzibar spiced carrots, Szechuan tofu, Popeye's chicken, and a chicken fricassee. It made the week's food interesting vs. a typical week's meal plan.

Wide variety of choice available: Across all three players, there were 20-30 different recipes to choose from in any given week. We didn't struggle to find the several different recipes we liked.

Portion sizes: Overall, portion sizes were good, with enough food for two (and sometimes leftovers for lunch the next day). There didn't appear to be any stinginess with meat or fish (the more expensive components). Equally, there wasn't much food wastage.

Quality of ingredients: There were no issues with the quality of ingredients, with Mindful Chef standing out with very good quality meat and fish. The venison steaks stood out as great quality that you might not get in a local supermarket.

WHAT WE DIDN'T LIKE

Time taken and complexity: Most of the meals took longer to prepare than expected, with some taking over an hour to cook. They often used up three or four different dishes to cook and prepare, and required equipment that you might not use on a weekday (e.g., a spiralizer and a food processor).

Cost and value for money: While the deep discounts were attractive, it's an expensive proposition at full price for which we couldn't see the value add. Even though the food was more interesting, the trade-off of convenience and value didn't work for us.

EXHIBIT 132: **Before – bacon cheeseburger**



Source: Bernstein photo

EXHIBIT 133: **After – bacon cheeseburger with rosemary salted fries**



Source: Bernstein photo

BERNSTEIN



We tried a standard HelloFresh box consisting of three meals for two people, which we got at a 50% discount, so it was £15.99 instead of £35.99. Overall, it was a **positive experience as we got to try meals that we might not usually cook** (Szechuan, Zanzibar spiced food), and the food was of **decent quality and portion sizes**. The downside is the **packaging and the value for money**. We're conscious of how much waste we create and particularly with online orders, we get through a lot of cardboard, but we felt the HelloFresh experience was very wasteful (particularly the tiny 2-3g sachets of chili flakes). Plus, it **wasn't great value for money** (particularly with vegetarian options) — we could have easily cooked the pasta meal for four people for the same price as one HelloFresh serving.

Verdict: Enjoyed it as something to try, but won't be rushing back (particularly at full price).

WHAT WE LIKED

New flavors were interesting: I like to consider myself a relatively competent and adventurous cook, but three of the four recipes were nice surprises. Admittedly, this is because I chose the most interesting recipes, but I'd never cooked a Zanzibar curry before, nor made Szechuan tofu or Baharat spiced carrots. However, I later realized that many of these flavors and concepts are just repeated with a different spice or name — so the Zanzibar curry might become the Sri Lankan curry next week with very limited changes to the recipe.

Portion sizes were generally good: Any meal with substantial carbs (pasta and rice) was substantial and easily enough for two people. The only bit that was a slight letdown was on some of the fresh items. If you're given small carrots for a carrot-based salad, it can leave you hungry at the end of the meal.

WHAT WE DID NOT LIKE

Lots of packaging: There was lots of packaging for the box, the ingredients, and the chilled items. Even the cardboard box that the food was delivered in was big (waste that you don't get with an online grocery delivery). The ingredients themselves used lots more packaging than cooking yourself. You get individual sachets of honey, stock powder, and seasoning (see Exhibit 141 and Exhibit 142), which are often used in multiple recipes. The plastic sachets add up!

Value for money: It didn't feel very value add or good value for money on some of the meals. The pasta recipe in Exhibit 138 to Exhibit 140 was quite simple (tomato pasta with some peppers and mushrooms) and would cost around £4.50 per service at full price. We sense checked this vs. a Sainsbury's online shop, and could buy all the ingredients (except the handful of walnuts) to make double the amount for £5.84, meaning that HelloFresh was 3x as expensive.

BERNSTEIN

EXHIBIT 134: **Large cardboard box delivered, but clearly branded**



Source: Bernstein photo

EXHIBIT 135: **The box promotes the benefits of sustainability: reducing waste, lower carbon footprint, etc.**



Source: Bernstein photo

EXHIBIT 136: **Each recipe individually bagged with a clear number (linked to recipe) and chilled items in separate bag**



Source: Bernstein photo

EXHIBIT 137: **Recycled materials protecting chilled items, but it is unclear if you could recycle the packaging**



Source: Bernstein photo

BERNSTEIN

EXHIBIT 142: **We liked the new and interesting spice mixes**



Source: Bernstein photo

EXHIBIT 143: **Szechuan tofu was something we'd not cooked before**



Source: Bernstein photo

EXHIBIT 144: **HelloFresh includes a booklet of advertising with deeply discounted offers for other D2C products**



Source: Bernstein photo

EXHIBIT 145: **Finished article didn't look too dissimilar to the recipe card**



Source: Bernstein photo

GOUSTO

We tried Gousto, a private competitor to HelloFresh, for eight meals. It cost £20.49, because a 50% discount was automatically applied at the checkout — we didn't even need a voucher code.

Overall, we liked the Gousto experience. The Ultimate Bacon Cheeseburger with rosemary salted fries (who doesn't love burger and fries) was our favorite. The experience and quality were good. However, we think the relative cost of the product, the significant effort required, and the need for equipment like a food processor means that the convenience/value trade off didn't work for us.

Verdict: Convenience vs. value didn't work for us, and we probably wouldn't try it again.

BERNSTEIN

WHAT WE LIKED

Food tasted good with generous portion size: The recipes tasted good, with one-pot creamy chicken and bacon cheeseburger tying for first place. Although the ingredients were recommended for two people, we think it can easily serve three (even without the little blunder we experienced as discussed below).

Good overall packaging: The box itself was sturdy and well-designed, dividing into chilled/non-chilled section, neatly with sustainable material (including icebag) (see Exhibit 150 and Exhibit 151).

Long use by dates and better quality than expected: The meat lasted between five and eight days from the day of receipt (see Exhibit 152). This is much longer than our experience with HelloFresh, which usually expires if we don't finish them by Saturday for a Tuesday box. Longer shelf life is a huge plus for us, as it allowed us some flexibility in our meal planning throughout the week. For example, if we made plans for one evening, it meant that we didn't cook. The fresh ingredients were also of relatively good quality.

Good value at 50% discount automatically applied: We were very happy about their customer service in terms of automatically applying the 50% off our first box — we didn't even have to Google it (not that it would take long to find a discount code in this instance) (see Exhibit 153)!

WHAT WE DID NOT LIKE

Inaccurate time requirements: The indicated time requirement for each recipe assumes that the user knows each of the steps by heart and can plan efficiently between the steps. We timed our cooking from the second of starting to read the recipe to serving on plates and it turned out to be 25-70% longer (average 40-50 minutes) than the indicated time requirement. This is a big time investment, especially when you also consider the cleanup afterwards.

Packaging of ingredients is terrible: We did not take the ingredients out of recipe bags to take photos for Exhibit 147 to Exhibit 149 — they came loose in the box. While it helps reduce packaging, it becomes a bit annoying when it comes to storage and cooking, compared with HelloFresh, where ingredients for each recipe are bagged together. Apart from the fact that one would have to check against the recipe back and forth to grab the correct ingredients, it becomes a bit problematic when multiple recipes share same ingredient, such as potatoes that vary by size — and we made the mistake of using up all the potatoes between two recipes when they are in fact allocated for three.

No expiry date for fresh produce: Another problem with loose items is that we cannot ascertain the expiry date of fresh produce, which can be frustrating. In addition, there was no expiry date even for the very few that do have packaging (see Exhibit 158).

Need special equipment: Two of our recipes required special equipment as a key part of the cooking process, particularly a food processor. It adds time and complexity to the dishes, and we would imagine very few people use a food processor on a typical evening cooking (see Exhibit 159). These requirements were not visible when choosing the recipes, and one would have to delve into the details of each recipe (and deliberately look for it) in order to find the information (see Exhibit 160 and Exhibit 161). Not having the food

BERNSTEIN

processor means the user will not be able to enjoy the spicy chicken they ordered (at least not with the sauce).

EXHIBIT 146: **Our four recipes from Gousto, a marketing brochure, and the celebratory red box**



Source: Bernstein photo

EXHIBIT 147: **One-pot creamy chicken and vegetable fricassee ingredients and recipe**



Source: Bernstein photo

EXHIBIT 148: **Joe's Popeye's chicken with crispy potatoes ingredients and recipe**



Source: Bernstein photo

EXHIBIT 149: **Spicy chicken with green quinoa and avocado ingredients and recipe**



Source: Bernstein photo

BERNSTEIN

EXHIBIT 150: **Good box design with no plastic; very sturdy with recyclable cardboard separating chilled/non-chilled**



Source: Bernstein photo

EXHIBIT 151: **Sustainable icebag for chilled food**



Source: Bernstein photo

EXHIBIT 152: **Protein's shelf life ranges from five to eight days from receipt**



Source: Bernstein photo

EXHIBIT 153: **50% off on first box automatically applied**

Order total :	
Price per serving:	£4.37 £2.19
Rècipes (4)	£34.99
50% discount	-£17.49
Rècipe surcharge (1)	£2.99
Delivery	FREE
Total	£20.49
Discount code	
DTI-SB-5030	✓

Source: Bernstein photo

BERNSTEIN

EXHIBIT 154: **One-pot creamy chicken and vegetable fricassee**



Source: Company website

EXHIBIT 155: **Joe's Popeye's chicken with crispy potatoes**



Source: Bernstein photo

EXHIBIT 156: **Spicy chicken with green quinoa and avocado**



Source: Bernstein photo

EXHIBIT 157: **Loose fresh produce lumped in the box**



Source: Bernstein photo

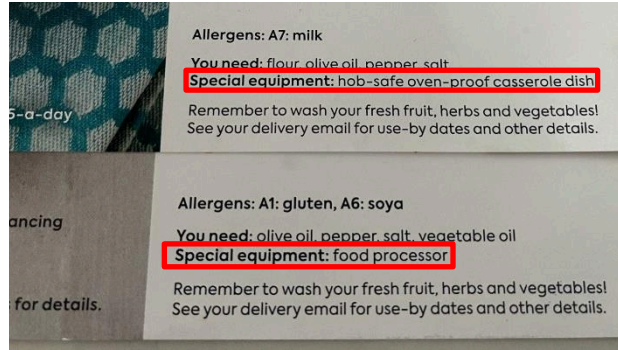
BERNSTEIN

EXHIBIT 158: **No expiry date for cherry tomatoes either**



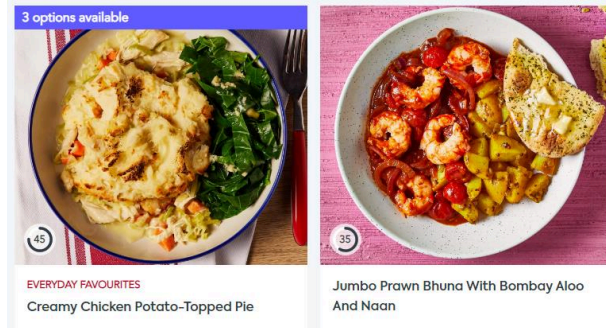
Source: Bernstein photo

EXHIBIT 159: **We would have wasted the meal and needed to look for alternative if we didn't have a food processor**



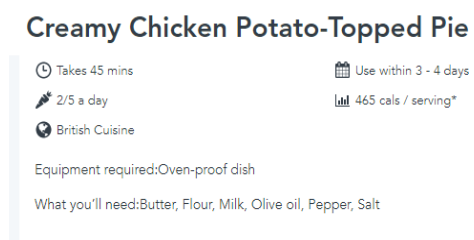
Source: Bernstein photo

EXHIBIT 160: **No sign of extra requirements when asking for meal choices...**



Source: Company website

EXHIBIT 161: **...until you click on recipe to see the details**



Source: Company website

+ MINDFUL CHEF

We tried a Mindful Chef box, which was acquired by Nestlé (covered by Bruno Monteyne). Mindful Chef positions itself as a slightly more premium brand focused on the provenance and quality of ingredients. We got three meals for two people, and it cost £39 with £10 off, typically £49 (which is significantly more expensive than HelloFresh or Gousto).

We enjoyed the Mindful Chef box and had some interesting recipes (venison steaks, pork meatball soup with courgetti, and a West Indian fish curry). The quality of the food was great (particularly the venison steaks), and we felt as though it was better quality than both HelloFresh and Gousto. However, all the meals took longer than expected to cook, and I was surprised that I needed a spiralizer (which I don't own) for one recipe.

Verdict: Highest quality and most interesting food, but expensive.

BERNSTEIN

WHAT WE LIKED

Differentiated food offer: The recipes were the most different. We really liked all three meals, particularly the venison steaks and the meatball courgetti soup. The choice on the website was also probably the broadest, and it felt like there was something for everyone.

Quality of ingredients: The fish and meat were of good quality. The venison steaks cooked very well and weren't tough. The fresh ingredients were also of good quality, including unusual ingredients such as fresh chestnuts, although it did look like the courgettes had been nibbled on by some type of animal in transit (see Exhibit 165).

Long use by dates: All the fresh meat and fish had a use by date of over a week, which was good and gave us some flexibility when planning to cook each meal.

WHAT WE DIDN'T LIKE

Time to cook and complexity of the meals: This was by far the most complex meal kit to prepare. We had to make our own courgetti, which took longer than expected. The venison meal was meant to take about 40 minutes, but it ended up taking over an hour with three different pans and things in the oven. There's no way a venison steak is done after three to four minutes, unless you like it blue.

Special equipment: We didn't realize we needed a spiralizer, which we didn't have, so we ended up having to try and peel the courgettes into strips.

Value for money and lower discounting: We were disappointed that we couldn't get as high a discount as an introductory offer, and although the meals were of good quality, they would be nearly £8 per serving at full price.

EXHIBIT 162: **Very vibrant Mindful Chef box**



Source: Bernstein photo

EXHIBIT 163: **Box promotes the benefits of sourcing, food waste, quality, and CO2 neutrality**



Source: Bernstein photo

BERNSTEIN

EXHIBIT 164: **Recipes organized into bags, with numbers linked to the recipe book and chilled items in a separate compartment**



Source: Bernstein photo

EXHIBIT 165: **Food was generally of good quality apart from some dubious looking courgettes**



Source: Bernstein photo

EXHIBIT 166: **Lots of ingredients for the venison meal – cooking the venison, cavolo nero, sauce, and vegetables separately**



Source: Bernstein photo

EXHIBIT 167: **Venison steaks were of very good quality**



Source: Bernstein photo

BERNSTEIN

EXHIBIT 168: **Portion sizes were good**



Source: Bernstein photo

EXHIBIT 169: **Thai meatball courgetti soup was tasty**



Source: Bernstein photo

EXHIBIT 170: **West Indian fish curry was well-portioned, and the fish quality was good**



Source: Bernstein photo

BERNSTEIN

PROPRIETARY US CONSUMER MEAL KIT SURVEY – PART 1

Meal kit users

OVERVIEW

We conducted a proprietary survey of 1,000 US consumers to understand their use of meal kits, brand awareness, demographics, and perceptions of the products. In this chapter, we detail the results of our survey focusing on those who have used a meal kit. Key conclusions below:

- **Our view of high TAM penetration is reinforced. 30% of respondents had used meal kits, and TAM penetration is closer to ~40%.** This is in line with our deep dive into retention, which suggested TAM penetration of 35%. HelloFresh is burning through its TAM at a rapid pace.
- **NPS is very poor at -29, with 50% of meal kit users being detractors and only 22% actively promoting meal kits.** Value for money and food wastage/packaging are the least attractive factors, while convenience of ordering and ease of cooking are the most attractive factors.
- **Discounting is a key driver of customer signups, with >50% of meal kit users citing it as a reason to choose the product.** 40% of meal kit users have reactivated once or more than once, higher than HelloFresh disclosure (potentially highlighting the issue of customers with multiple accounts).
- **Retention is still a problem. Customer relationships are not long-lived. 80% have churned at some point,** with only 17% of meal kits users as continuous users. **Only 21% have been using the service for more than six months.** HelloFresh has the worst retention relative to peers.
- **Meal kit users tend to be younger, more affluent with younger or no children.** They are time-poor, enjoying cooking but using ready meals and food delivery services more often than average. Despite being less sensitive to pricing, **more affluent consumers use discounts more, and have worse retention.**

BERNSTEIN

KEY FINDINGS

- **Population penetration is high. 30% of respondents said they had used meal kits** (see Exhibit 171). This is even higher when excluding less affluent consumers and focusing on the TAM. **TAM penetration is closer to ~40%** (see Exhibit 172 and Exhibit 174), which is in line with our detailed retention deep dive where we identified a TAM penetration of 35%. This reinforces our view that HelloFresh is burning through its TAM at a rapid pace, leading to significant challenges to long-term growth. Even if you believe in lower price elasticity/pressure for the most affluent consumers, the high penetration is concerning.
- **HelloFresh has the highest brand recognition**, with 85% of meal kit users recognizing the brand, and it is the most used brand (see Exhibit 177 and Exhibit 178). This is **closely followed by Blue Apron with 80% recognition**. HelloFresh is the largest player in the market, and we would expect strong customer recognition.
- The **smaller HelloFresh brands (EveryPlate, Green Chef, and Factor 75) all have lower brand recognition** among meal kit users (10-30%), which provides for greater growth upside, but this will require more marketing spend to increase awareness. These **brands are also cannibalistic, with 60-70% of Green Chef or EveryPlate customers having also used HelloFresh**.
- **Discounting is a key driver of customer signups, with >50%** of meal kit users citing it as a reason to choose the product (see Exhibit 179). In Chapter 6, we identified the weakness in HelloFresh's brand positioning, with heavy 40-60% introductory and reactivation discounting devaluing the brand, and average discounting being around 20%.
- **60% of meal kit users are no longer using meal kits, but 33% still say that they're using meal kits at least monthly** (see Exhibit 180). This is better than our expectations, where we would have expected churn to be higher — closer to the 90% level. However, when we put retention in the context of length of time using the product and reactivations, we can see that 40% of customers only used the product once or for the trial period (see Exhibit 182), while 40% of meal kit users have re-signed up once or more than once (see Exhibit 183). This is significantly higher than management's disclosure, which potentially highlights the issue of customers with multiple accounts taking advantage of discounts.
- **Customer relationships are not long-lived; 80% have churned at some point**, with only 17% of meal kits users not stopping the service after signing up (see Exhibit 183). Only 21% of users have been using the service for more than six months (see Exhibit 182). HelloFresh also has the **worst retention relative to other players, with only 45% still buying** (see Exhibit 181).

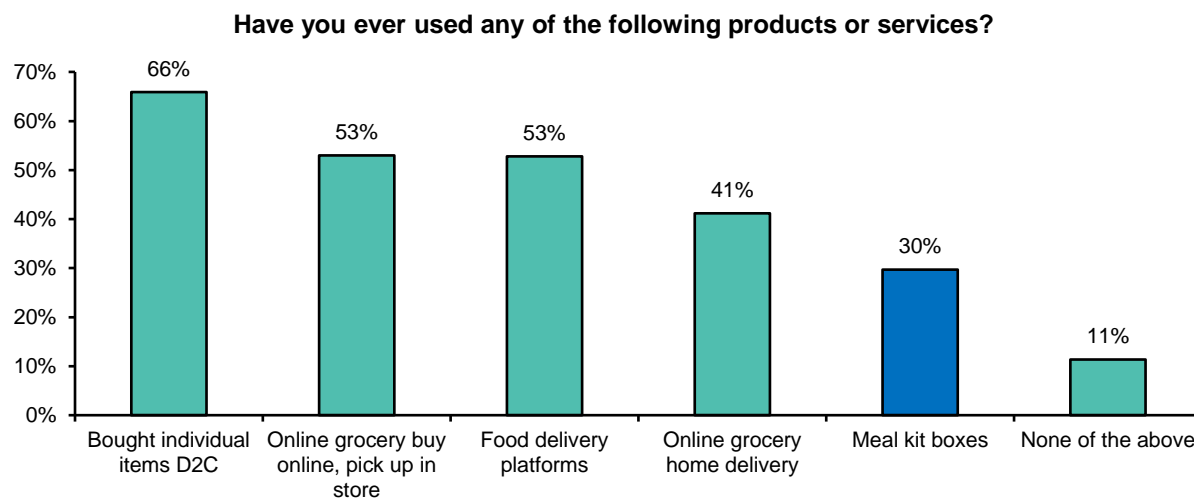
BERNSTEIN

- Although more **affluent consumers may be less sensitive to pricing, they appear to have worse churn metrics** (see Exhibit 184) **and a higher use of discounts** (see Exhibit 185). This makes us more concerned about the lack of stickiness with affluent consumers. We think the **TAM is more limited** than what management claims due to the inability of most customers to be able to afford the product (see Exhibit 173). However, the weakness to retain the core affluent demographic and the high levels of penetration are concerning to long-term growth.
- **NPS of -29 is not good**, with the majority of meal kit users being detractors (50%) and only 22% of respondents actively promoting meal kits (see Exhibit 186). **Value for money and food wastage/packaging are the least attractive factors, while convenience of ordering and ease of cooking are the most attractive factors** (see Exhibit 187). This is broadly the same as our own experience where we taste tested the product, covered in Chapter 9. 20% of meal kit users say that value for money is poor or very poor (see Exhibit 188). Most meal kit users are broadly happy with the proposition, with 66% saying food quality is good or very good, 75% liking the convenience of ordering, and 71% liking the recipe quality and variety.
- **The survey reinforces our view of meal kit demographics with a skew toward younger, higher income consumers with younger children** (see Exhibit 194 to Exhibit 196). There's a higher skew toward **people who are working from home** (see Exhibit 198), which reinforces the risk of post-pandemic reset. Regionally, the mix is **skewed toward the Northeast and the Midwest**, with the West and South being under-represented (see Exhibit 197) — this is likely driven by the growth of HelloFresh in the Northeast, and it is now opening new larger sites to help fulfill the West Coast (e.g., in Phoenix, Arizona).
- Consumers are also **more likely to be time-poor, enjoying cooking but using ready meals and food delivery services more often** (see Exhibit 199 to Exhibit 202). They are also generally more digitally savvy, with 30% typically ordering their groceries online (see Exhibit 203).

Methodology note: We conducted a survey of ~1,000 US consumers on December 1 and December 2, 2021, using the Survey Monkey Audience Panel. The responses were broadly nationally representative, weighted by gender, age, and income. 30% of participants had used meal kits, for which we present the answers below. We think this sample is adequate for our general purposes, but the small sample size and potential skew should be considered when interpreting the analysis.

BERNSTEIN

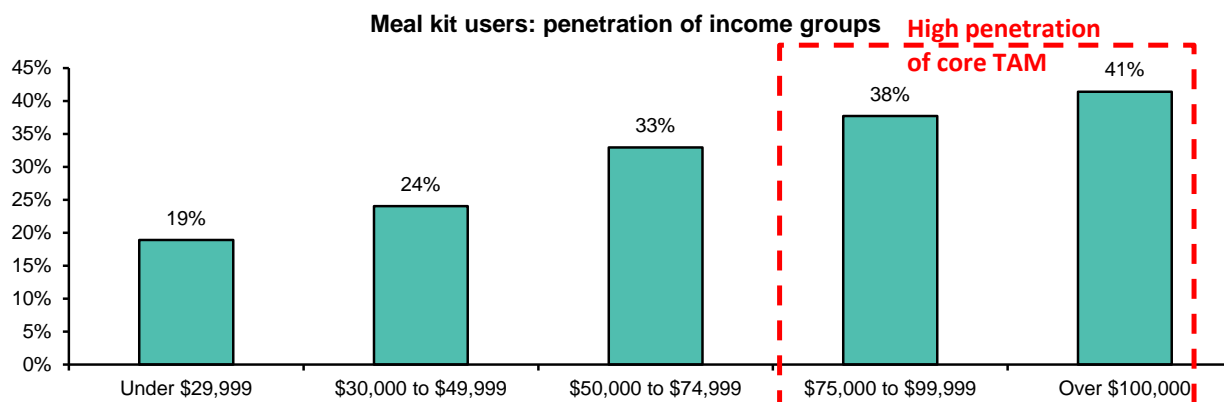
EXHIBIT 171: **30% of respondents had used meal kit boxes – in line with our TAM penetration estimates of 25-35%**



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 172: **Around 40% penetration of core demographic groups is a concern for long-term growth**



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

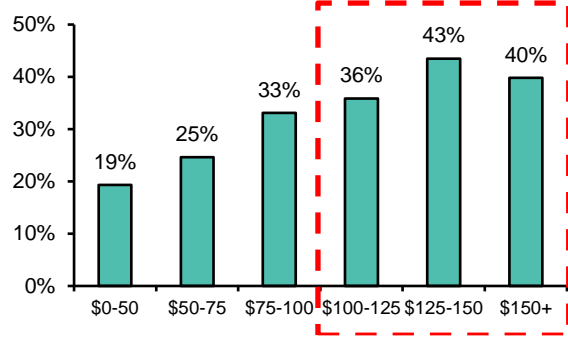
EXHIBIT 173: Even for the highest quintile of earners (US), a HFG box takes up 46% of weekly food spending

US food spending by income quintile	Food spending at home per week	HFG box (three meals, two people)
Lowest quintile	\$54	117%
2nd quintile	\$71	89%
3rd quintile	\$85	74%
4th quintile	\$100	63%
Highest quintile	\$137	46%

Source: USDA, US Census Bureau, company websites, and Bernstein analysis

EXHIBIT 174: With ~40% penetration of food spending quintiles, we think it is difficult for HFG to extend into lower income groups due to affordability

Meal kit users: penetration of consumers by food spending per week

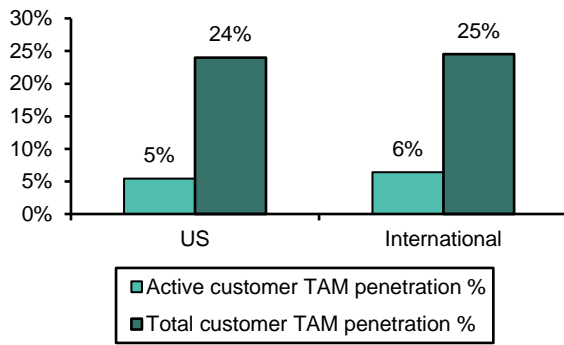


Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 175: Due to high churn, including lost customers, HelloFresh has worked its way through at least 24-25% of management's TAM

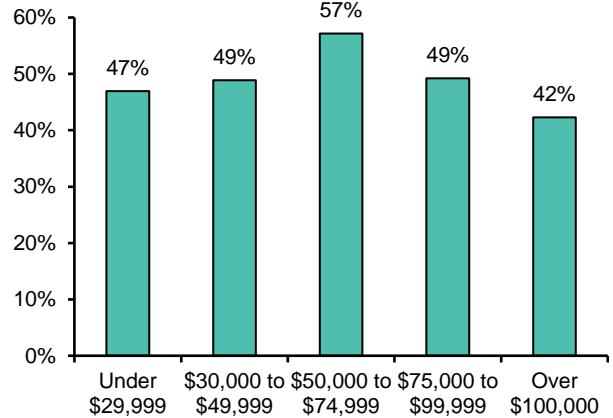
HelloFresh: Active vs. total customer TAM penetration %, Q2-21



Source: Company reports, and Bernstein estimates (all data) and analysis

EXHIBIT 176: Churn is higher for more affluent groups, with only 40-50% of consumers still using the product

Meal kit users: still using meal kits penetration by income band



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

+ MEAL KIT USERS

We conducted a survey of ~1,000 US consumers on December 1 and December 2, 2021, using the Survey Monkey Audience Panel. The responses were broadly nationally representative weighted by gender, age, and income. 30% of participants had used meal kits, for which we present the answers below. We think this sample is adequate for our general purposes, but the small sample size and potential skew should be considered when interpreting the analysis.

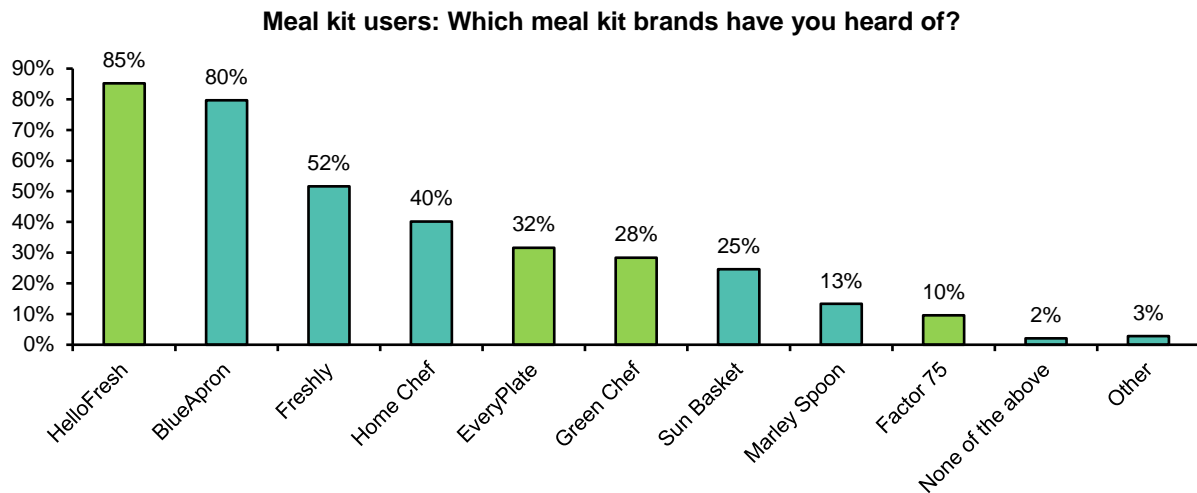
Note: We asked respondents for their perspectives on different brands. HelloFresh, Green Chef, EveryPlate, and Factor 75 are HelloFresh brands; Marley Spoon and Blue Apron are not covered; Freshly is owned by Nestlé (covered by Bruno Monteyne); Home Chef is owned by Kroger (covered by Brandon Fletcher); and Sun Basket is private (not covered).

MEAL KIT USER SURVEY RESPONSES

HelloFresh has the highest brand recognition, with 85% of meal kit users recognizing the brand, and it is the most used brand (see Exhibit 177 and Exhibit 178). This is **closely followed by Blue Apron with 80% recognition**. HelloFresh is the largest player in the market, and we would expect strong customer recognition.

The **smaller HelloFresh brands (EveryPlate, Green Chef, and Factor 75) all have lower brand recognition** among meal kit users (10-30%), which provides for greater growth upside, but this will require more marketing spend to increase awareness. These **brands are also cannibalistic, with 60-70% of Green Chef or EveryPlate customers having also used HelloFresh**.

EXHIBIT 177: HelloFresh has the strongest brand recognition; followed by Blue Apron, indicating greater potential upside vs. smaller brands, but more marketing spend required



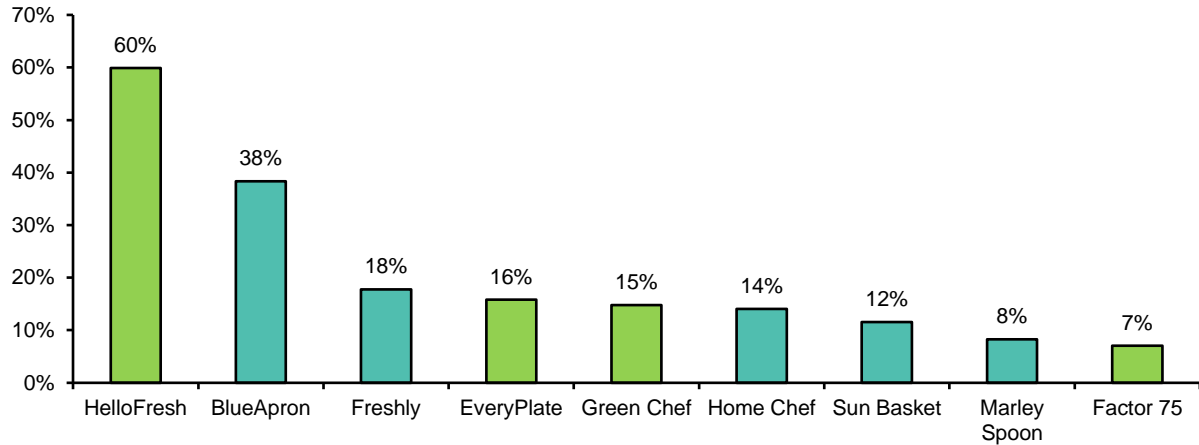
Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

EXHIBIT 178: HelloFresh was the most used meal kit at 60%, followed by Blue Apron; only ~15-16% of meal kit users had used EveryPlate or GreenChef

Meal kit users: Which meal kit brands have you used?



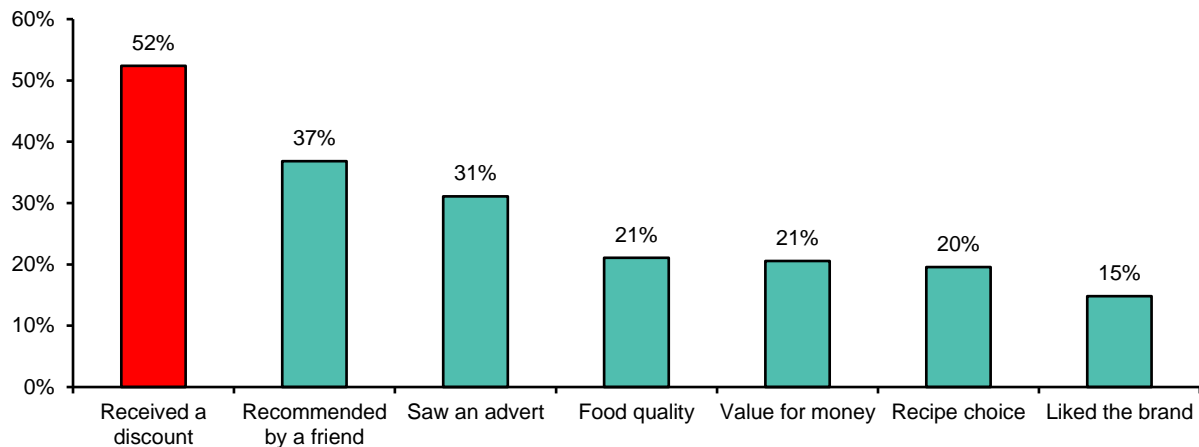
Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

Discounting is a key driver of customer signups, with >50% of meal kit users citing it as a reason to choose the product (see Exhibit 179). In Chapter 6, we identified the weakness in HelloFresh's brand positioning, with heavy 40-60% introductory and reactivation discounting devaluing the brand, and average discounting being around 20%.

EXHIBIT 179: Discounting is cited as the key driver for >50% of meal kit users

Meal kit users: Why did you choose these brands?



Note: Sample = 327

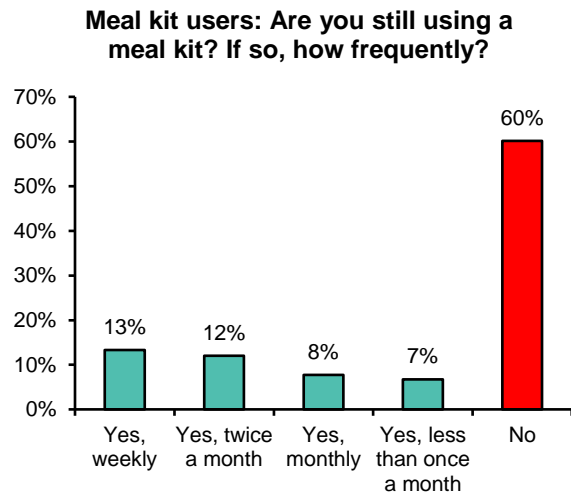
Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

60% of meal kit users are no longer using meal kits, but 33% still say that they're using meal kits at least monthly (see Exhibit 180). This is better than our expectations, where we would have expected churn to be higher — closer to the 90% level. However, when we put retention in the context of length of time using the product and reactivations, we can see that 40% of customers only used the product once or for the trial period (see Exhibit 182), while 40% of meal kit users have re-signed up once or more than once (see Exhibit 183). HelloFresh also has the **worst retention relative to other players, with only 45% still buying** (see Exhibit 181).

Customer relationships are not long-lived; 80% have churned at some point, with only 17% of meal kits users not stopping the service after signing up (see Exhibit 183). Only 21% of users have been using the service for more than six months (see Exhibit 182).

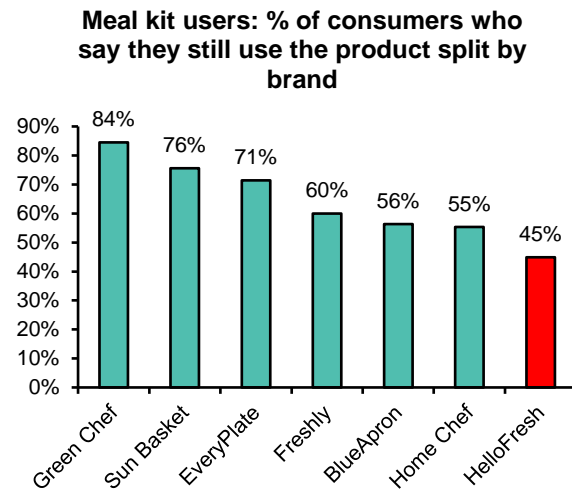
EXHIBIT 180: 60% of meal kit users are no longer using the product, but 33% say they're using it at least monthly



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 181: HelloFresh has the worst retention of all the brands, with only 45% of customers sticking around

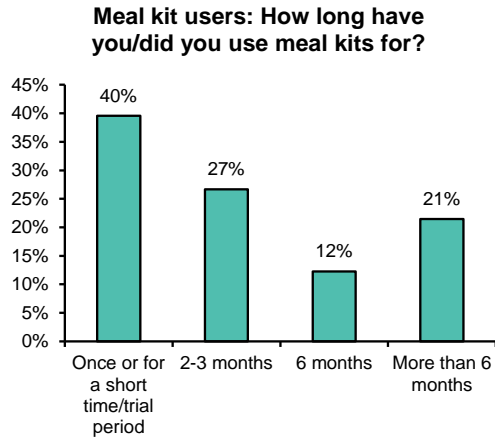


Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

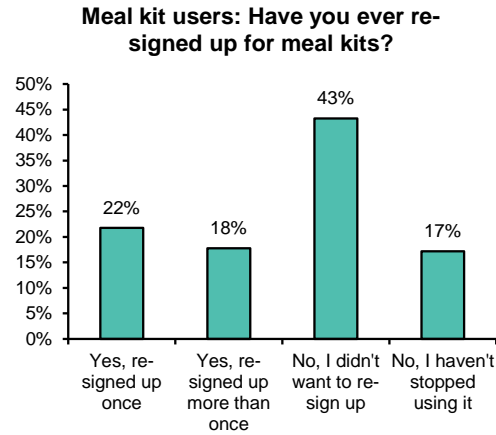
EXHIBIT 182: 40% of meal kits users only used them once or for a short time; only 21% have used them for more than six months



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 183: 40% of users have reactivated at some point, with only 17% of users having not stopped using meal kits

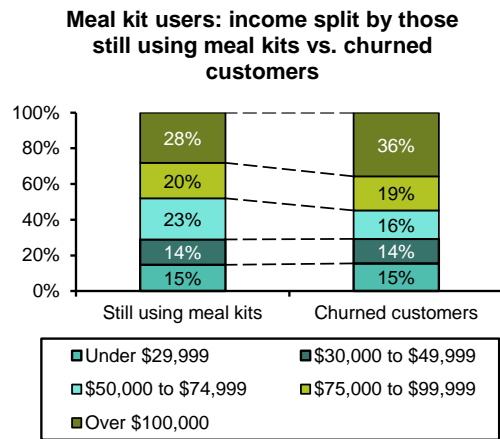


Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

Although more **affluent consumers may be less sensitive to pricing, they appear to have worse churn metrics** (see Exhibit 184) **and a higher use of discounts** (see Exhibit 185). This makes us more concerned about the lack of stickiness with affluent consumers. We think the **TAM is more limited** than what management claims due to the inability of most customers to be able to afford the product (see Exhibit 173). However, the weakness to retain the core affluent demographic and the high level of penetration are concerns for long-term growth.

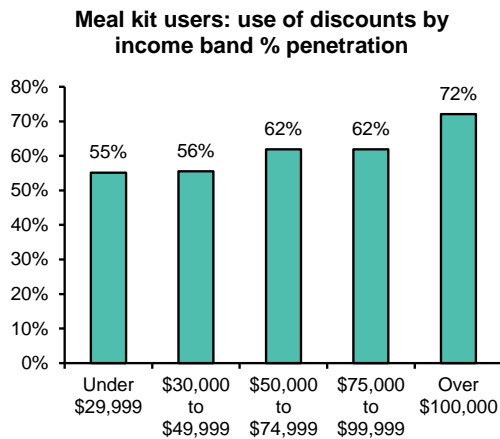
EXHIBIT 184: Churn is actually worse for more affluent consumers – over-indexing by +800 bps vs. those still using meal kits



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 185: More affluent consumers are more likely to use discounts, with 72% of those earning over \$100k using a discount



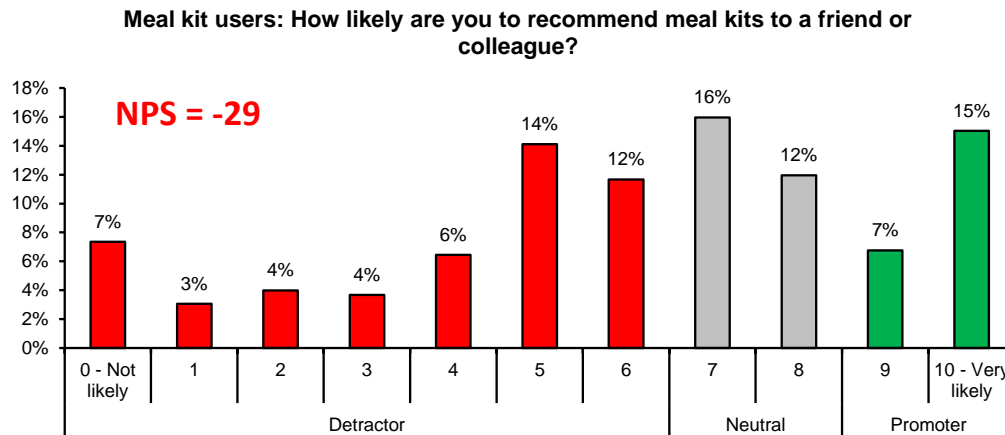
Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

An NPS of -29 is not good, with most meal kit users being detractors (50%) and only 22% of respondents actively promoting meals (see Exhibit 186). **Value for money and food wastage/packaging are the least attractive factors, while convenience of ordering and ease of cooking are the most attractive factors** (see Exhibit 187). This is broadly the same as our experience from taste tests as detailed in Chapter 9. 20% of meal kit users say that value for money is poor or very poor (see Exhibit 188). Most meal kit users are broadly happy with the proposition, with 66% saying food quality is good or very good, 75% liking the convenience of ordering, and 71% liking the recipe quality and variety.

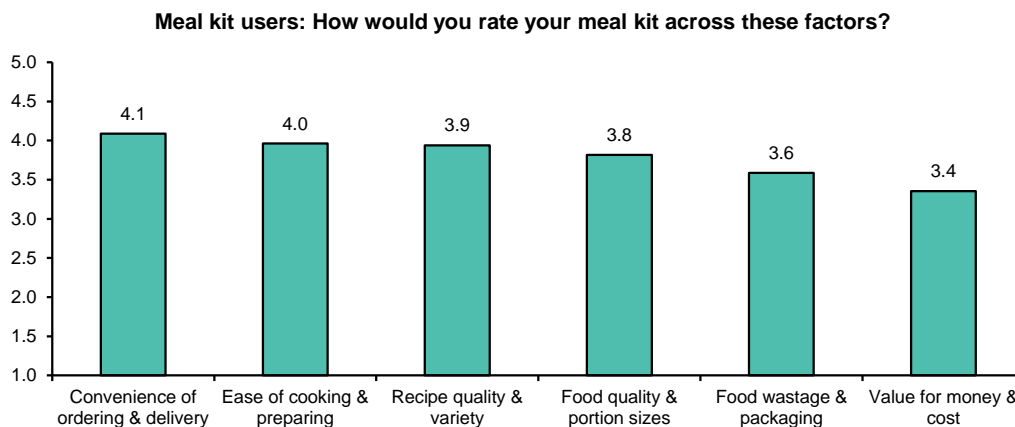
EXHIBIT 186: NPS of -29, with the majority being detractors and only 22% of respondents actively promoting meals



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 187: Value for money and food wastage/packaging are the least attractive factors, while convenience of ordering and ease of cooking are the most attractive factors



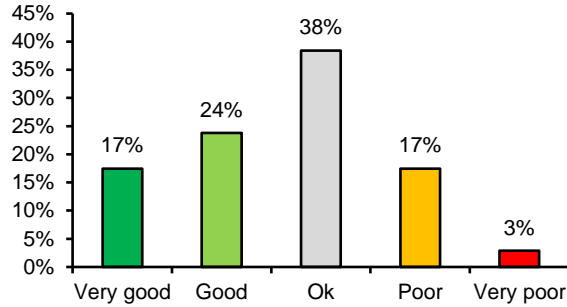
Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

EXHIBIT 188: **Rating distribution for value for money and cost**

Meal kit users: How would you rate meal kits for "value for money & cost"?

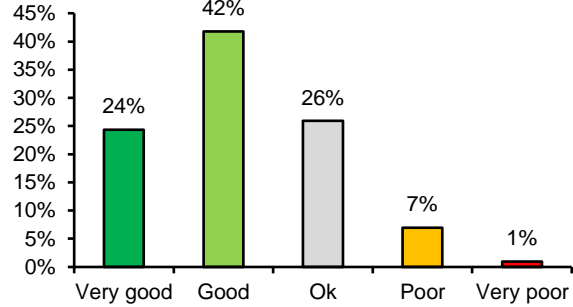


Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 189: **Rating distribution for food quality and portion sizes**

Meal kit users: How would you rate meal kits for "food quality & portion sizes"?

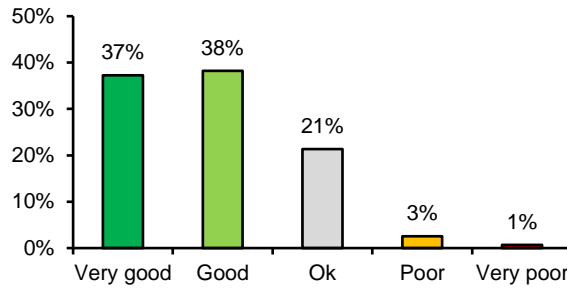


Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 190: **Convenience of ordering and delivery**

Meal kit users: How would you rate meal kits for "convenience of ordering & delivery"?

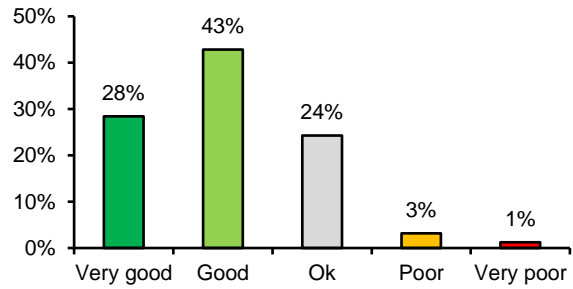


Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 191: **Recipe quality and variety**

Meal kit users: How would you rate meal kits for "recipe quality & variety"?



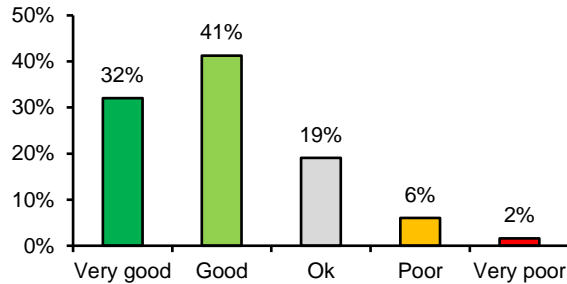
Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

EXHIBIT 192: **Ease of cooking and preparing**

Meal kit users: How would you rate meal kits for "ease of cooking & preparing"?

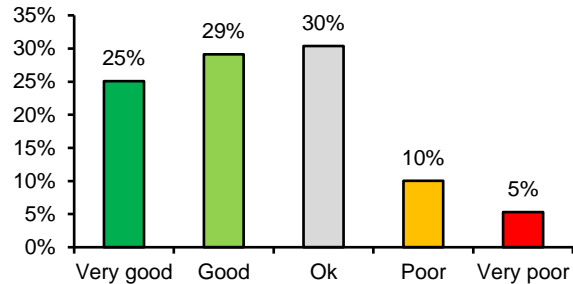


Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 193: **Food wastage and packaging**

Meal kit users: How would you rate meal kits for "food wastage & packaging"?



Note: Sample = 327

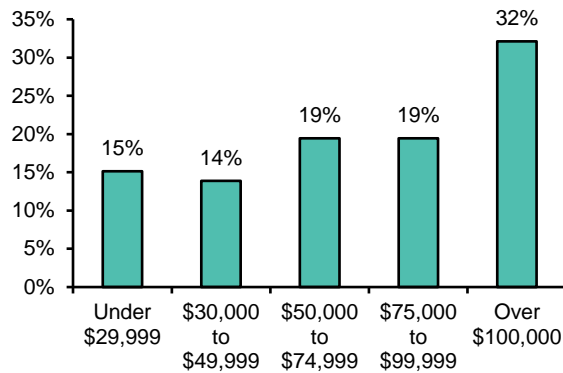
Source: Survey Monkey Panel and Bernstein analysis

MEAL KIT DEMOGRAPHICS

- The survey reinforces our view of meal kit demographics with a skew towards younger, higher income consumers with younger children** (see Exhibit 194 to Exhibit 196). There's a higher skew toward **people who are working from home** (see Exhibit 198), which reinforces our thoughts on the risk of post-pandemic reset. Regionally, the mix is **skewed toward the Northeast and the Midwest**, with the West and South being under-represented (see Exhibit 197) — this is likely driven by the growth of HelloFresh in the Northeast, and it is now opening new larger sites to help fulfil the West Coast (e.g., in Phoenix, Arizona).
- Consumers are also more likely to be time-poor, enjoying cooking but use ready meals and food delivery services more often (see Exhibit 199 to Exhibit 202). They are also generally more digitally savvy, with 30% typically ordering their groceries online (see Exhibit 203).

EXHIBIT 194: **Meal kit consumers are more affluent...**

Meal kit users: income distribution

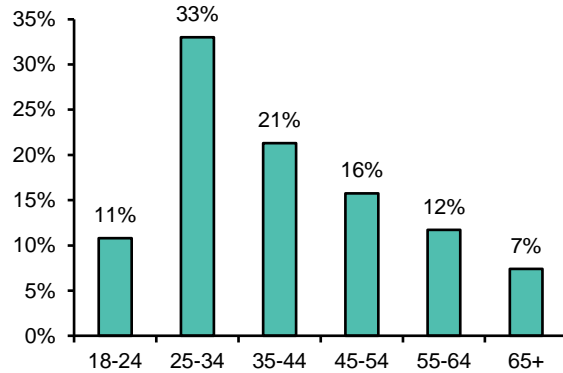


Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 195: **...and younger...**

Meal kit users: age distribution

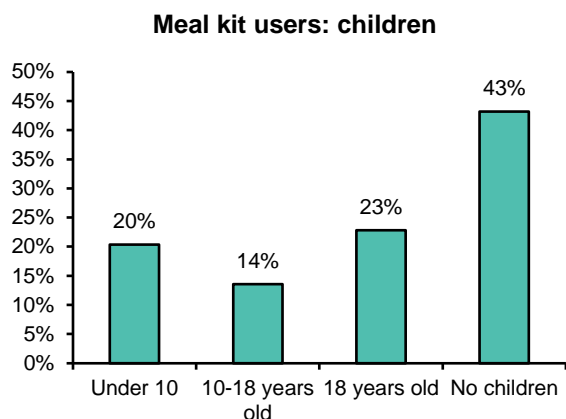


Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

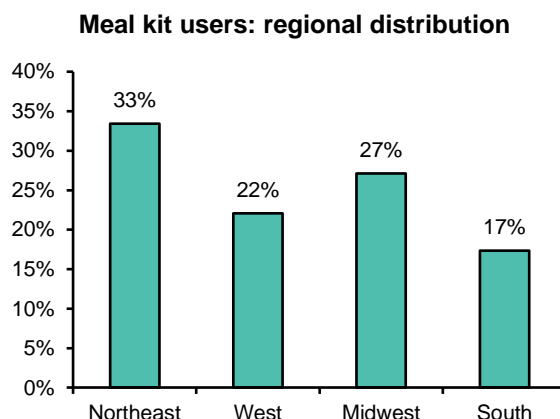
EXHIBIT 196: ...with a greater mix of people with children under 10...



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

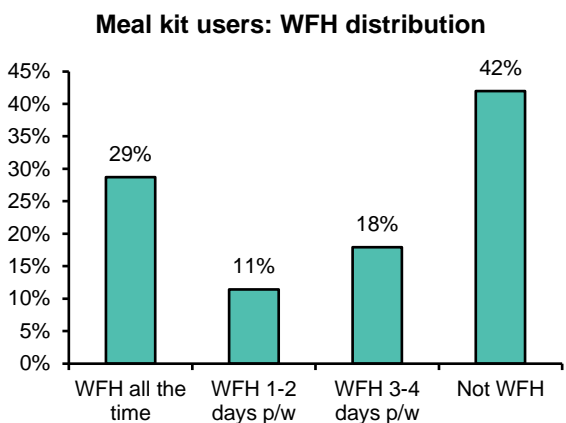
EXHIBIT 197: ...and skewed toward the Northeast and Midwest



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

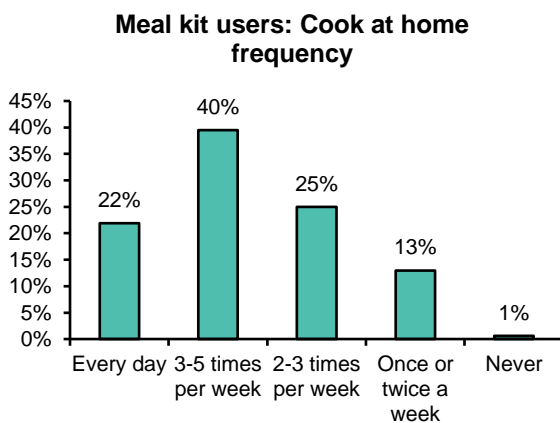
EXHIBIT 198: High skew towards WFH



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 199: Meal kit users cook at home regularly...

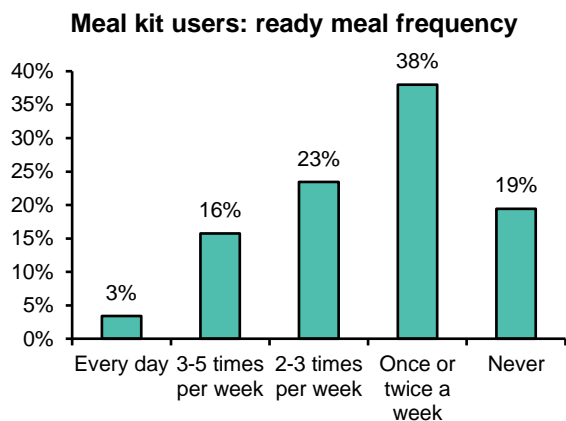


Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

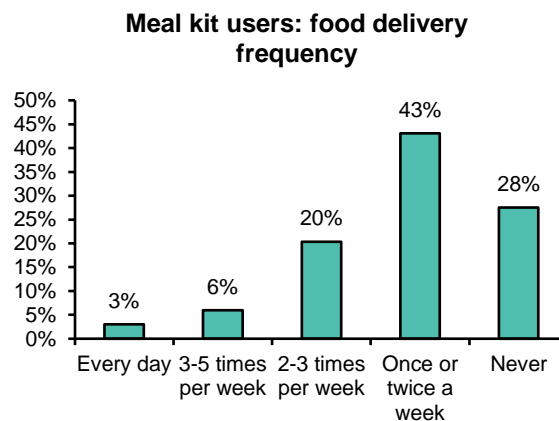
EXHIBIT 200: **...but are more likely to use ready meals**



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

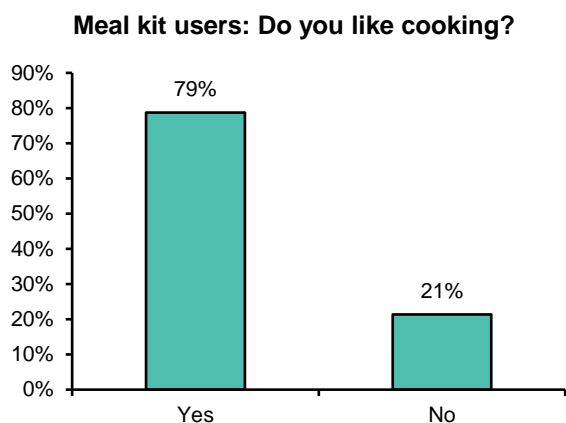
EXHIBIT 201: **...and to order food delivery regularly**



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

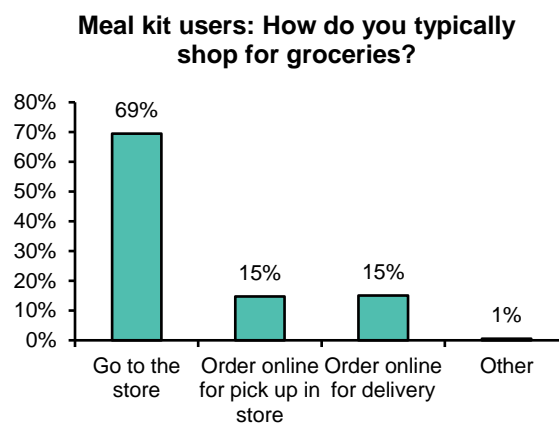
EXHIBIT 202: **They enjoy cooking...**



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 203: **...and over-index on online grocery shopping**



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

PROPRIETARY US CONSUMER MEAL KIT SURVEY – PART 2

Non-meal kit users and demographics

+ OVERVIEW

We conducted a proprietary survey of 1,000 US consumers to understand their use of meal kits, brand awareness, demographics, and perceptions of the products. In this chapter, we detail the results of our survey focusing on those who have never used a meal kit. This complements part 1, which looked at meal kit users. Key conclusions below:

- **High TAM penetration (30%+) and high brand recognition (70% non-meal kit users).** Non-meal kit users are aware of meal kits and highly aware of HelloFresh (70% recognize it), which puts into question the ability to continue to grow at a 20% CAGR, and the need for and effectiveness of marketing spend (e.g., is above-the-line TV advertising required to grow brand awareness?)
- **Price is important, and the product is too expensive.** HelloFresh is a commoditized grocery product, and grocery shoppers are highly price-sensitive. **Within each income group, nearly 60% of non-meal kit users said it was too expensive.** The only exception being those earning >\$150k, where penetration was 40%. However, there are only about 20 million US households that meet this definition, limiting the TAM potential.
- **Discounting is strong, but not enough to make people buy.** 40% non-meal kit users have already received a discount code (mostly from HelloFresh) and chosen not to buy the product. This reinforces our view that discounting is devaluing the proposition and even at discounted prices, it is still relatively expensive compared to grocery shopping.
- We compare meal kit demographics vs. non-meal kit users. **Meal kit customers skew toward working from home (+1,800 bps over-index), earning over \$100k (+1,200 bps), and have children under 10 years old (+800 bps). Meal kit customers tend to be 30-44-year-old.**

+ KEY FINDINGS

Population penetration is high; 30% of respondents said they have used meal kits (see Exhibit 204). This is even higher when excluding less affluent consumers and focusing on the TAM. **TAM penetration is closer to ~40%**, in line with our detailed retention analysis in Chapter 5, which identified a TAM penetration of 35%. This reinforces our view that HelloFresh is burning through its TAM at a rapid pace, leading to significant challenges to

BERNSTEIN

long-term growth. Even if you believe in lower price elasticity/pressure for the most affluent consumers, the high penetration is a concern.

HelloFresh has the highest brand recognition, with 70% of non-meal kit users recognizing the brand, closely followed by Blue Apron at 63% (see Exhibit 205). This brings into question the need for, and the effectiveness of, the high marketing spend. Brand awareness is already there, but there needs to be targeted education on the products. We question whether some of the more expensive, lower ROI marketing spend that HelloFresh engages in (e.g., TV) is useful. As with meal kit users, recognition of other HelloFresh brands (Green Chef, Every Plate, and Factor 75) was much lower at between 2% and 14%. This provides greater upside for growth, but we think these brands are cannibalistic and require greater marketing spend.

41% of non-meal kit users say they've received a discount code already, but decided not to purchase (see Exhibit 206). Most of them received a HelloFresh code, but this is skewed by HelloFresh's scale (see Exhibit 207). This reinforces our perspective that even at a discounted price, the product is expensive, as it is essentially a commoditized grocery box. We also think that the discounts are devaluing the brand proposition.

53% of non-meal kit users said they were too expensive and 33% said they don't like subscriptions (see Exhibit 209). When looking at the demographics of those saying they're too expensive, **less affluent consumers are more likely to say they're too expensive, but more affluent people were equally represented** (see Exhibit 210 and Exhibit 211). Non-meal kit users recognize the convenience of ordering and ease of cooking as the most attractive factors, but are equally concerned about the cost of the product and food wastage/packaging issues (see Exhibit 208).

DEMOGRAPHICS – MEAL KIT
USERS VS. NON-USERS

Meal kit users skew toward 30-44-year-olds, over-indexing by +1,200 bps (see Exhibit 213). Meal kit users under-index on over 60-year-olds by -1,500 bps at 14% of users vs. 29% non-meal kit users.⁸

More likely to have children under 10 years old, over-indexing by +800 bps (see Exhibit 214). Less likely to have children over 18, but equally as likely to have no children.

Significant skew (1,700+ bps) toward more affluent consumers (those earning more than \$75k) (see Exhibit 215). 32% of meal kit users earn >\$100k vs. 20% of the non-meal kit population. Half as many meal kit users earn under \$30k as non-meal kit users. 45% of meal kit users spend >\$100 on food p/w vs. 40% of total population (see Exhibit 216).

58% of meal kit users are currently working from home at least some of the time vs. only 40% of the non-meal kit users (see Exhibit 220). However, this is likely linked to the fact that meal kit users are more affluent and, therefore, more likely to be in jobs that enable remote working.

Meal kit users are likely to enjoy cooking (see Exhibit 224) and cook at home relatively regularly. However, they are much **more likely to also use ready meals** (see Exhibit 222) and

BERNSTEIN

use food delivery more regularly. 72% use food delivery at least once a week vs. only 37% of non-meal kit users (see Exhibit 223).

Meal kit users are more likely to already buy their groceries online with digital penetration of 30% vs. just 17% for non-meal kit users (see Exhibit 225).

Meal kit users are **more likely to shop at Trader Joe's, Kroger, Whole Foods, Safeway, and Stop & Shop,**² which represents their focus on fresh food, quality, affluent demographics, and regional skew towards the Northeast (see Exhibit 226).

Methodology note: We conducted a survey of ~1,000 US consumers on December 1 and December 2, 2021, using the Survey Monkey Audience Panel. The responses were broadly nationally representative weighted by gender, age, and income. 30% of participants had used meal kits, for which we present the answers below. We think this sample is adequate for our general purposes, but the small sample size and the potential skew should be considered when interpreting the analysis.

NON-MEAL KIT USERS

We conducted a survey of ~1,000 US consumers on December 1 and December 2, 2021. This was conducted using the Survey Monkey Audience Panel, and the responses were broadly nationally representative weighted by gender, age, and income. We split our survey after question 1 to focus on non-meal kit users vs. meal kit users to understand their perspectives on meal kits. 30% of participants had used meal kits, for which we present the answers below. We think this sample is adequate for our general purposes, but the small sample size and the potential skew should be considered when interpreting the analysis.

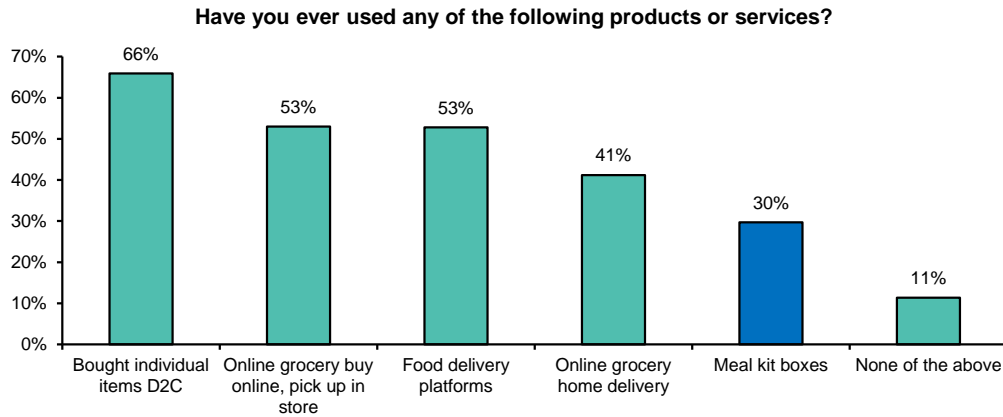
Note: We asked respondents for their perspectives on different brands. HelloFresh, Green Chef, EveryPlate, and Factor 75 are HelloFresh brands; Marley Spoon and Blue Apron are not covered; Freshly is owned by Nestlé (covered by Bruno Monteyne); Home Chef is owned by Kroger (not covered); and Sun Basket is private (not covered).

Population penetration is high; 30% of respondents said they had used meal kits (see Exhibit 204). This is even higher when excluding less affluent consumers and focusing on the TAM. TAM penetration is closer to ~40% (see Exhibit 205 and Exhibit 207), in line with our detailed retention deep dive, which identified a TAM penetration of 35%. This reinforces our view that HelloFresh is burning through its TAM at a rapid pace, leading to significant challenges to long-term growth. Even if you believe in lower price elasticity/pressure for the most affluent consumers, the high penetration is a concern.

² Trader Joe's (private, not covered); Whole Foods (owned by Amazon, covered by Mark Shmulik); Kroger (not covered); Safeway (part of Albertsons, not covered); Stop & Shop (owned by Ahold Delhaize).

BERNSTEIN

EXHIBIT 204: 30% of respondents had used meal kit boxes – in line with our TAM penetration estimates of 25-35%

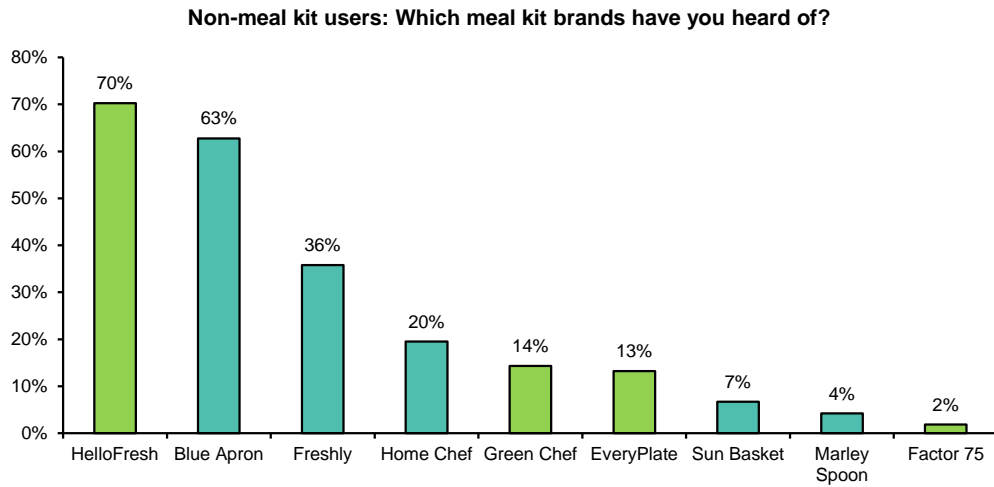


Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

HelloFresh has the highest brand recognition, with 70% of non-meal kit users recognizing the brand, closely followed by Blue Apron at 63% (see Exhibit 205). As with meal kit users, recognition of other HelloFresh brands (Green Chef, Every Plate, and Factor 75) was much lower at between 2% and 14%. This provides greater upside for growth, but we think these brands are cannibalistic and require greater marketing spend to grow awareness.

EXHIBIT 205: HelloFresh has the highest brand recognition, but new brands are not known and will require significant marketing spend in the future to build awareness



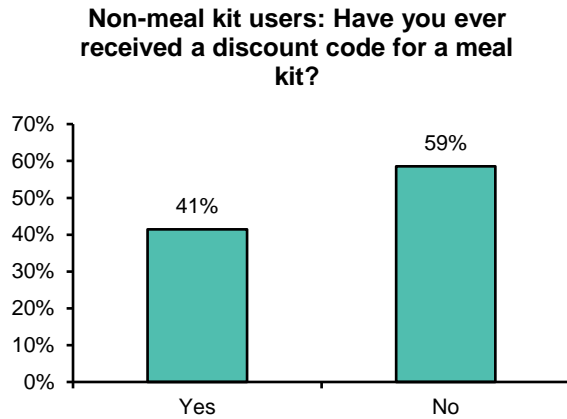
Note: Sample = 763

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

41% of non-meal kit users say that they've received a discount code already, but decided not to purchase (see Exhibit 206). Most of them received a HelloFresh code, but this is skewed by HelloFresh's scale (see Exhibit 207).

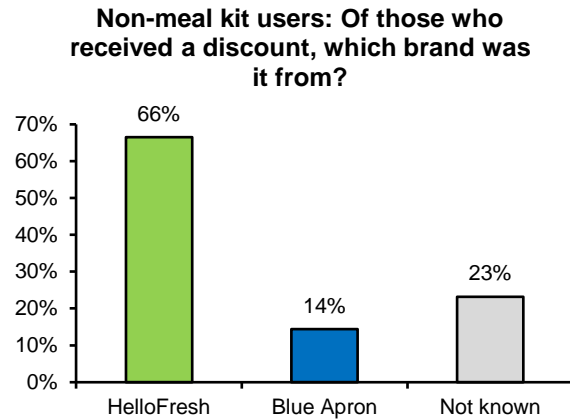
EXHIBIT 206: 41% of non-meal kit users have already received a discount code



Note: Sample = 763

Source: Survey Monkey Panel and Bernstein analysis

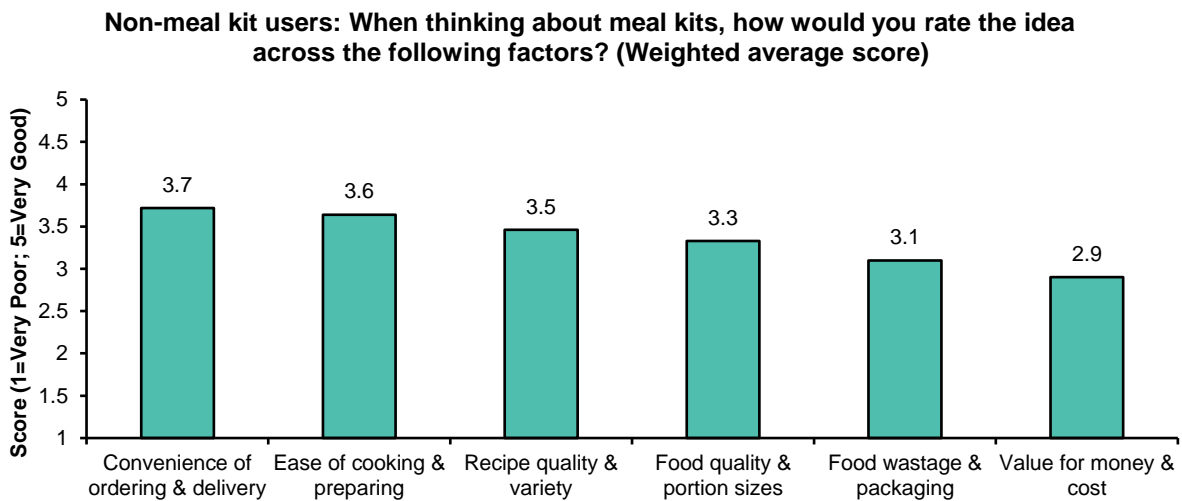
EXHIBIT 207: 66% of those who received a discount got it from HelloFresh, well above other brands



Note: Sample = 194

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 208: For non-meal kit users, convenience of ordering and cooking came out as top-rated factors, while value for money was rated as the least attractive feature of meal kits



Note: Sample = 763

Source: Survey Monkey Panel and Bernstein analysis

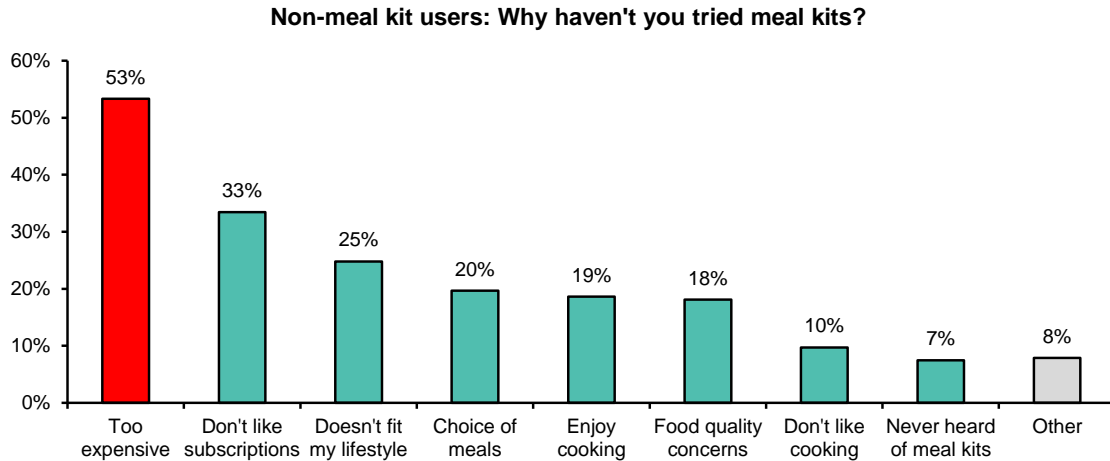
The **top reason for not trying meal kits was that they are too expensive**. 53% of non-meal kit users said that they were too expensive, followed by not liking subscriptions as the second reason. Interestingly, we found that 19% enjoy cooking, which means that they

BERNSTEIN

wouldn't try, while only 10% said that they don't enjoy cooking. This suggests that the meal kit box proposition is less likely to be attractive to those who cook regularly.

Amongst other **free form entries for reasons** for not trying meal kits, some of the most common were: (1) Large family and wanting to teach kids to cook and eat healthily; (2) allergies and dietary requirements; (3) being a picky eater; and (4) suspicious of food quality and ingredients or like to choose ingredients in the store.

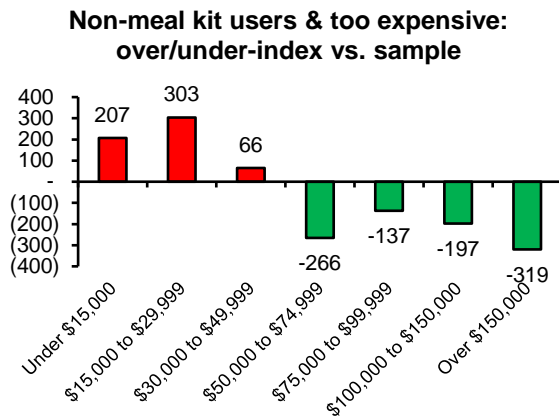
EXHIBIT 209: Top reasons for not using meal kits were that they are too expensive and people don't like the business model



Note: Sample = 763

Source: Survey Monkey Panel and Bernstein analysis

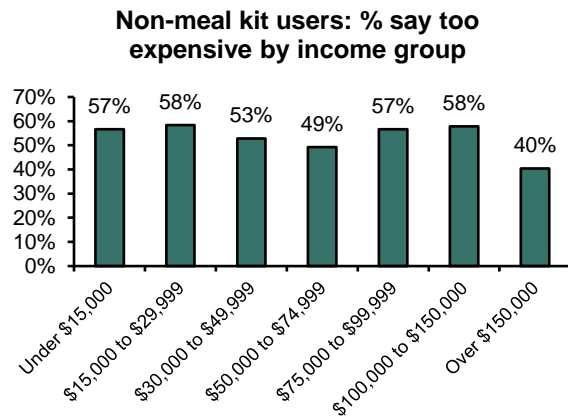
EXHIBIT 210: Less affluent consumers more likely to say they're too expensive...



Note: Sample = 408

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 211: ...but still a relatively broad mix of families says they're too expensive



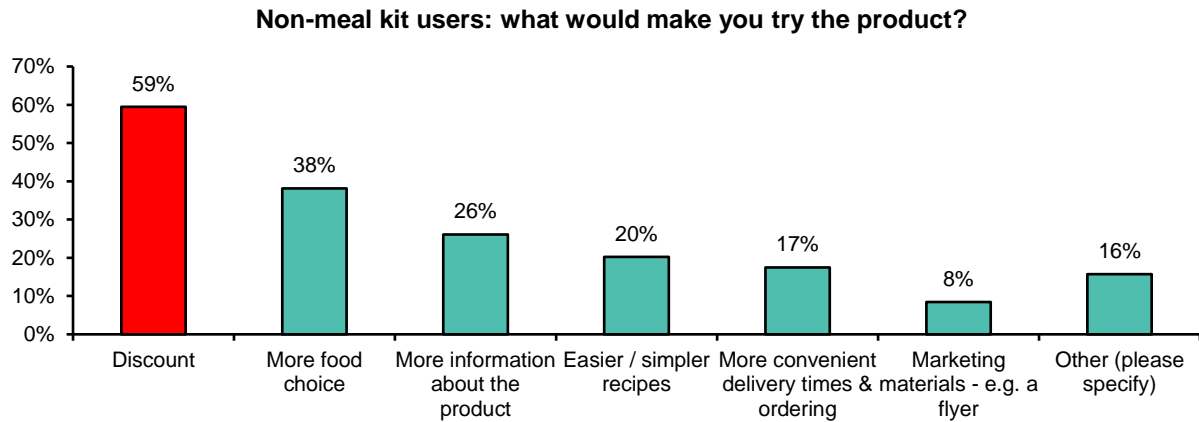
Note: Sample = 408

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

59% of those who hadn't tried the product said that they would try it if given a discount (see Exhibit 212). 38% said they wanted more food choices. Amongst freeform text answers, the most often cited reasons to make people try the product were: (1) free food and heavy discounts, including "You'd have to pay me to try them"; (2) allergy and dietary requirements; (3) larger portion sizes; (4) less packaging; and (5) nothing – "I have no interest" was repeated several times.

EXHIBIT 212: **Discounts were cited as the most important reason for making people try the product**



Note: Sample = 750

Source: Survey Monkey Panel and Bernstein analysis

+ MEAL KIT VS. NON-MEAL KIT USER DEMOGRAPHICS

Meal kit users skew toward 30-44-year-olds, over-indexing by +1,200 bps (see Exhibit 213). Meal kit users under-index on over 60-year-olds by -1,500 bps at 14% users vs. 29% of non-meal kit users.

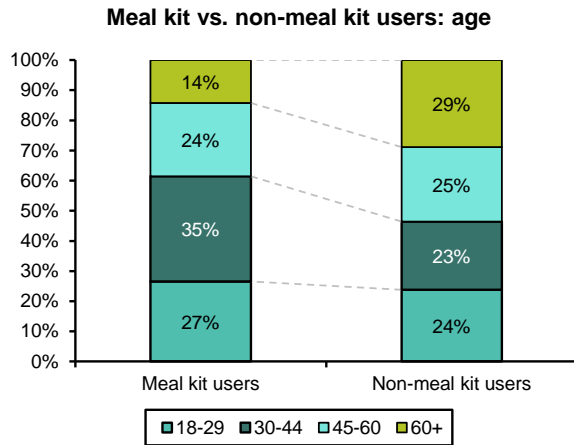
- **More likely to have children under 10 years old**, over-indexing by +800 bps (see Exhibit 214). Less likely to have children over 18, but equally as likely to have no children.
- **Significant skew (1,700+ bps) toward more affluent consumers** (those earning more than \$75k) (see Exhibit 215). 32% of meal kit users earn >\$100k vs. 20% of the non-meal kit population. Half as many meal kit users earn under \$30k as non-meal kit users. 45% of meal kit users spend >\$100 on food p/w vs. 40% of the total population (see Exhibit 216).
- **Weekly food spending is relatively stable, which makes meal kits an expensive product for most households (affluent or not)**. It's also worth noting that food spending does not change as much relative to the level of household income, as the difference between users and non-users in high weekly food spending categories (>\$100) is much smaller than that of high household income categories (>\$75k). This is

BERNSTEIN

consistent with our findings on the high use of discounts across income brackets (see Exhibit 218).

- **58% of meal kit users are currently working from home at least some of the time vs. only 40% of non-meal kit users** (see Exhibit 220). However, this is likely linked to the fact that meal kit users are more affluent and, therefore, more likely to be in jobs that enable remote working.
- **Meal kit users are likely to enjoy cooking** (see Exhibit 224) and cook at home relatively regularly. However, they are much **more likely to also use ready meals** (see Exhibit 222) **and use food delivery more regularly**. 72% use food delivery at least once a week vs. only 37% of non-meal kit users (see Exhibit 223).
- **Meal kit users are more likely to already buy their groceries online with digital penetration of 30% vs. just 17% for non-meal kit users** (see Exhibit 225).
- Meal kit users are **more likely to shop at Trader Joe's, Kroger, Whole Foods, Safeway, and Stop & Shop**,³ which represents their focus on fresh food, quality, affluent demographics, and regional skew toward the Northeast (see Exhibit 226).

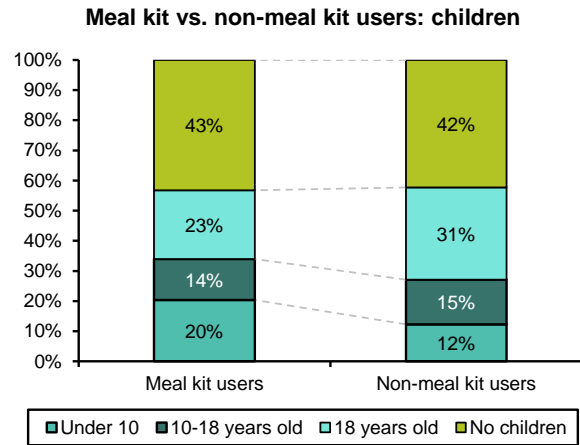
EXHIBIT 213: **Over-indexing on 30-44-year-olds, under-indexing on over 60-year-olds**



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 214: **More likely to have young children (<10 years old), but equally likely to have no children at all**



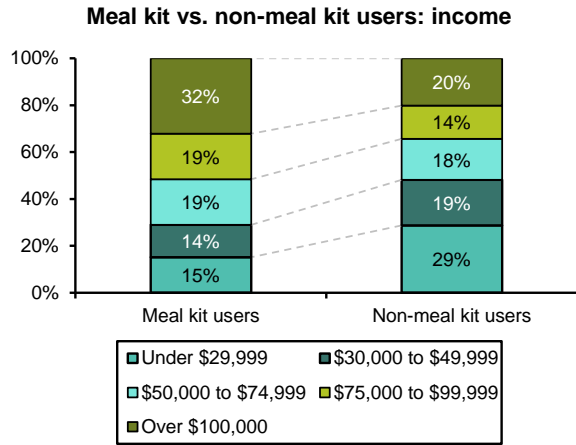
Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

³ Trader Joe's (private, not covered); Whole Foods (owned by Amazon, covered by Mark Shmulik); Kroger (not covered); Safeway (part of Albertsons, not covered); Stop & Shop (owned by Ahold Delhaize).

BERNSTEIN

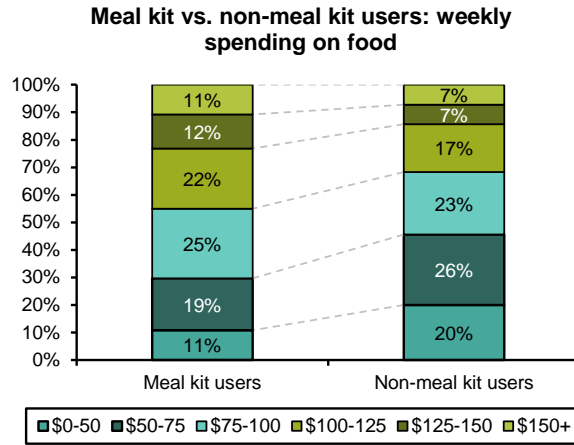
EXHIBIT 215: 1,700+ bps skew toward more affluent consumers (earning >\$75k)



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

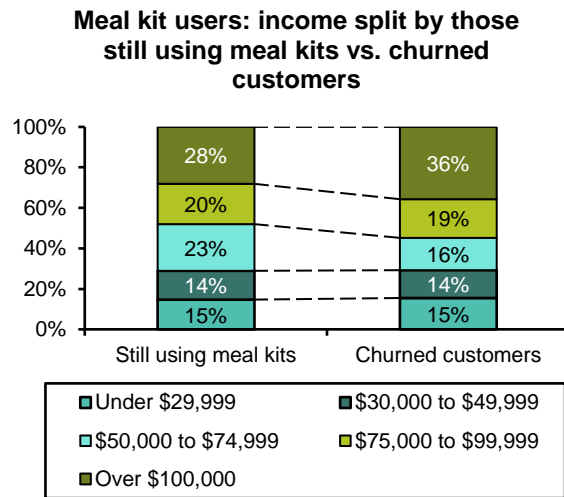
EXHIBIT 216: Skew toward those who spend more on food per week, with 45% spending >\$100 p/w



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

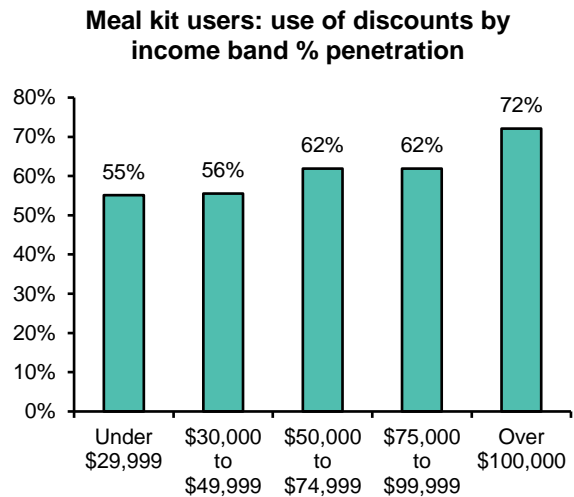
EXHIBIT 217: Churn is worse for more affluent consumers – over-indexing by +800 bps vs. those still using meal kits



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 218: More affluent consumers are more likely to use discounts, with 72% of those earning over \$100k using a discount

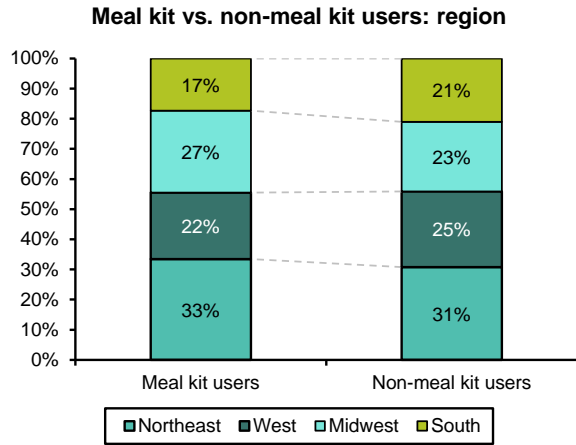


Note: Sample = 205

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

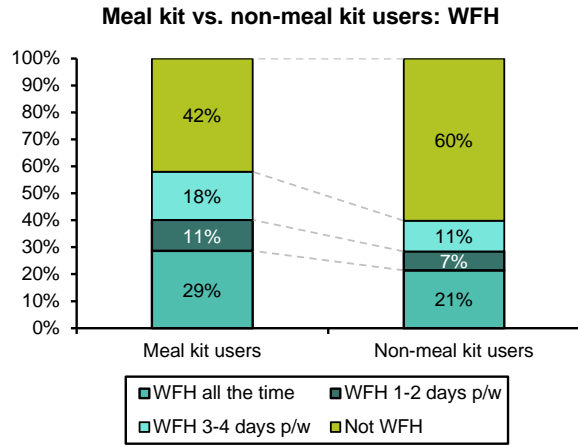
EXHIBIT 219: **Slight skew toward Northeast and Midwest**



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

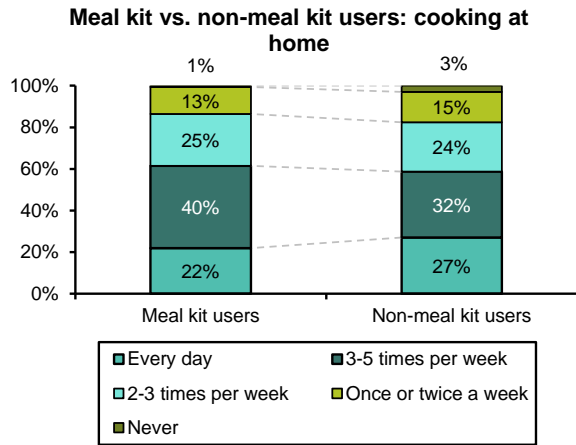
EXHIBIT 220: **Significant skew toward WFH**



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

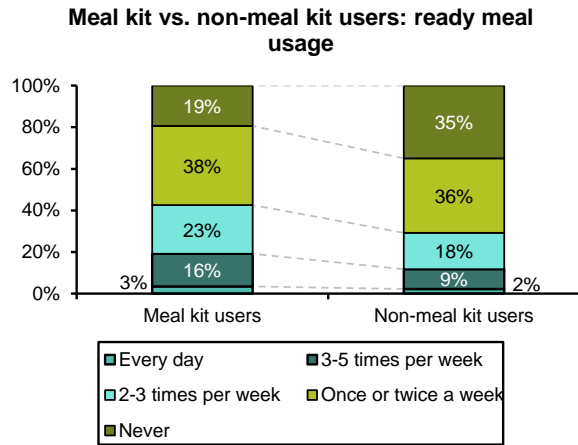
EXHIBIT 221: **Meal kit users more likely to cook at home...**



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 222: **...but also use ready meals more often...**

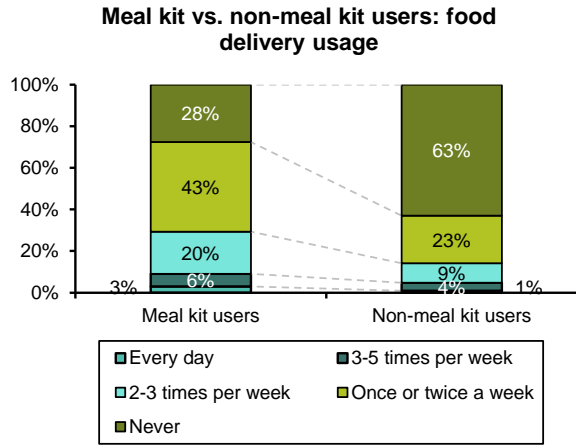


Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

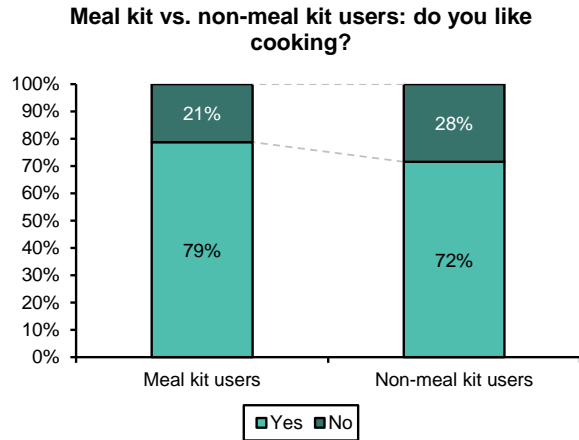
EXHIBIT 223: ...and much more likely to use food delivery



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

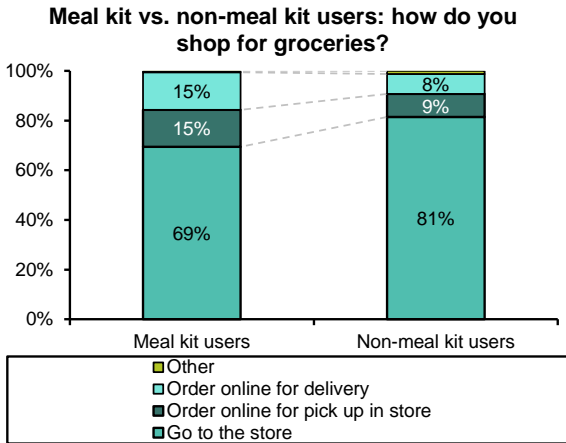
EXHIBIT 224: Meal kit users enjoy cooking...



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

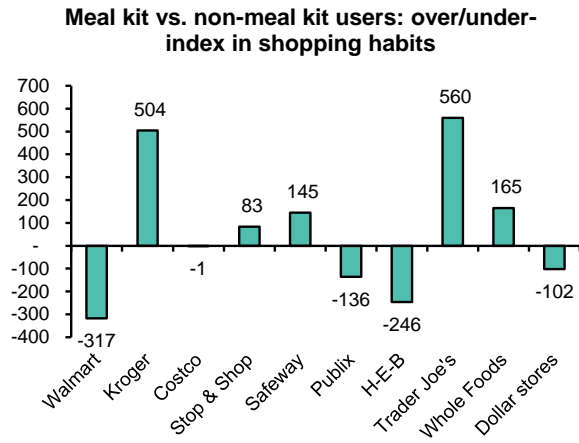
EXHIBIT 225: ...and are more digitally savvy



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 226: Kroger, Trader Joe's, Whole Foods, Safeway, and Stop & Shop over-index



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

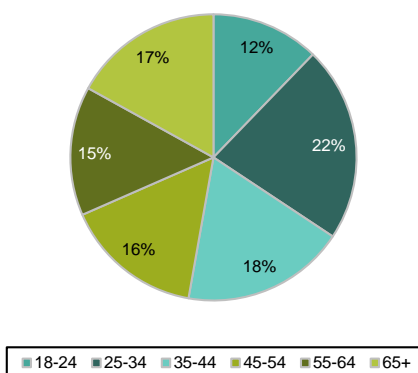
+ APPENDIX: OUR SURVEY

We surveyed 1,055 US consumers on December 1 and December 2, 2021. The survey was completed using Survey Monkey's Audience panel of US consumers and weighted according to age and gender to be broadly nationally representative. Below, we show the demographics of our sample across age, gender, income, and regions (see Exhibit 227 to Exhibit 230).

BERNSTEIN

EXHIBIT 227: **Age distribution**

HFG US Survey - Respondent age distribution

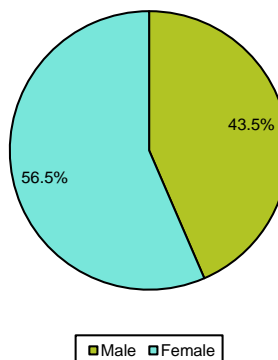


Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 228: **Gender mix**

HFG US Survey - Respondent gender mix

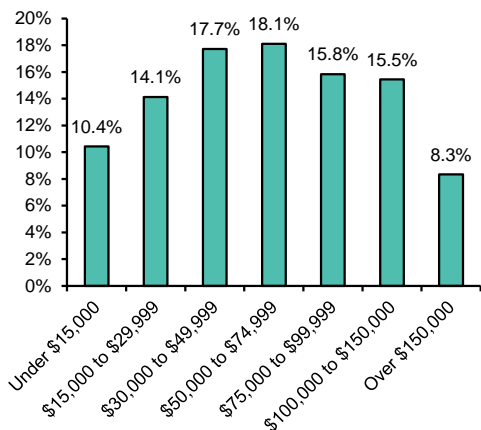


Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 229: **Income distribution**

HFG US Survey - Respondent income distribution

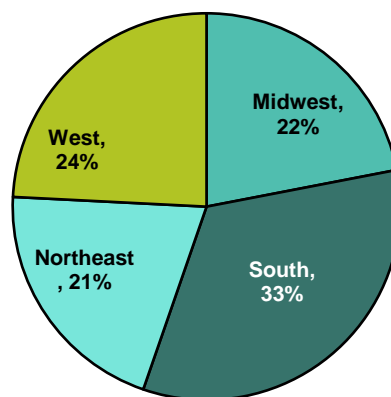


Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 230: **Regional mix**

HFG US Survey - Respondent location distribution



Note: Sample = 1,055

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

FOUR KEY TAKEAWAYS FROM THE 2021 CMD

FY22 margins hit, medium-term guidance unchanged

OVERVIEW

HelloFresh disclosed the mid-term target on the FY21 CMD, which is expected to be achieved through a suite of newly announced growth levers. We are not convinced of the growth levers, and our view on the small TAM remains. We outline our thoughts along four key themes below:

- **Our fundamental views remain unchanged.** The TAM is smaller, and the business model is hard. TAM penetration is high (25-40%), pricing is a problem, and churn is high (90% in Q4).
- **Growth levers are unconvincing.** New geographies and new product lines will likely add to the top line, but other initiatives might have a small impact (e.g., breakfast, more recipes, and grocery add-ons).
- **The business is becoming more complex.** New brands, customization, grocery add-ons, and reduced lead times add to operational complexity, which puts into question mid-term margins.
- **Medium-term guidance was uninspiring and unchanged** at €10Bn revenue and 10-15% margins. We question mid-term margins as we expect growth investments to continue.

SUMMARY

- **Our fundamental views remain unchanged.** The TAM is smaller, and the business model is hard. TAM penetration is high (25-40%), pricing is a problem, and churn is high (90% in Q4). We are increasingly concerned that HelloFresh is burning its way rapidly through its addressable market and will struggle to grow in the long term.
- **Growth levers are unconvincing.** New geographies and new product lines will likely add to the top line, but other initiatives might have a small impact (e.g., breakfast, more recipes, and grocery add-ons). We find management's attempt to grow into new areas such as ready meals, add-ons, grocery items, and new categories confusing. **Management appears to be claiming that it can unbundle the current weekly shop and rebundle it within its proposition** (in its move toward being a food solutions group). This will not work — HelloFresh cannot compete on range, price, or speed. **It has cleverly renamed "grocer" to "food solutions group."**
- **The business is becoming more complex.** New brands, customization, grocery add-ons, and reduced lead times add to operational complexity, which puts into question

BERNSTEIN

medium-term margins. Automation investments were vague, and we don't think the technology is there yet. We cannot understand the rationale for investing in its own last-mile delivery solution.

- **Medium-term guidance was uninspiring** and unchanged at €10Bn revenue and 10-15% margins. We question mid-term margins as we expect growth investments to continue. 2025 is not the end point — further investments will be required.

(1) FUNDAMENTAL VIEWS
REMAIN UNCHANGED: TAM IS
SMALLER AND BUSINESS
MODEL IS HARD

Nothing in the CMD changed our perspectives on the fundamentals of the business. We are still concerned about the smaller TAM and the hard business model with high levels of churn, discounting, and marketing spend.

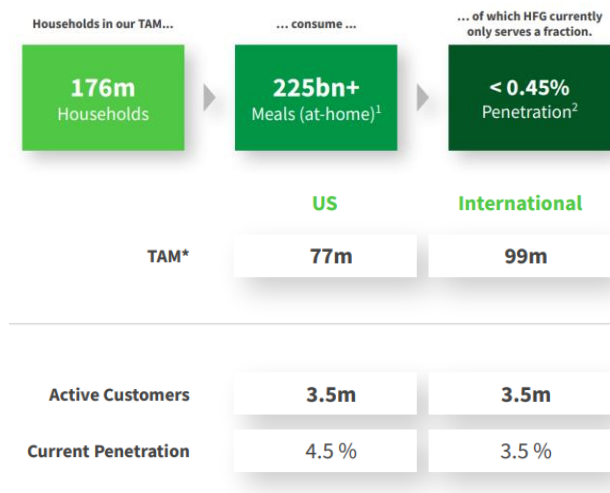
- **The TAM is smaller and far more penetrated than management claims.** For example, in the US, management claims a TAM of the top 60% of households (see Exhibit 231). As we show in Exhibit 233, **a HelloFresh (or EveryPlate) box would be completely unaffordable for most third quintile households, as it would take up 74% of their weekly spending.** Suggesting that a third quintile family could sustainably purchase a meal kit on a regular basis vastly overestimates consumer spending power and is out of touch with how tightly most families control their food spending.
 - On TAM penetration, we think HelloFresh is at risk of burning through its addressable market. Based on our analysis (when including lost customers), **25-40% of the addressable customer base has already used a meal kit box and churned** (see Exhibit 232 and Exhibit 234). **The flywheel of high churn, high discounting, and high marketing spend is hurtling HelloFresh towards a brick wall of TAM saturation.** It'll have to maintain high levels of marketing spend to keep acquiring the same customers over and over again (as we've seen with reactivations increasing but marketing spend holding flat YoY). The effectiveness of the marketing spend is in question, given the high levels of brand awareness and high levels of reactivation.
- **Pricing is an issue.** Management tried to dismiss claims that the product was expensive and that it has increasingly represented good value for customers. However, it just pointed out **its weak pricing power and inability to pass on price increases** given the high cost of the product as HelloFresh boxes have stayed the same price even though the prices of other foodstuffs have increased due to inflation, while still being poor value for money (see Exhibit 239). Relative to grocery products, a **meal kit is 1.6-2.4x more expensive than cooking from scratch or ready meals** (see Exhibit 240), and **53% of those who don't use meal kits said they were too expensive** (see Exhibit 241). This is supplemented by a **very poor net promoter score of -29** (when it should be positive), as customers do not see meal kits as good value for money, and don't like the wastage and packaging (see Exhibit 242).
- **Retention is still very poor and reactivations are not a good thing.** Management showed a graph which shows net revenue retention improving over time (see Exhibit 235). However, we think this is reflective of growing reactivations (driven by discounts) rather than a fundamental improvement in customer relationships (see Exhibit 236). If

BERNSTEIN

you overlay the increasing reactivations for each year with their respective cohorts, there is a relationship between improving retention and increasing reactivations. As we identified in our deep dive into retention in Chapter 5, we expect retention ex reactivations to be low at ~10% of customers in Q4 (see Exhibit 237), and we are **increasingly concerned about how quickly HelloFresh is burning through customers** (see Exhibit 238) with **very high TAM penetration of 25-40%** (see Exhibit 232 and Exhibit 234).

- **Reactivations are not a good thing.** Typically driven by discounts, they demonstrate poor consumer relationships and a lack of product fit with customer lifestyles. Management often confusingly talks about two types of reactivations: (1) a pause within a quarter when someone goes on holiday; and (2) a reactivation after not purchasing for a quarter. A pause is not included in the numbers in Exhibit 236 and isn't an issue (people will naturally not buy every week). However, **a reactivation after a quarter of not buying reflects poor customer engagement in a high frequency category** (e.g., we buy groceries every week). We think most of these are discount-driven (we get lots of high discounts close to quarter-end) and built to prop up customer numbers in a quarter. Even if they have lower CAC, we haven't seen marketing spend come down (we should have), which questions the efficiency of marketing spend, and management has stated previously that reactivated customers act just like new customers (e.g., 90% of them will churn again by Q4).

EXHIBIT 231: Management claims very low TAM penetration and a high TAM of 60% of US households

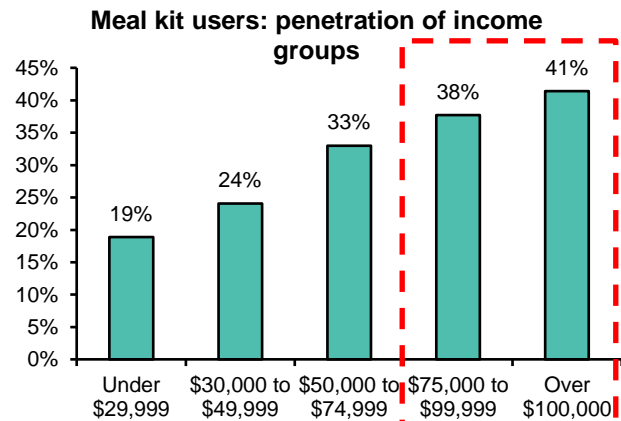


*Total addressable market

Note: ¹Assumes 2.5 heads per household with 10 weekly meals from home over 52 weeks; ²Delivering 1 billion meals annually

Source: Company reports

EXHIBIT 232: Based on our proprietary consumer survey, ~40% of high earners had used a meal kit



Note: Sample = 327

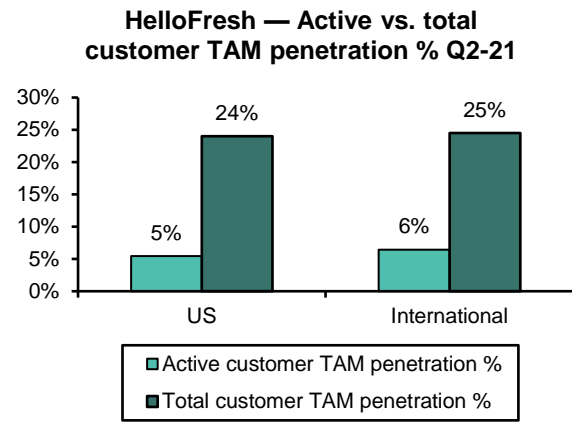
Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

EXHIBIT 233: **A HelloFresh box is unaffordable for the third quintile of families and challenging for the fourth quintile**

US food spending by income quintile	Food spending at home per week	HFG box (three meals, two people)
Lowest quintile	\$54	117%
2nd quintile	\$71	89%
3rd quintile	\$85	74%
4th quintile	\$100	63%
Highest quintile	\$137	46%

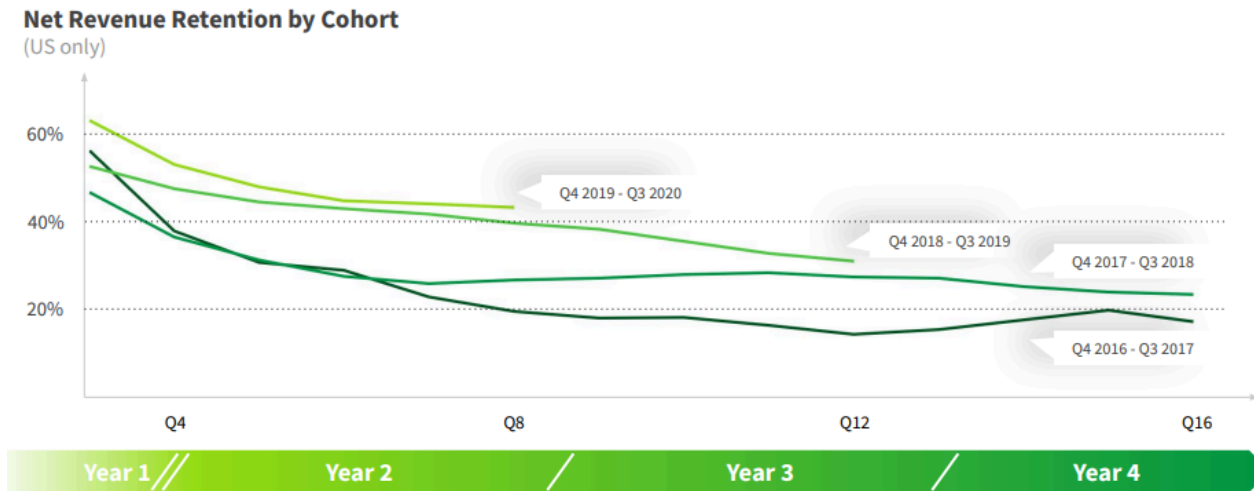
EXHIBIT 234: **Based on our retention deep dive, penetration of management's TAM is ~25%**



Source: USDA, US Census Bureau, company websites, and Bernstein analysis

Source: Company reports, and Bernstein estimates (all data) and analysis

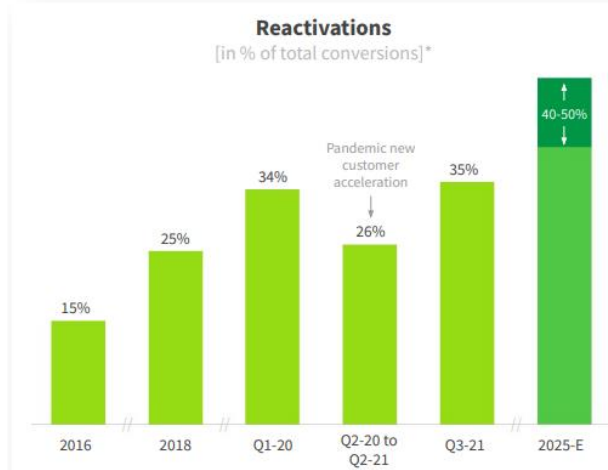
EXHIBIT 235: **We don't think underlying retention is improving; instead, it is being propped up by reactivations (which are not a good thing)**



Source: Company reports

BERNSTEIN

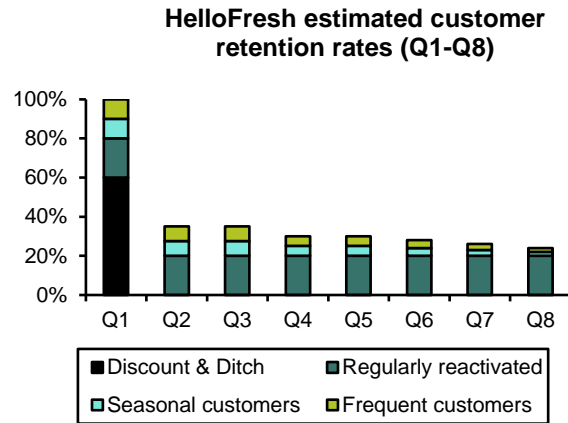
EXHIBIT 236: **Reactivations are not a good thing and are growing (driving the retention improvement)**



*Company data - Being the reactivation % of total conversions for longest-standing markets (DE, AU, BENELUX, GB) in the given quarter; Reactivation is a canceled customer who restarts their subscription plan. Pausing and unpausing customers are not treated as canceled

Source: Company reports

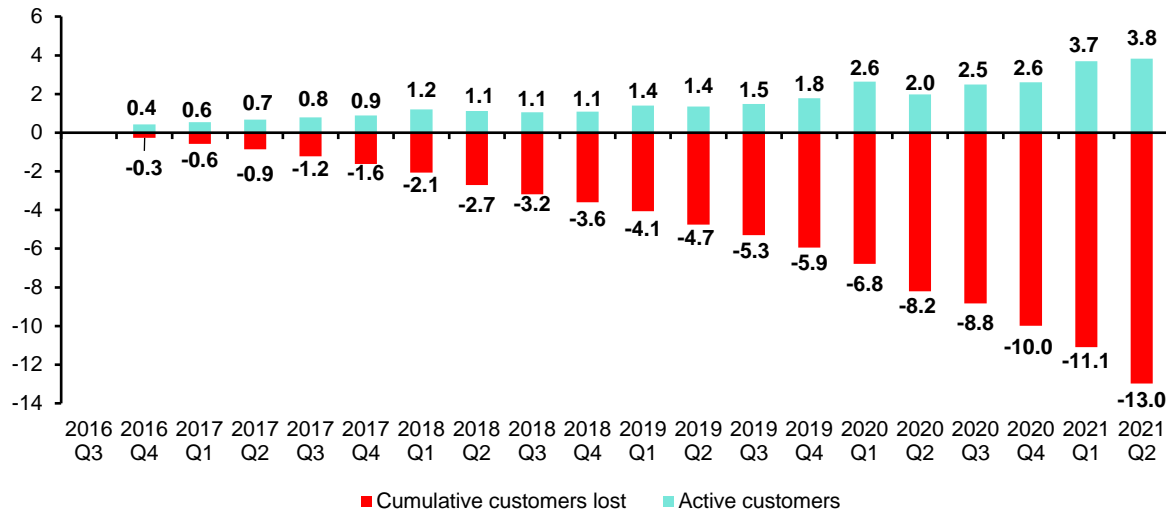
EXHIBIT 237: **We expect retention ex. reactivations to be low at ~10% in Q4**



Source: Bernstein estimates (all data) and analysis

EXHIBIT 238: **13 million customers have been acquired and lost in the US, trying HelloFresh and not sticking with the product over the last four years; we question the long-term trajectory for growth**

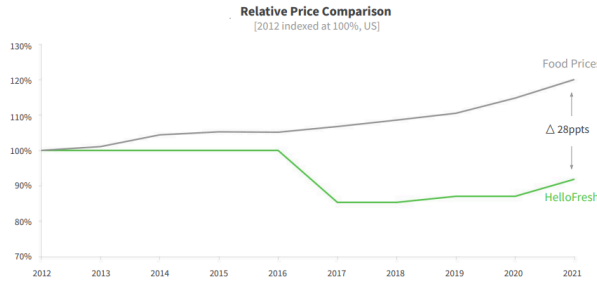
HFG - Total customer base (millions): active and lost customers (US)



Source: Company reports, and Bernstein estimates (all data) and analysis

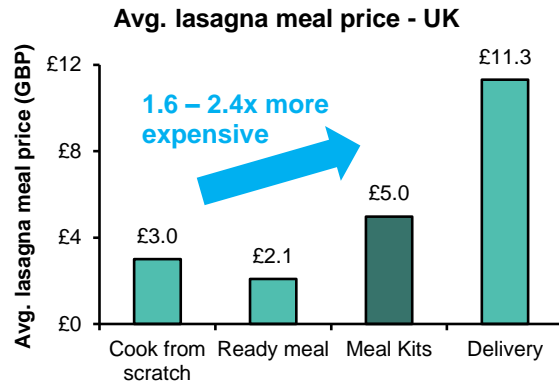
BERNSTEIN

EXHIBIT 239: **HFG hasn't passed on price increases and, therefore, has reduced price relative to other foodstuffs, but it's still not good value**



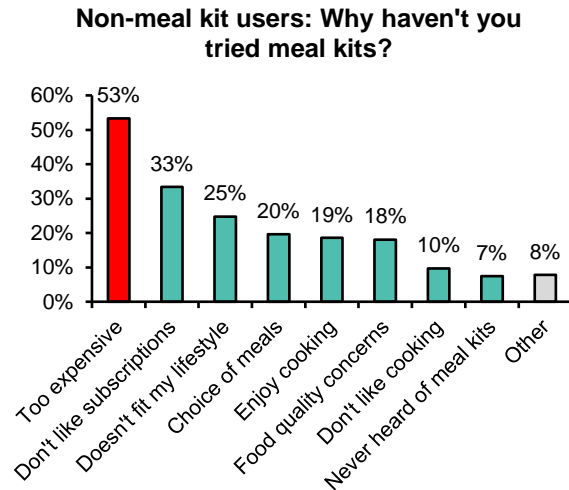
Source: Company reports

EXHIBIT 240: **Meal kits are 1.6-2.4x the cost of cooking from scratch or ready meals**



Source: Company websites, and Bernstein estimates (all data) and analysis

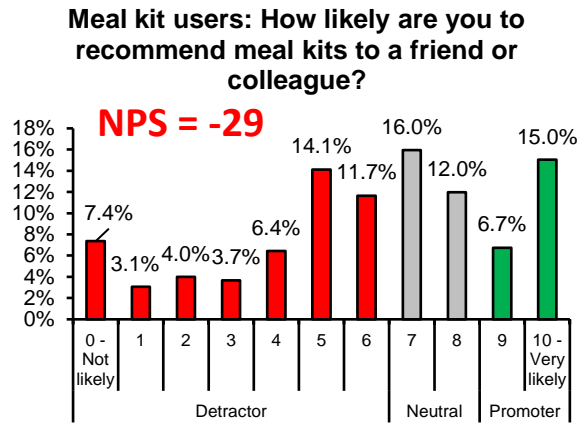
EXHIBIT 241: **53% of non-meal kit users said they were too expensive**



Note: Sample = 763

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 242: **Net promoter score of meal kit users is very poor at -29 (should be at least positive)**



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

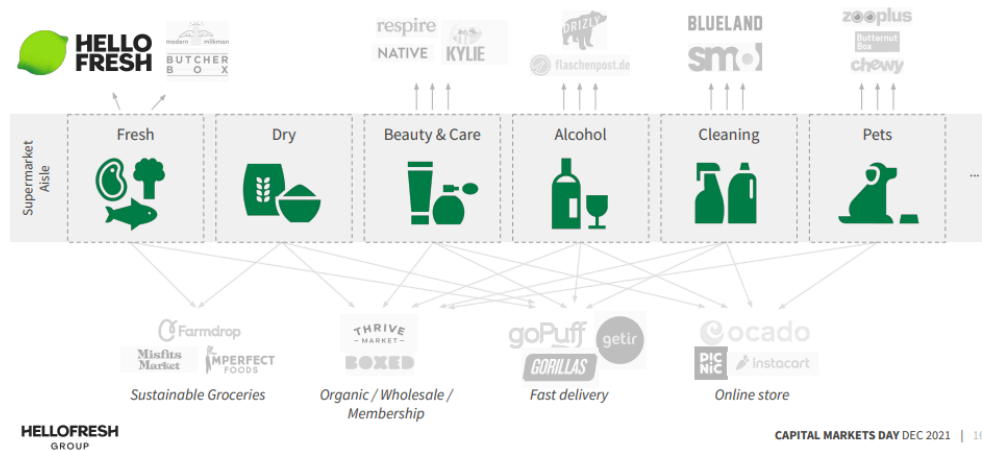
(2) GROWTH LEVERS ARE UNCONVINCING

The approach to growth was all encompassing with a wide range of growth levers. None of these was new and seemed to build on 2020's strategy rather than convincing us of materially new levers to grow TAM. **We found management's description of the consumer trends in the food industry contradictory.** While we agree that the weekly shop is being unbundled, we find management's attempt to grow into new areas such as ready meals, add-ons, grocery items, and new categories confusing. **Management appears to be claiming that it can unbundle the current weekly shop and rebundle it within its proposition (in its move toward being a food solutions group). This will not work — HelloFresh cannot compete on range, price, or speed.** It is 60-140% more expensive than a grocery store, is

BERNSTEIN

at least 5x slower (five day lead time vs. next day for groceries), and 15x+ smaller (~1,000 market SKUs vs. a grocery store at 15-30k SKUs). Having said that, stocking up behavior is "antiquated"; it wants to create a solution where you order weekly with a range of meals for the week — this seems contradictory. There is nothing innovative in the solution except a less consumer-friendly grocery offer delivered in a box with a less efficient supply chain, worse consumer relationships, and less buying power. **It has cleverly renamed "grocer" as a "food solutions group."**

EXHIBIT 243: **The world of food and the weekly food shop is being unbundled – we agree!**

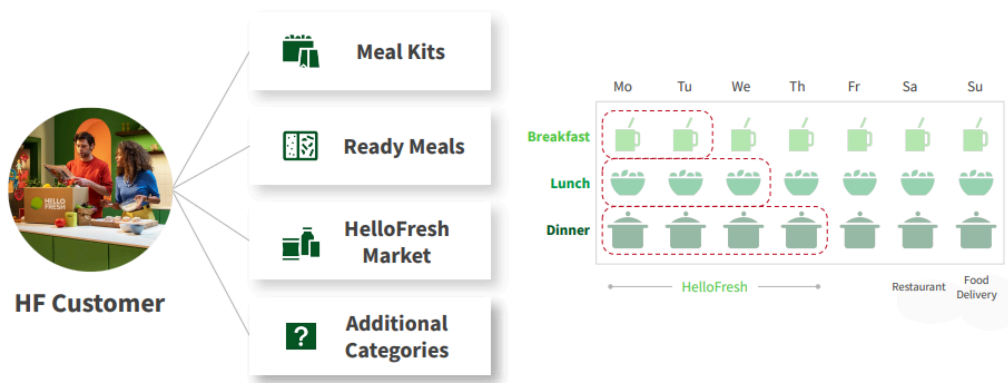


Source: Company report

EXHIBIT 244: **HelloFresh cannot compete with grocers on range, price, or speed; there is nothing innovative – it's just renaming "grocer" to "food solutions group"**

By moving towards a Food Solutions Group, we aim to play a pivotal role in that new world...

... we target a larger share of meals



Source: Company report

BERNSTEIN

As before, the growth levers focus on:

- **(1) TAM Penetration:** Continued growth in existing markets, acquiring new customers, and capturing additional share of customer spend on food; this is supported by increased convenience (quicker lead times), selection (more recipes), and value (better price vs. market);
- **(2) TAM Expansion:** New brands (e.g., EveryPlate and GreenChef), new geographies (e.g., Japan, Norway, and Italy), and new product lines (e.g., Ready to Eat (RTE) — Factor 75, YouFoodz); and
- **(3) Additional monetization:** Focuses on new meal occasions (e.g., breakfast) and add-ons (e.g., HelloFresh Market and recipe customization).

In Exhibit 245, we rate each of the levers in terms of business benefit and ease of implementation.

BERNSTEIN

EXHIBIT 245: **We think new geographies and product lines have the greatest business benefit**

Lever	Initiative	What is it?	Business benefit	Complexity	Bernstein perspective
TAM penetration	Quicker lead times	Go from 4-5 day lead times to 2-3 days, speeding up delivery to customer & cut off times	Low	Easy	Quicker lead times would increase competitiveness vs. grocers but 2-3 days is still uncompetitive. This would reduce the effectiveness of the supply chain and inventory/labor forecasting.
	More recipes	Increase from 35 recipes to 50-100 recipes and full market rollout of all brands	Low	Medium	More recipes would help order frequency and may attract some new customers (e.g., vegan). It adds to complexity of operations in handling combinations.
	Value	Become more competitive on price, reducing price vs market by -25 to 40% vs. the 2016 baseline (2021 at -20 to -30%)	High	Hard	Reducing prices would open up the TAM but present significant challenge unit economics. Price gap is significant vs. grocers.
TAM expansion	New meal kit brands	Rollout GreenChef (premium offer) and EveryPlate (reduced cost offer)	Low	Hard	New brands are cannibalistic, require more marketing spend, and the operations are duplicated with dedicated sites to each brand. Limited synergies & the same TAM.
	New geographies	Expand into new markets such as Italy and Norway (both in 2021), and Japan (2022)	High	Medium	New markets are attractive as an organic growth source. Italy and Norway are small. Japan will be challenging, given no experience in Asian markets or with Japanese cuisine.
	New product lines	Continue expansion of RTE (ready to eat) products through Factor 75 and YouFoodz. Factor 75 to launch in a new market in 2022	High	Medium	High growth rates in short-term due to low levels of sales today. TAM is very small, given very high cost of the product, requires more labor to prepare, complexity of ops is increased, and sites are duplicated.
Additional monetization	New meal occasions	Focus on getting greater share of weekly meal occasions (e.g., breakfast & lunch)	Low	Easy	Meal kits have limited appeal to consumers due to cost and take time to prepare. On breakfast, we question the value added by a meal kit compared with cheap options such as cereal or toast. On lunch, we question the value/time trade off vs. sandwiches & salads.
	Grocery product additions	Rollout of HelloFresh Market to 4 new markets (as well as US) with private label and ~1000 SKUs. Market is effectively a grocery offering of ready meals, and "solution-oriented" items	Low	Hard	We don't think HelloFresh can compete on range, price, or convenience vs. grocers. Adding 1,000 SKUs to the warehouses will increase food waste, add complexity to picking, and require significant investment in technology (e.g. WMS/IMS/OMS).
	Recipe customization	Driving additional AOV & orders by allowing customers to swap ingredients, upgrade ingredients and add ingredients to meal kits	Low	Medium	Increases complexity of operations (e.g., not just a single pick of individual recipes) whilst driving limited incremental AOV growth.

Source: Company reports and Bernstein analysis

(3) THE BUSINESS IS BECOMING MORE COMPLEX

We question how complex the business has become or is becoming. Previously, HelloFresh ran a simple business model where 15-30 recipes were packed in a box a week in advance and shipped to the consumer. This model (despite high discounting, churn, and marketing spend) had perks with high levels of inventory forecasting and control and labor forecasting, which helped reduce cost. However, this is changing with the introduction of new brands, more recipes, and shorter lead time, which make the business increasingly complex. We question whether the medium-term EBITDA margin guidance is achievable, given the fundamental changes in the business model. We outline below key changes that we think complicate HelloFresh and pressure on margins and Capex:

BERNSTEIN

- **New brands are duplicative, with extra marketing spend required, more production facilities, and greater head office effort to develop recipes and content.** From our consumer survey, new brands are broadly cannibalistic with HelloFresh customers, while awareness is low, meaning that more marketing spend is required to scale them even though they have a limited impact on the top line. From an operational perspective, HelloFresh is allocating specific production facilities to run brands such as Factor 75, Green Chef, and EveryPlate; therefore, there are currently very limited operational synergies. If HelloFresh would like to be able to offer customers the choice to add one Factor 75 meal and one HelloFresh meal in a single box, it would further fragment the supply chain and add complexity.
- **New recipes increase the complexity within existing HelloFresh production facilities.** In the old model when there were 20-30 recipes, the picking and packing operations were relatively simple. Recipes could be packed into individual bags, and when it came to assembling orders, each bag could be selected and packed into a box. This is made significantly more complex operationally by increasing the number of recipes where the **number of order combinations goes up 10x from 27,000 to 230,000.**
- **Recipe customization also adds to the complexity.** It changes the ability for HelloFresh to pre-package recipes in individual bags before customer orders are finalized. Recipe bags will have to be individually customized to each customer's selection, which will add time to pick and pack, and thus increase cost.
- **HelloFresh Market, with a range of 1,000+ grocery SKUs, will equally affect the complexity.** Instead of having a product range of 30 recipe bags, there will now be a range of 1,000 products, which may need to be packed into boxes. This turns HelloFresh from a simple warehouse operation to a complex online grocery fulfillment operation. It adds complexity to forecasting and stockholding — instead of being able to order ingredients in time for orders to go out, HelloFresh will now likely have to hold stocks of 1,000 SKUs, which further increases the complexity of technology and systems. Many grocers have been trying to solve this problem for 20 years, and it is hard. If HelloFresh wants to do this well, there will have to be significant investments and changes to the current ways of operating.
- **Reduced lead times from four to five days to two to three days will further challenge operations and forecasting.** Instead of operating a just-in-time supply chain and inventory forecasting for the week's meal kits, HelloFresh will have to improve its inventory management systems and hold stocks of recipe items in order to meet those two- to three-day lead times. Moreover, it changes the ability of labor forecasting. It will be less clear one week in advance how many staff will be needed to pick and pack items on a given day.
- **Automation can help, but management was vague on the opportunity, and the technology isn't ready yet.** We think management actually meant that it is going to think about mechanization rather than automation (e.g., conveyors and goods-to-picker type systems) instead of what a layperson may imagine by automation (e.g., the packing of individual ingredients into boxes). We don't think the robotic arm technology exists yet to do the latter. Plus, we think HelloFresh has underestimated

BERNSTEIN

the spend required to "automate" its solution with only €200Mn committed (Ocado has spent over €1.5Bn tackling a similar concept over the last 10 years to handle one-third of HelloFresh's sales).

- **We cannot understand the rationale for extending into last-mile delivery.** HelloFresh does not have the localized scale to develop its own logistics network. We question how the solution could compete against a large-scale logistics provider such as UPS or FedEx, given the scale challenges. We also question the investments in last-mile delivery from a complexity and core business skill perspective. Logistics is not in HelloFresh's core expertise, and developing its own transport management systems and routing systems feels like a poor use of capital when other larger retailers wouldn't dream of developing a similar solution.

(4) FY22 AS THE END OF
GROWTH INVESTMENTS? WE
THINK NOT

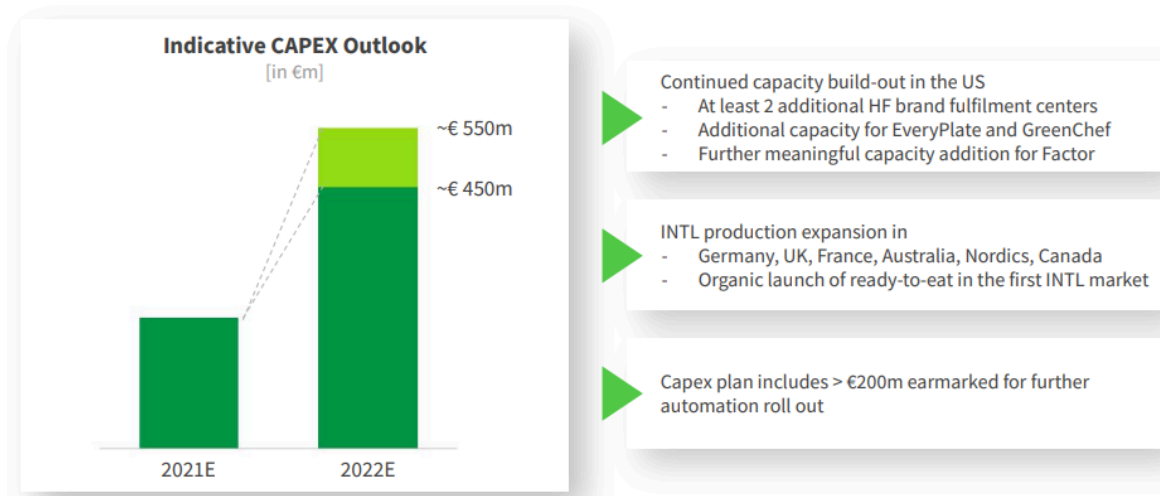
We saw a significant step change in Capex with FY22 guided to be double from FY21 (see Exhibit 246), which is more than what HelloFresh has ever spent. This is mainly driven by the continued expansion of capacity in the US, expansion in international markets, and investments in automation. We think this is also being driven by the increasing complexity of the business and the requirement to invest to continue growing. This represents >7% sales vs. historical levels of investment at 2% of sales.

We don't expect FY22 to be the end. We expect pressures on marketing spend, fulfillment costs, and procurement costs to continue to weigh into FY23. Although scale might add operating leverage to the G&A lines and production facilities will likely become more mature, we still expect FY23 to be pressured and only achieve 8.7% EBITDA margins. This is driven by a +90 bps improvement in contribution margins and a +60 bps improvement in marketing spend. Consensus FY23 EBITDA margins are at 10.2%, which we think will come down.

Long-term margin guidance is in question. While we think 10% EBITDA margins are feasible and could get to 10.4% by FY25, we question the ongoing need to invest in growth. As shown in Exhibit 247, management's claim that two of the levers to get to the 2025 margin target are driven by maturing fulfillment sites and maturing geographies. We question whether this is accurate, as we would expect HelloFresh to still be in growth mode by FY25 and therefore still invest in new geographies and new facilities to support future growth. Management's presentation felt like 2025 and its mid-term guidance was the endpoint of growth. **We would not be surprised if FY25's margins are lower than expected as a result of continued investment.**

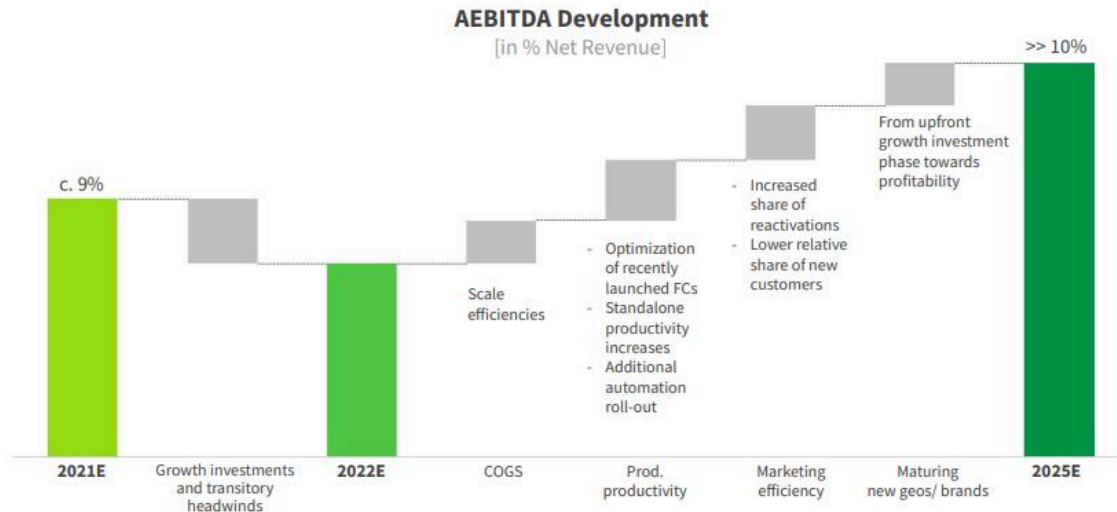
EXHIBIT 246: **Capex has been guided up significantly, doubling into FY22**

To capitalize on our long-term growth opportunity, we plan to c. double investment in 2022



Source: Company reports

EXHIBIT 247: **We question FY25 margins, as we think there will still be a need for growth investments in the future**



Source: Company reports

THE CASH COW POTENTIAL

If we were in control, how we would steer the company

+ OVERVIEW

In this chapter, we detail out our strategy for HelloFresh if we were in the driving seat. Our strategy focuses on slower growth, lower discounts, simpler business model, higher margins, and higher FCF, which is in direct contrast to its current strategy.

- **The problem:** Consensus expectations are too high. The TAM is smaller, and the product is unaffordable. The business model is hard with high discounting, churn, and marketing spend.
- **The solution:** Focus on the core affluent customer base that loves the product and drives all the EBITDA of the business today. Prioritize bottom line over top line. Pull back on the heavy discounting and reactivations. Pass on inflation to customers. Pull back on capital-intensive growth that introduces unnecessary complexity to the business, and focus on core efficiencies and rights to win (i.e., simple business model, efficient processes, etc.).
- **The upside:** A sustainable five-year plan focused on profit, cash flow generation, and shareholder returns. Our proposed strategy would lead to 20% EBITDA margins, stronger FCF generation, faster EPS growth, and an ability to return up to €1.5Bn to shareholders over five years (equivalent to 20% market cap today). We think the company could be worth up to €54 per share (28% upside to today) vs. our current forecasts, revenue would be 50% lower, but EBITDA would be 15% higher, margins up by +1000 bps, FCF +121%, and EPS CAGR of 16.5%.
- **Risks to the strategy include:** (1) negative shareholder response to profit over growth; (2) disintermediation from grocers and margin pressure; (3) greater customer loss than expected from reduced discounting; and (4) less innovation driving less consumer relevance.

+ OUR UNDERPERFORM CASE

Consensus expectations are too high at 15.4% revenue CAGR and +103 bps margin expansion for FY21-26 (see Exhibit 248 and Exhibit 249). We think it will be difficult for HelloFresh to have its cake and eat it too by achieving strong top line growth and have limited impact on margin. We think it is possible to achieve one or the other at the expense of each other. For example, to grow at a 15.4% CAGR, we think HelloFresh will need to invest heavily in marketing and discounts, while to grow margin, we think HelloFresh will

BERNSTEIN

have to pull back on marketing and investments for growth (recipe customization, new production facilities, automation, grocery expansion, etc.). Our Underperform thesis hinges around a few key points outlined below.

The **HelloFresh TAM is smaller than what management claims**, as the product is unaffordable for most people and **TAM penetration is high at ~40% of target customer groups**. Meal kits are 1.6-2.4x more expensive than cooking from scratch or ready meals (see Exhibit 250), and a HelloFresh box is unaffordable for the average US family, making up 74% of its weekly food spending for just three meals for two people (let alone children and the other 18 meals) (see Exhibit 251). Of customers surveyed, TAM penetration is at 40% for affluent customers, given the high number of customers that HelloFresh has churned through (see Exhibit 253), supported by our bottom up calculations, which see TAM penetration at 35%. Plus, as it works through its TAM, we think future growth will be more and more difficult to achieve as it acquires less attractive customers.

The business model is hard with high levels of discounting, churn, and marketing spend, leading to HelloFresh working its way through its TAM at a rapid rate. Customers come in and leave just as quickly, leading to an unhealthy customer database and weak relationships with customers (see Exhibit 254). It makes us concerned for the next five years.

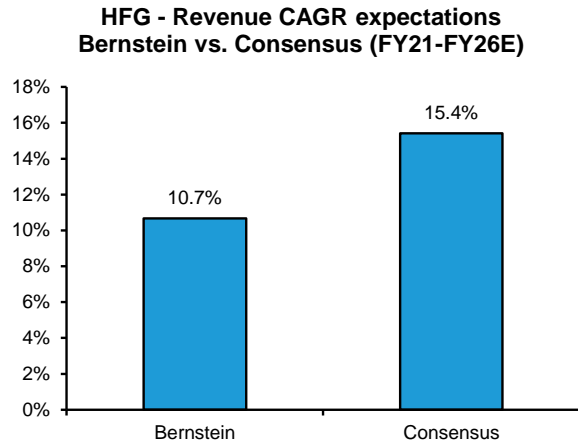
- **Churn is high at 90%; customers aren't buying after Y1** (see Exhibit 252). Reactivations are increasing (which the company is positive about), but we think they are mainly discount-driven, which devalues the brand. Although this isn't a subscription product and we don't expect customers to buy every week, when a customer doesn't purchase for a whole quarter and is reactivated, we think this shows that the product-market fit isn't there, reinforced by our survey data, which shows a -29 NPS.
- **Discounting is high, which devalues the brand and reduces pricing power.** The product is unaffordable for most people, and HelloFresh is artificially stimulating growth by acquiring non-core TAM customers (e.g., students who buy on a discount), and by propping up customer numbers at the end of a quarter with deep discount emails.
- **Marketing spend is high, and there is limited operational leverage.** This shows that HelloFresh has to work the business quite hard to maintain the same levels of growth. We struggle to see marketing spend getting below 15% in the long term unless it manages to fix consumer relationships and improve retention.

The current strategy focuses on creating a food solutions group. The strategy is scattergun, covering everything from recipe customization to automation, to in-house last-mile delivery, to ready meals and grocery items (see Exhibit 255). **Our big concern with the strategy is that it adds significant complexity to a business pressuring on margins and FCF in the future.** Two of the best things about HelloFresh's business are its simple operations and high markups, which lead to strong margins and FCF. We are also concerned that management's attempt to rebundle the unbundling of the weekly shop in its own proposition might not work. **HelloFresh cannot compete on range, price, or speed.** It is 60-140% more expensive than a grocery store, at least 5x slower (five-day lead time

BERNSTEIN

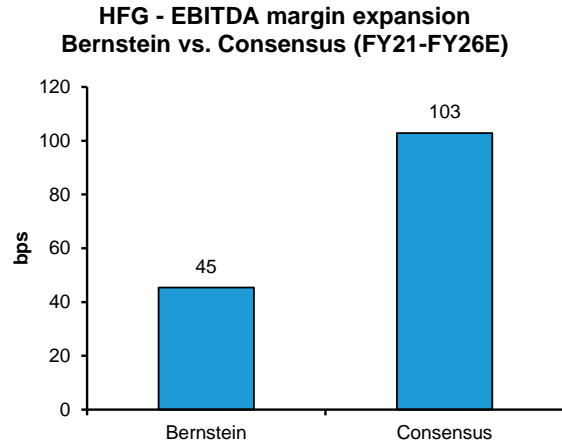
vs. next day for groceries), and 15x+ smaller (~1,000 market SKUs vs. a grocery store at 15-30k SKUs). Having said that, stocking up behavior is "antiquated"; it wants to create a solution where you order weekly with a range of meals for the week — this seems contradictory. There is nothing innovative in the solution except a less consumer-friendly grocery offer delivered in a box with a less efficient supply chain, worse consumer relationships, and less buying power. **It has cleverly renamed "grocer" to "food solutions group."**

EXHIBIT 248: **High revenue expectations of +15.4% CAGR...**



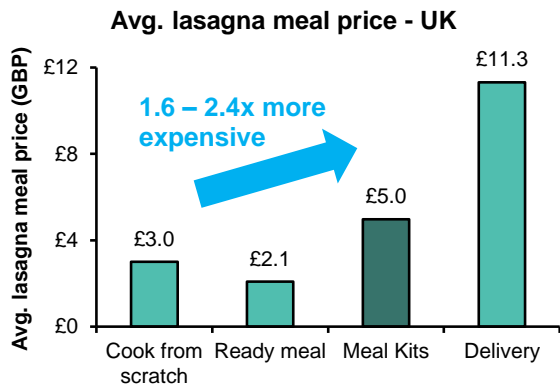
Source: Bloomberg, company reports, and Bernstein estimates and analysis

EXHIBIT 249: **...plus margin expansion of +103 bps**



Source: Bloomberg, company reports, and Bernstein estimates and analysis

EXHIBIT 250: **Meal kits are 1.6-2.4x the cost of cooking from scratch or ready meals**



Source: Company website and Bernstein analysis

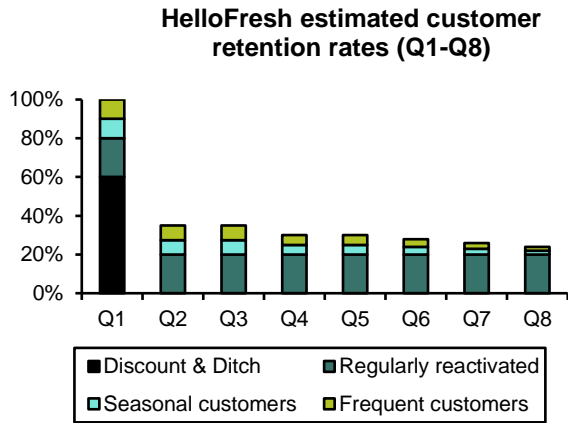
EXHIBIT 251: **A HelloFresh box is unaffordable for the third quintile of families and challenging for the fourth quintile**

US food spending by income quintile	Food spending at home per week	HFG box (three meals, two people)
Lowest quintile	\$54	117%
2nd quintile	\$71	89%
3rd quintile	\$85	74%
4th quintile	\$100	63%
Highest quintile	\$137	46%

Source: USDA, US Census Bureau, company website, and Bernstein analysis

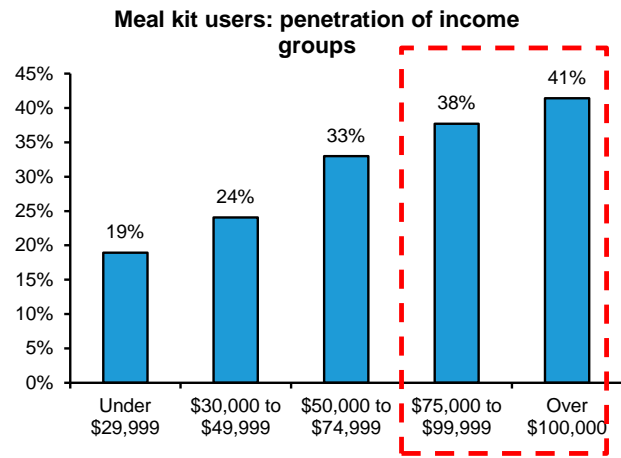
BERNSTEIN

EXHIBIT 252: **Churn is high, with 90% of customers leaving by Q4**



Source: Bernstein estimates (all data) and analysis

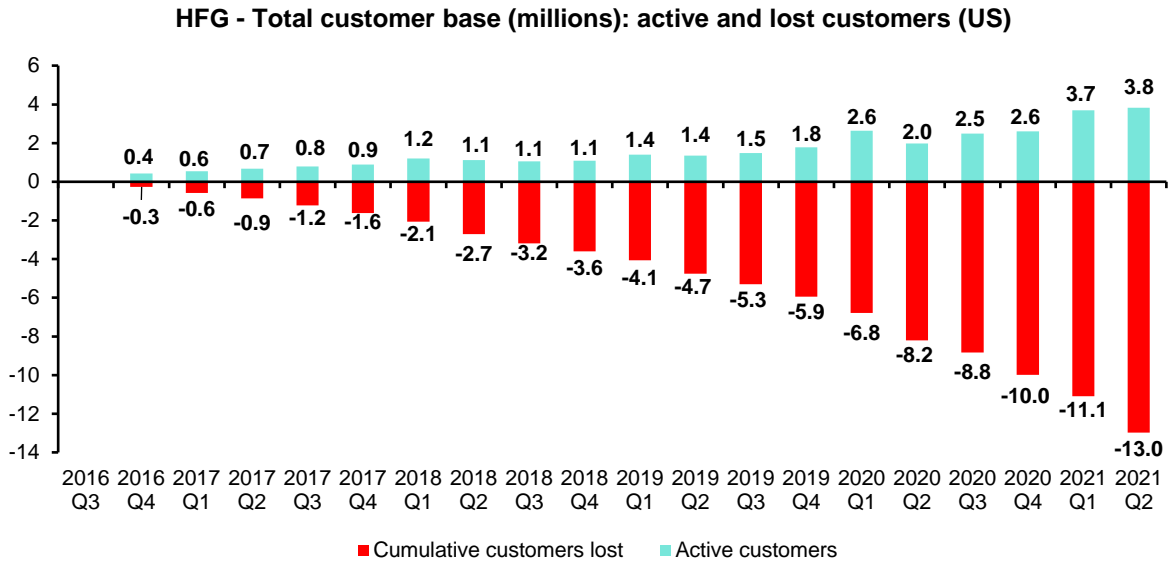
EXHIBIT 253: **High TAM penetration – ~40% of high earners had used a meal kit**



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 254: **13 million customers have been acquired and lost in the US, trying HelloFresh and not sticking with the product over the last four years; we question the long-term trajectory for growth**



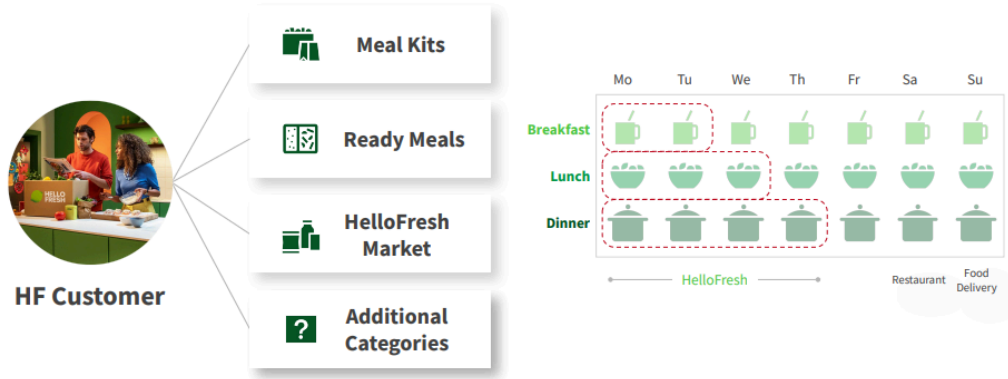
Source: Company reports, and Bernstein estimates (all data) and analysis

BERNSTEIN

EXHIBIT 255: **Creation of a food solutions group provides significant upside**

By moving towards a Food Solutions Group, we aim to play a pivotal role in that new world...

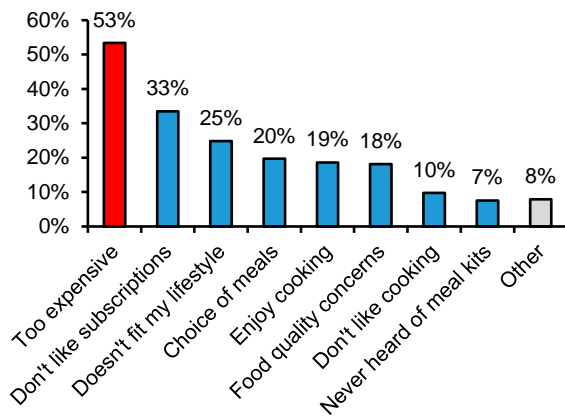
... we target a larger share of meals



Source: Company reports

EXHIBIT 256: **53% of non-meal kit users said they were too expensive**

Non-meal kit users: Why haven't you tried meal kits?

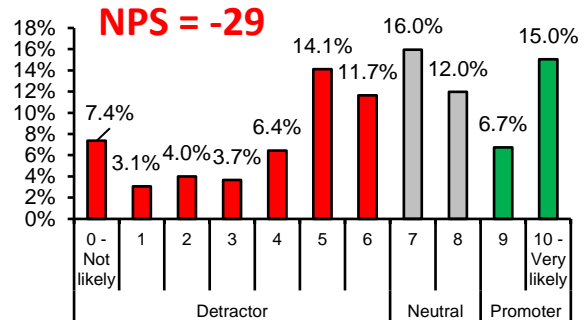


Note: Sample = 763

Source: Survey Monkey Panel and Bernstein analysis

EXHIBIT 257: **Net promoter score of meal kit users is very poor at -29 (should be at least positive)**

Meal kit users: How likely are you to recommend meal kits to a friend or colleague?



Note: Sample = 327

Source: Survey Monkey Panel and Bernstein analysis

BERNSTEIN

OUR STRATEGY

The concept: At the core of HelloFresh, there is a small group of core affluent customers who love the product and are highly profitable (see Exhibit 258 and Exhibit 259). Even with very high churn, we expect there to be almost three million core customers at present.

The strategy: HelloFresh should pivot from being the Amazon of meal kits or creating a food solutions group to targeting this core of affluent customers and focusing on growing strong sustainable margins and FCF as opposed to discount-driven, churn-intensive, and Capex-intensive growth at all costs. This will lead to much lower top line growth, but increase margins significantly and increase FCF. It will increase the product-market fit, the company can pass on inflation, and improve customer satisfaction. **How to do it? Below, we outline key features of our HelloFresh strategy.**

FOCUS ON MARGINS > TARGET
20% EBITDA MARGINS (2026E)

Pull discounts: We think HelloFresh is giving away almost 20% of AOV in discounts to attract and reactivate customers with deep discounts of 40-60%, which devalue the brand and attract weak customers (see Exhibit 260). We would stop the majority of these reactivation discounts immediately (only targeting customers who fit the affluent band or who have purchased regularly before) and reduce the sign-up discount to ~10-20%, in line with other meal kit brands. This will lead to an immediate reduction in customer numbers (>50% reduction), but create a healthier, more sustainable cohort.

Stop reactivating at a discount: Reactivations are not a good thing. For the most part, we think they are discount-driven attempts to prop up quarterly customer growth (we have received multiple emails over the last year with up to 60% off, often towards the end of the quarter) and create an unhealthy, brand-devaluing customer relationship. We would immediately stop reactivating in the same way and instead focus on targeting selective reactivation of customers who are either core customer types or who have shown specific behaviors that are attractive (e.g., a history of consistent full price purchasing). This should improve retention rates, customer relationships, and brand perception.

Increase pricing and pass on inflation: By targeting the core customer base, HelloFresh will be more able to pass on food inflation, as its core customer base is more affluent and less price-sensitive. Passing on a few percentage points of inflation each year will hardly be noticed by the most affluent customer base. This avoids the difficult strategy of today of trying to increase margins whilst reducing pricing, which rarely works (see Exhibit 261). It will help grow AOV organically over the next few years.

SLOW DOWN GROWTH >
TARGET -4% REVENUE DECLINE
(CAGR 2021-26E)

Focus on target customer types: Despite the already high TAM penetration, we think HelloFresh should double down on its core and attempt to drive further acquisition/reacquisition of core customer types. We think this will lead to slower overall growth (2-3% per year for the next couple of years) vs. a >20% consensus CAGR. However, we believe this will create a more sustainable, long-lasting business model.

BERNSTEIN

PULL INVESTMENTS THAT
INTRODUCE COMPLEXITY,
FOCUS ON EFFICIENCY, FREE UP
FCF

Simplify the business model again: The best thing about HelloFresh's core business is its simplicity. Picking 15 consistent ingredients into 20-25 recipe combinations, and then packing three or four of those recipes into a box and shipping it to a customer is relatively simple. Customers order a week in advance, and there is a fantastic ability to forecast both inventory and labor, thereby reducing costs and food wastage. HelloFresh should focus on the strengths of its business model rather than trying to be everything to everyone.

Pull grocery investments: HelloFresh might never be able to compete with food retailers on the breadth of range, depth of range, quality, price, or margin, nor be able to compete on speed of delivery. It should stop investing in the 1,000s SKU grocery option, which adds significant operational complexity (wastage, technology, operations, and picking). Although the investment in grocery is not directly quantified, we think this will drive lower SG&A and lower Capex.

Pull last-mile investments: HelloFresh should stop growing its last-mile capabilities, as it might never be able to drive the scale required to compete against a large parcel provider. It should instead look to create strong partnerships with major parcel carriers. Yes, Amazon has developed its own last-mile network, but HelloFresh is not Amazon.

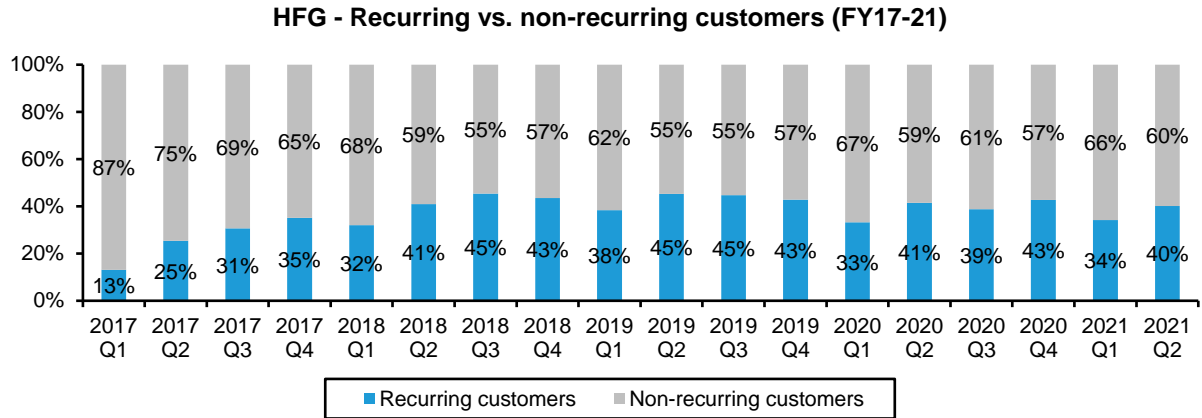
Slow warehouse growth: We think HelloFresh will have enough capacity (ex. new market entries) to support more stable growth in the long run. We think HelloFresh should pause the majority of its new warehouse growth, which would reduce Capex significantly. In a post-pandemic world and a higher inflationary environment, we think HelloFresh runs the risk of overexpanding and being left with underutilized fixed assets. With lower revenue growth, lower capacity is needed.

Focus on growing AOV of core customer base: Expanding the TAM through lots of growth levers is great, but it pressures margin and pressures FCF with high Capex. We would change the overall strategy to really understand what the core customer group wants and push one or two of those levers to drive up retention and NPS. For example, we would try breakfast options and see the relative uptake by those core customers, and if there is insufficient uptake, we would pull the idea completely. We think selective recurring add-ons that are high margin will drive the best upside (e.g., sides of vegetables at a reasonable price), and surprise and delight items that are changing relatively frequently should drive consistent engagement. We would have ~50-100 SKUs, not 1,000s.

One thing we are in two minds about is the speed of delivery: Currently, in most markets, you need to order a HelloFresh box approximately five to seven days in advance. This brings with it huge benefits of labor and inventory forecasting, as well as low product wastage. We think this is uncompetitive vs. the push toward quicker grocery deliveries. However, we don't quite understand how important speed is in the proposition to HelloFresh's core customers. It would be margin-dilutive to reduce the lead times, but worth considering if it improves core customer retention.

BERNSTEIN

EXHIBIT 258: HelloFresh has a small core of customers who like the product and who will purchase at full price – they should be treasured



Source: Company reports, and Bernstein estimates (all data) and analysis

EXHIBIT 259: We estimate that HelloFresh is making >100% of its EBITDA from its loyal recurring customer base while losing money on its non-recurring reactivations due to heavy discounting

EBITDA breakdown	HelloFresh total	Recurring customers	Non-recurring customers
Active customers (year avg.)	7.28	2.5	4.7
Average frequency	16.2	20	14.2
AOV	51 €	60 €	44 €
Revenue	6,027 €	3,064 €	2,963 €
EBITDA margin %	8.8%	23%	-6%
EBITDA	530 €	705 €	-174 €

Source: Company reports, and Bernstein estimates (all data) and analysis

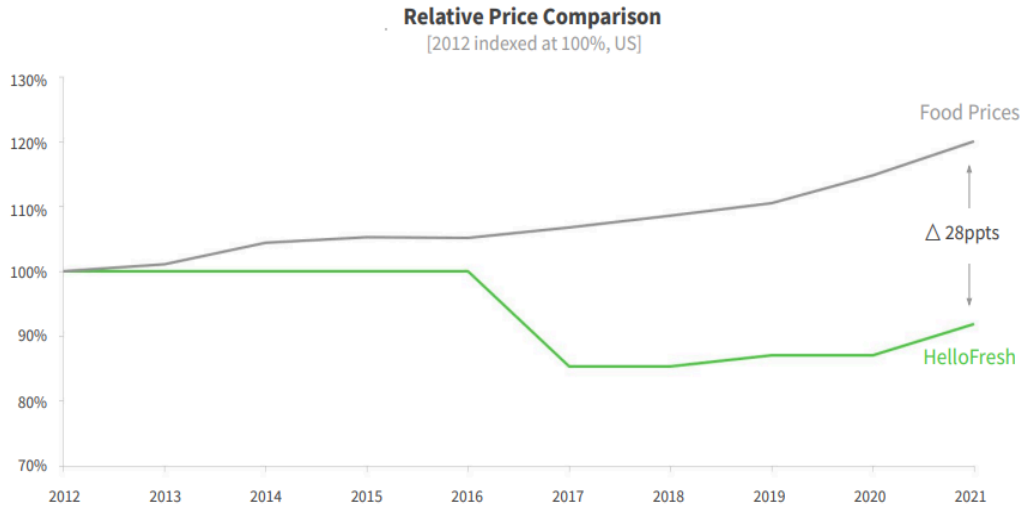
BERNSTEIN

EXHIBIT 260: If you stripped out all discounts, HelloFresh could make significantly higher margins and have more sustainable customer relationships

	FY21 actuals	10% discounting	5% discounting	0% discounting
Gross revenue per order	€ 63.9	€ 63.9	€ 63.9	€ 63.9
Discount %	-20%	-10%	-5%	0%
Net revenue per order	€ 51.1	€ 57.5	€ 60.7	€ 63.9
Fulfilment cost per order	-€ 20.9	-€ 20.9	-€ 20.9	-€ 20.9
<i>Fulfilment costs (% sales)</i>	-40.9%	-36.3%	-34.4%	-32.7%
Procurement cost per order	-€ 17.4	-€ 17.4	-€ 17.4	-€ 17.4
<i>Procurement costs (% sales)</i>	-34.1%	-30.3%	-28.7%	-27.3%
Contribution margin	€ 12.8	€ 19.2	€ 22.4	€ 25.6
<i>Contribution margin %</i>	25.0%	33.3%	36.9%	40.0%
Marketing cost per order	-€ 7.3	-€ 7.3	-€ 7.3	-€ 7.3
<i>Marketing costs (% sales)</i>	-14.4%	-12.8%	-12.1%	-11.5%
SG&A per order	-€ 2.1	-€ 2.1	-€ 2.1	-€ 2.1
<i>SG&A (% sales)</i>	-4.1%	-3.6%	-3.4%	-3.3%
D&A	€ 0.8	€ 0.8	€ 0.8	€ 0.8
Special items & share based comp.	€ 0.3	€ 0.3	€ 0.3	€ 0.3
AEBITDA	€ 4.5	€ 10.9	€ 14.1	€ 17.3
<i>AEBITDA margin %</i>	8.8%	18.9%	23.2%	27.1%

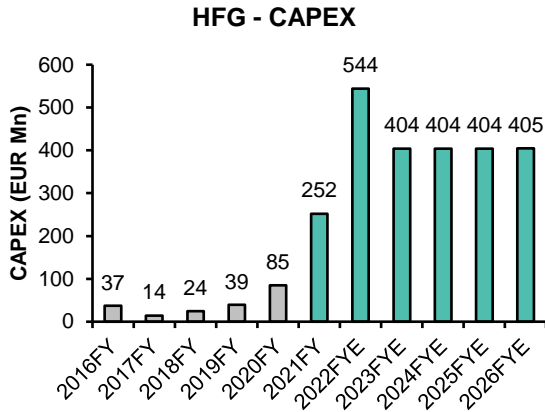
Source: Company reports, and Bernstein estimates (all data) and analysis

EXHIBIT 261: HelloFresh hasn't been passing on inflation, and is aiming to reduce its price premium and margin premium, which is a risky strategy



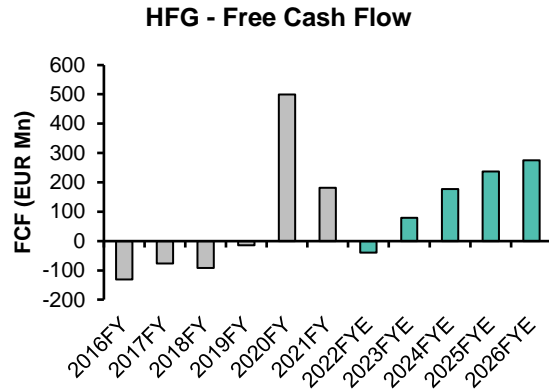
Source: Company reports

EXHIBIT 262: **The business is becoming more capital-intensive...**



Source: Company reports, and Bernstein estimates and analysis

EXHIBIT 263: **...which is pressuring FCF**



Source: Company reports, and Bernstein estimates and analysis

+ IMPACT OF OUR PROPOSED CORPORATE ACTION STRATEGY

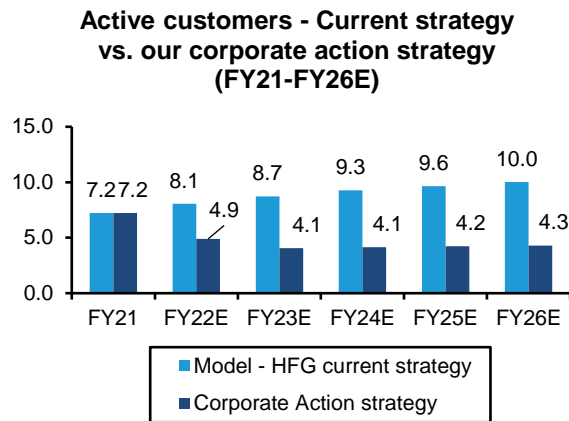
As a result of the change in strategy, we think HelloFresh would be operating a more sustainable strategy focused on profit and cash flow generation instead of unstable top line growth (driven by reactivations and discounts). We think our proposed strategy would lead to higher profits (20% margins), stronger FCF, faster EPS growth, and an ability to return >€1.5Bn to shareholders (20% market cap today) (see Exhibit 270).

- **Price target:** Using the same multiples that we use today (10x EBITDA and 21x P/E), if HelloFresh were to implement our strategy, we would increase our price target to €54 as a result of our proposed corporate action, which would provide 28% upside to today's share price and a change from our current €39 price target. This is driven by stronger profitability and free cash flow generation, which increase both our DCF, EV/EBITDA, and P/E valuations.
- **Customer numbers:** With our strategy, our customer number forecast would drop from 10 million in 2026 to 4.3 million, driven by a focus on the core affluent consumer base, but retention rates and customer satisfaction would likely increase (see Exhibit 264).
- **Revenue growth:** Although AOV would increase as a result of discounting coming down from 20% to 10%, our revenue forecast would decrease from a +9.6% CAGR to a -4.3% CAGR for 2021-26. This would be driven by lower discounting and lower customer acquisition, but we would see higher AOV (see Exhibit 265).
- **Contribution margins:** Contribution margins would increase by >700 bps as a result of lower discounting and passing on food inflation to consumers. As a result, contribution margins would be 33.5% in FY26 vs. our modeling of 26.1%.

BERNSTEIN

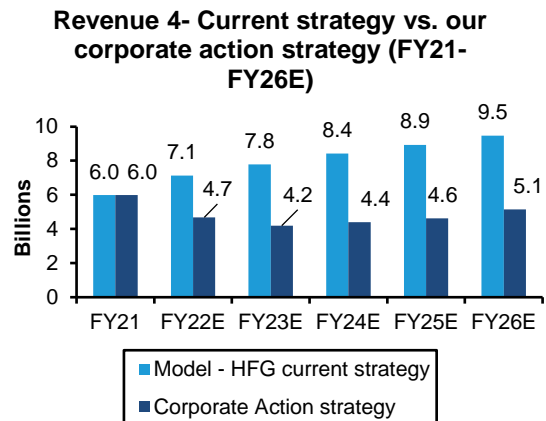
- **EBITDA:** As a result of higher contribution margins and lower marketing (focused on specific customer types), as well as greater operating leverage on SG&A (driven by simple operations), we would expect EBITDA to grow at a 13% CAGR vs. a 10% CAGR today. This would lead to 20% EBITDA margins instead of 9% EBITDA margins in 2026 in our current model (see Exhibit 266 and Exhibit 267). We think this would be a more attractive, sustainable investment vs. lower margins propped up by weak customer relationships, high churn, and high discounting.
- **FCF:** As a result of stronger EBITDA growth and lower Capex (driven by a focus on simplicity), our FCF would grow at a 25% CAGR 2021-26 vs. our current expectation of +7% CAGR. This would lead to a 7% FCF yield at current prices vs. 3% in our model expectations (see Exhibit 269).
- **Dividends and buybacks:** With a focus on margins, the possibility for shareholder returns increases. With our strategy, HelloFresh would end up sitting on total cash of €2.3Bn vs. €0.8Bn in our current expectations. We think this would allow it to return more than €1.5Bn to shareholders over the next five years. If this was used in buybacks today, the company could buy back 20% of its stock at today's prices (see Exhibit 270).

EXHIBIT 264: **Customer numbers**



Source: Company reports, and Bernstein estimates and analysis

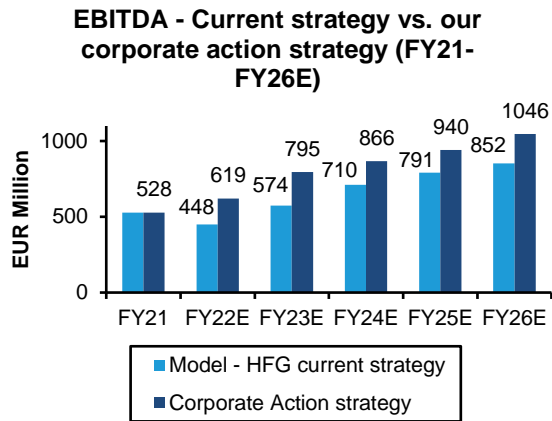
EXHIBIT 265: **Revenue growth**



Source: Company reports, and Bernstein estimates and analysis

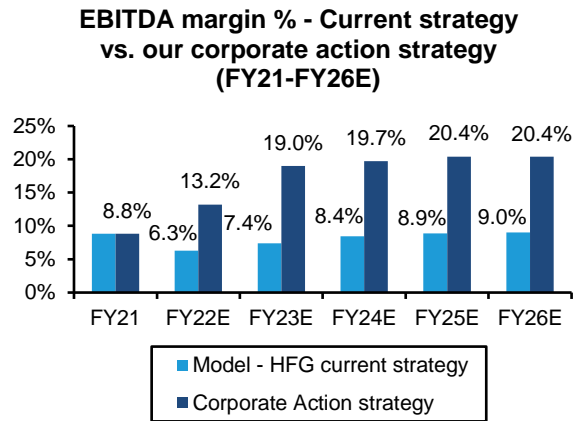
BERNSTEIN

EXHIBIT 266: **EBITDA**



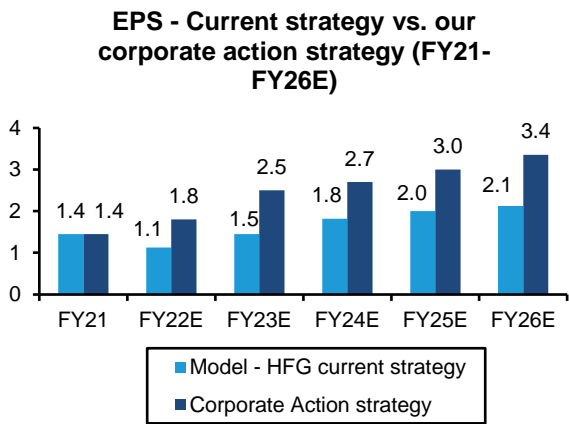
Source: Company reports, and Bernstein estimates and analysis

EXHIBIT 267: **EBITDA margins**



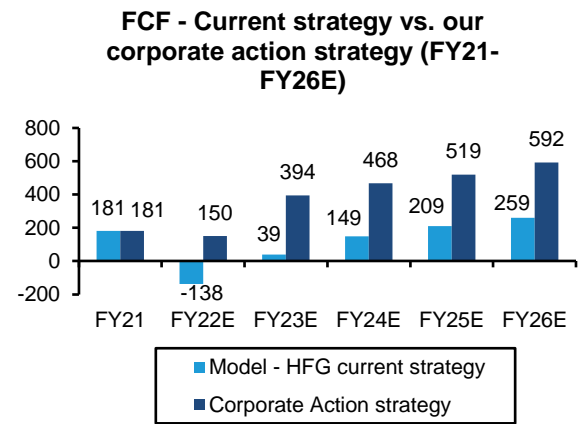
Source: Company reports, and Bernstein estimates and analysis

EXHIBIT 268: **EPS**



Source: Company reports, and Bernstein estimates and analysis

EXHIBIT 269: **FCF**



Source: Company reports, and Bernstein estimates and analysis

BERNSTEIN

EXHIBIT 270: **HFG current strategy (our published model) vs. our proposed corporate action strategy**

		FY21	FY22E	FY23E	FY24E	FY25E
Active Customers (m)	Model - HFG current strategy	7.2	8.1	8.7	9.3	9.6
	Corporate Action strategy	7.2	4.9	4.1	4.1	4.2
Group Revenue	Model - HFG current strategy	5993	7126	7788	8421	8933
	Corporate Action strategy	5993	4674	4179	4390	4612
Revenue growth %	Model - HFG current strategy	59.8%	18.9%	9.3%	8.1%	6.1%
	Corporate Action strategy	59.8%	-22.0%	-10.6%	5.1%	5.1%
Contribution margin %	Model - HFG current strategy	25.3%	23.9%	25.1%	25.9%	26.1%
	Corporate Action strategy	25.3%	28.4%	32.0%	32.8%	33.5%
Adj EBITDA	Model - HFG current strategy	528	448	574	710	791
	Corporate Action strategy	528	619	795	868	940
Adj EBITDA %	Model - HFG current strategy	8.8%	6.3%	7.4%	8.4%	8.9%
	Corporate Action strategy	8.8%	13.2%	19.0%	19.7%	20.4%
Basic EPS	Model - HFG current strategy	1.4	1.1	1.5	1.8	2.0
	Corporate Action strategy	1.4	1.8	2.4	2.7	3.0
FCF	Model - HFG current strategy	181	-138	39	149	209
	Corporate Action strategy	181	150	394	468	519
Net Cash / (Debt)	Model - HFG current strategy	276	101	134	283	492
	Corporate Action strategy	276	289	776	1244	1763

Source: Company reports, and Bernstein estimates and analysis

RISKS TO THE PROPOSED STRATEGY

- **Capitulation to top line growth strategy isn't taken well with investors** who appear broadly supportive of management's current strategy. Switch in focus from growth to cash generation is a significant change in the company strategy, suggesting TAM may be smaller and opportunity size may be smaller.
- **Disintermediation from grocers and margin defensiveness.** Grocery is a low-margin business, and typically any excess returns are competed away in high competition. Traditional grocers are typically good at new product development, and if they offered these meal kit products at significantly lower prices, this could impact our margin strategy.
- **Reducing discounting may lead to further customer loss than we expect.** While we model >50% active customers would disappear with the introduction of this strategy, customer reduction may be even higher, leading to a spiraling effect where further marketing spend is cut and more customers are lost.

BERNSTEIN

- **Management would argue its innovation is key to driving customer engagement** and that it needs to make the business more complex (quicker lead times, more options, recipe customization, etc.) to maintain relevance with customers. A slower, less innovative strategy may lead to being outcompeted by smaller rivals.
- **Switching to a cash cow strategy brings into question the longevity of the cash flows** from the small group of core affluent customers. How long will the core be willing to buy at full price and significant markups Does the meal kit proposition without significant innovation and constant customer churn have longevity?

Disclosure Appendix

REQUIRED DISCLOSURES

I. REQUIRED DISCLOSURES

Autonomous Research US is a unit within Sanford C. Bernstein & Co., LLC, a broker-dealer registered with the U.S. Securities and Exchange Commission and a member of the Financial Industry Regulatory Authority (www.finra.org) and the Securities Investor Protection Corporation (see www.sipc.org). When this report contains an analysis of debt securities, such report is intended for institutional investors and is not subject to all the independence and disclosure standards applicable to debt research for retail investors under the FINRA rules.

VALUATION METHODOLOGY

European Food Retail: We value stocks in our coverage through the following steps: (1) We use a market-based approach to valuation. We take data for a set of comparable companies and assess how multiples relevant to the sector (PE, EV/EBITDA, EV/sales, EV/EBIT, FCF yield) change relative to expected growth rates, creating a regression of each multiple versus expected growth; (2) We generate earnings forecasts for the company, compare those forecasts with consensus expectations, and seek to reflect events that may happen during the 12 months that are likely to move consensus expectations; (3) We value the stock by applying the relevant multiple (as determined by our industry valuation regressions) to our earnings forecast; and (4) Where appropriate, we break down the company into its parts (e.g., by geography) and value it as a sum of those parts. Note that we make several adjustments to our valuation analysis: (1) For company-specific tax rates, habits of recurring one-off charges, or other company-specific traits; (2) To separate non-operating assets if we feel their inclusion is distorting the valuation multiples; and (3) To include pension deficits, non-operating provisions, and seasonality of debt in our net debt calculation.

HelloFresh SE: We value HelloFresh using an average of a 15-year DCF, PE, and EV/EBITDA.

RISKS

European Food Retail: There are certain risks that are common to all the companies in our coverage: (1) Prevailing economic conditions — in each of the territories our coverage companies operate in, the food retail spend is correlated to prevailing economic conditions. Thus, any unexpected deterioration or improvement in the macroeconomic conditions in these countries will likely impact the growth assumptions applied to those operations; and (2) New Entrants — all companies in our coverage are at risk from new entrants either at a local/regional level (i.e., a new supermarket opening locally to an incumbent) or national level (a new entrant entering a whole market). Currently, the greatest expansion is being seen at the lower (Lidl/Aldi in the discount sector) and higher (Waitrose/Wholefoods) ends of the market or online (Amazon). These companies may continue to outpace the sector and impact the growth of the companies in our sector. Similarly successful operators in certain regions/countries, e.g., E.Leclerc in France, could expand beyond their current boundaries. As a lot of the non-coverage companies are privately held, it can be difficult to assess the ability and willingness of these companies to expand further.

HelloFresh SE: The upside risks to our target price include: (1) Pandemic behavior sticks and new customers continue ordering; (2) Cost reduction sticks post-pandemic and marketing spend stays low vs. 2019 levels; (3) Further acquisitions that grow the business; and (4) New strategic initiatives or geographies provide material upside.

RATINGS DEFINITIONS, BENCHMARKS, AND DISTRIBUTION

Bernstein brand

The Bernstein brand rates stocks based on forecasts of relative performance for the next 6-12 months versus the S&P 500 for stocks listed on the US and Canadian exchanges, versus the MSCI Europe Index (MSDLE15) for stocks listed on the European exchanges (except for Russian companies), versus the MSCI Emerging Markets Index for Russian companies and stocks listed on emerging markets exchanges outside of the Asia Pacific region, versus the MSCI Japan (MXJP) for stocks listed on the Japanese exchanges, and versus the MSCI Asia Pacific ex-Japan Index for stocks listed on the Asian (ex-Japan) exchanges — unless otherwise specified.

The Bernstein brand has three categories of ratings:

- Outperform: Stock will outpace the market index by more than 15 pp
- Market-Perform: Stock will perform in line with the market index to within +/-15 pp
- Underperform: Stock will trail the performance of the market index by more than 15 pp

Not Rated: The stock Rating, Target Price and/or estimates (if any) have been suspended temporarily.

Autonomous brand

The Autonomous brand rates stocks as indicated below. As our benchmarks we use the SX7P and SXFP index for European banks, the SXIP for European insurers, the S&P 500 and S&P Financials for US banks coverage, S5LIFE for US Insurance, the SPSIINS for US Non-Life Insurers coverage, and IBOV for Brazil and H-FIN index for China banks and insurers. Ratings are stated relative to the sector (not the market).

The Autonomous brand has three categories of ratings:

- Outperform (OP): Stock will outpace the relevant index by more than 10 pp
- Neutral (N): Stock will perform in line with the market index to within +/-10 pp
- Underperform (UP): Stock will trail the performance of the relevant index by more than 10 pp
- Coverage Suspended (CS) applies when coverage of a company under the Autonomous research brand has been suspended. Ratings and price targets are suspended temporarily. Previously issued ratings and price targets are no longer current and should therefore not be relied upon.

Not Rated: The stock Rating, Target Price and/or estimates (if any) have been suspended temporarily.

Those denoted as 'Feature' (e.g., Feature Outperform FOP, Feature Under Outperform FUP) are our core ideas. Not Rated (NR) is applied to companies that are not under formal coverage.

For both brands, recommendations are based on a 12-month time horizon.

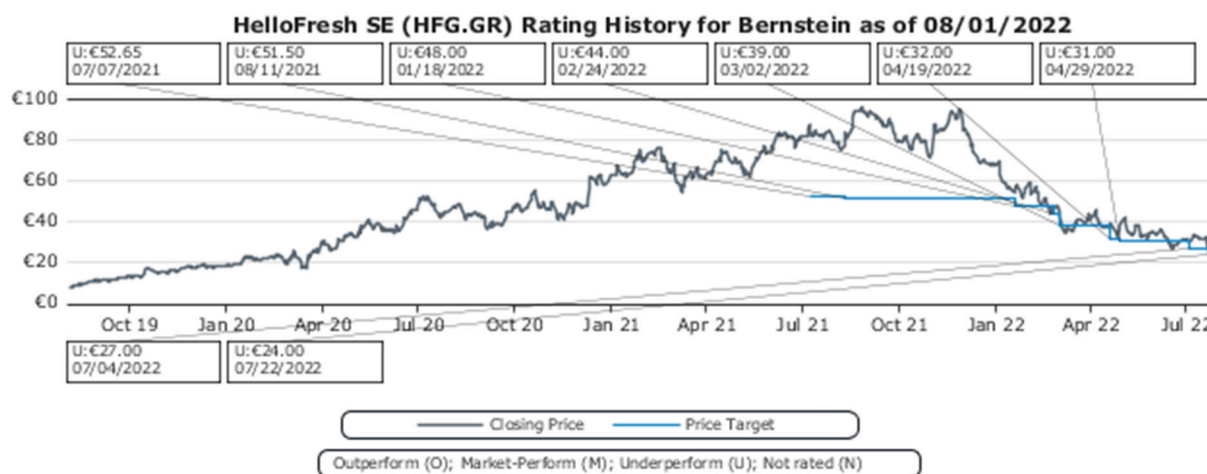
DISTRIBUTION OF RATINGS/INVESTMENT BANKING SERVICES

Rating	Market Abuse Regulation(MAR) and FINRA Rule 2241 classification	Count	Percent	Count*	Percent*
Outperform	BUY	395	50.51%	0	0.00%
Market-Perform (Bernstein Brand) Neutral (Autonomous Brand)	HOLD	261	33.38%	1	0.38%
Underperform	SELL	123	15.73%	0	0.00%
Not Rated (Bernstein Brand) Coverage Suspended (Autonomous Brand)	NOT RATED	3	0.38%	0	0.00%

* These figures represent the number and percentage of companies in each category to whom Bernstein and Autonomous provided investment banking services.

As of August 01, 2022. All figures are updated quarterly and represent the cumulative ratings over the previous 12 months.

PRICE CHARTS/RATINGS AND PRICE TARGET HISTORY



OTHER MATTERS

It is at the sole discretion of the Firm as to when to initiate, update and cease research coverage. The Firm has established, maintains, and relies on information barriers to control the flow of information contained in one or more areas (i.e., the private side) within the Firm, and into other areas, units, groups, or affiliates (i.e., public side) of the Firm.

The legal entity(ies) employing the analyst(s) listed in this report can be determined by the country code of their phone number, as follows:

- +1 Sanford C. Bernstein & Co., LLC
- +44 Bernstein Autonomous LLP
- +353 Sanford C. Bernstein Ireland Limited
- +91 Sanford C. Bernstein (India) Private Limited
- +852 Sanford C. Bernstein (Hong Kong) Limited 盛博香港有限公司
- +65 AllianceBernstein (Singapore) Ltd.

CERTIFICATION

Each research analyst listed in this report, who is primarily responsible for the preparation of the content of this report, certifies that all of the views expressed in this publication accurately reflect that analyst's personal views about any and all of the subject securities or issuers and that no part of that analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views in this publication.

II. OTHER IMPORTANT INFORMATION AND DISCLOSURES

References to "Bernstein" or the "Firm" in these disclosures relate to the following entities: Sanford C. Bernstein & Co., LLC, Bernstein Autonomous LLP, Sanford C. Bernstein Limited (for dates prior to January, 1, 2021), Autonomous Research LLP (for dates between April 1, 2019 and December 31, 2020), Sanford C. Bernstein (Hong Kong) Limited 盛博香港有限公司, Sanford C. Bernstein (Canada) Limited, Sanford C. Bernstein (India) Private Limited (SEBI registration no. INH000006378) and Sanford C. Bernstein (business registration number 53193989L), a unit of AllianceBernstein (Singapore) Ltd. which is a licensed entity under the Securities and Futures Act and registered with Company Registration No. 199703364C.

Separate branding is maintained for "Bernstein" and "Autonomous" research products.

- Bernstein produces a number of different types of research products including, among others, fundamental analysis and quantitative analysis, under both the "Autonomous" and "Bernstein" brands. Recommendations contained within one type of research product may differ from recommendations contained within other types of research products, whether as a result of differing time horizons, methodologies or otherwise. Furthermore, views or recommendations within a research product issued under one brand may differ from views or recommendations under the same type of research product issued under the other brand. The Research Ratings System for the two brands and other information related to those Rating Systems are included in the previous section.
- Each operates as a separate business unit within the following entities: Sanford C. Bernstein & Co., LLC, Sanford C. Bernstein (Hong Kong) Limited 盛博香港有限公司 and Bernstein Autonomous LLP. For information relating to "Autonomous" branded products (including certain Sales materials) please visit: www.autonomous.com. For information relating to Bernstein branded products please visit: www.bernsteinresearch.com.

Information related to the acquisition of Autonomous Research:

- On and as of April 1, 2019, AllianceBernstein L.P. acquired Autonomous Research. As a result of the acquisition, the research activities formerly conducted by Autonomous Research US LP and Autonomous Research Asia Limited were assumed by Sanford C. Bernstein & Co., LLC and Sanford C. Bernstein (Hong Kong) Limited 盛博香港有限公司, respectively. Both entities continue to publish research under the Autonomous brand.
- References to "Autonomous" in these disclosures relate to the Autonomous Research LLP and, with reference to dates prior to April 1, 2019, to Autonomous Research US LP and Autonomous Research Asia Limited, and, with reference to April 1, 2019 onwards, the Autonomous Research US unit and separate brand of Sanford C. Bernstein & Co., LLC and the Autonomous Research Asia unit and separate brand of Sanford C. Bernstein (Hong Kong) Limited 盛博香港有限公司, collectively.

Information related to the reorganization of Sanford C. Bernstein Limited and Autonomous Research LLP:

- On and after close of business on December 31, 2020, as part of an internal reorganization of the corporate group, Sanford C. Bernstein Limited transferred its business to its affiliate Autonomous Research LLP. Subsequent to this transfer, Autonomous Research LLP changed its name to Bernstein Autonomous LLP. As a result of the reorganization, the research activities formerly conducted by Sanford C. Bernstein Limited were assumed by Bernstein Autonomous LLP, which is authorized and regulated by the Financial Conduct Authority (FRN 500498) and now publishes research under the Bernstein Research Brand. Please note that all price targets, recommendations, and historical price charts are unaffected by the transfer of the business from Sanford C. Bernstein Limited and have been carried forward unchanged to Bernstein Autonomous LLP. You can continue to find this information on the Bernstein website at www.bernsteinresearch.com.

Analysts are compensated based on aggregate contributions to the research franchise as measured by account penetration, productivity, and proactivity of investment ideas. No analysts are compensated based on performance in, or contributions to, generating investment banking revenues.

This report has been produced by an independent analyst as defined in Article 3 (1)(34)(i) of EU 296/2014 Market Abuse Regulation ("MAR").

Where this material contains an analysis of debt product(s), such material is intended only for institutional investors and is not subject to the independence and disclosure standards applicable to debt research prepared for retail investors.

This document may not be passed on to any person in the United Kingdom (i) who is a retail client (ii) unless that person or entity qualifies as an authorized person or exempt person within the meaning of section 19 of the UK Financial Services and Markets Act 2000 (the "Act"), or qualifies as a person to whom the financial promotion restriction imposed by the Act does not apply by virtue of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, or is a person classified as an "professional client" for the purposes of the Conduct of Business Rules of the Financial Conduct Authority.

This document may not be passed onto any person in Canada unless that person qualifies as "permitted client" as defined in Section 1.1 of NI 31-103.

To our readers in the United States: Sanford C. Bernstein & Co., LLC, a broker-dealer registered with the U.S. Securities and Exchange Commission ("SEC") and a member of the U.S. Financial Industry Regulatory Authority, Inc. ("FINRA") is distributing this publication in the United States and accepts responsibility for its contents. Where this report has been prepared by research analyst(s) employed by a non-US affiliate, such analyst(s), is/are (unless otherwise expressly noted) not registered as associated persons of Sanford C. Bernstein & Co., LLC or any other SEC-registered broker-dealer and are not licensed or qualified as research analysts with FINRA or any other US regulatory authority. Accordingly, reports prepared by such analyst(s) may not be prepared in compliance with FINRA's restrictions regarding (among other things) communications by research analysts with a subject company, interactions between research analysts and investment banking personnel, participation by research analysts in solicitation and marketing activities relating to investment banking transactions, public appearances by research analysts, and trading securities held by a research analyst account.

To our readers in the United Kingdom: This publication has been issued or approved for issue in the United Kingdom by Bernstein Autonomous LLP, authorized and regulated by the Financial Conduct Authority and located at 50 Berkeley Street, London W1J 8SB, +44 (0)20-7170-5000. Registered in England & Wales No OC343985.

To our readers in Ireland and the member states of the EEA: This publication is being distributed by Sanford C. Bernstein Ireland Limited, which is authorized and regulated by the Central Bank of Ireland.

To our readers in Hong Kong: This publication is being distributed in Hong Kong by Sanford C. Bernstein (Hong Kong) Limited 盛博香港有限公司, which is licensed and regulated by the Hong Kong Securities and Futures Commission (Central Entity No. AXC846) to carry out Type 4 (Advising on Securities) regulated activities and subject to the licensing conditions mentioned in the SFC Public Register (<https://www.sfc.hk/publicregWeb/corp/AXC846/details>). This publication is solely for professional investors only, as defined in the Securities and Futures Ordinance (Cap. 571).

To our readers in Singapore: This publication is being distributed in Singapore by Sanford C. Bernstein, a unit of AllianceBernstein (Singapore) Ltd., only to accredited investors or institutional investors, as defined in the Securities and Futures Act (Chapter 289). Recipients in Singapore should contact AllianceBernstein (Singapore) Ltd. in respect of matters arising from, or in connection with, this publication. AllianceBernstein (Singapore) Ltd. is a licensed entity under the Securities and Futures Act and registered with Company Registration No. 199703364C. It is regulated by the Monetary Authority of Singapore and located at One Raffles Quay, #27-11 South Tower, Singapore 048583, +65-62304600. The business name "Bernstein" is registered under business registration number 53193989L.

To our readers in the People's Republic of China: The securities referred to in this document are not being offered or sold and may not be offered or sold, directly or indirectly, in the People's Republic of China (for such purposes, not including the Hong Kong and Macau Special Administrative Regions or Taiwan), except as permitted by the securities laws of the People's Republic of China.

To our readers in Japan: This document is not delivered to you for marketing purposes, and any information provided herein should not be construed as a recommendation, solicitation or offer to buy or sell any securities or related financial products.

For the institutional client readers in Japan who have been granted access to the Bernstein website by Daiwa Securities Group Inc. ("Daiwa"), your access to this document should not be construed as meaning that Bernstein is providing you with investment advice for any purposes. Whilst Bernstein has prepared this document, your relationship is, and will remain with, Daiwa, and Bernstein has neither any contractual relationship with you nor any obligations towards you.

To our readers in Australia: Sanford C. Bernstein & Co., LLC., Bernstein Autonomous LLP, Sanford C. Bernstein Ireland Limited, Sanford C. Bernstein (Hong Kong) Limited 盛博香港有限公司, AllianceBernstein (Singapore) Ltd., and Sanford C. Bernstein (India) Private Limited ("Bernstein Affiliates") are regulated, respectively, by the Securities and Exchange Commission under U.S. laws, by the Financial Conduct Authority under U.K. laws, by the Central Bank of Ireland, by the Hong Kong Securities and Futures Commission under Hong Kong laws, by the Monetary Authority of Singapore under Singapore laws, and Securities and Exchange Board of India, all of which differ from Australian laws. The Bernstein Affiliates are exempt from the requirement to hold an Australian financial services license under the Corporations Act 2001 in respect of the provision of the following financial services to wholesale clients:

- providing financial product advice;
- dealing in a financial product;
- making a market for a financial product; and
- providing a custodial or depository service.

To our readers in Canada: If this publication pertains to a Canadian domiciled company, it is being distributed in Canada by Sanford C. Bernstein (Canada) Limited, which is licensed and regulated by the Investment Industry Regulatory Organization of Canada ("IIROC"). If the publication pertains to a non-Canadian domiciled company, it is being distributed by Sanford C. Bernstein & Co., LLC, which is licensed and regulated by both the SEC and FINRA, into Canada under the International Dealers Exemption.

To our readers in India: This publication is being distributed in India by Sanford C. Bernstein (India) Private Limited (SCB India) which is licensed and regulated by Securities and Exchange Board of India ("SEBI") as a research analyst entity under the SEBI (Research Analyst) Regulations, 2014, having registration no. INH000006378 and as a stockbroker having registration no. INZ000213537. SCB India is currently engaged in the business of providing research and stock broking services.

- SCB India is a Private limited company incorporated under the Companies Act, 2013, on April 12, 2017, bearing corporate identification number U65999MH2017FTC293762, and registered office at Level 6, 4 North Avenue, Maker Maxity, Bandra Kurla Complex, Bandra (East), Mumbai 400051, Maharashtra, India (Phone No: +91-22-68421401).
- SCB India does not have any disciplinary history as on the date of this report.

- The associates of SCB India or their relatives may have financial interest(s) in the subject company.
- Except as noted above, SCB India or its associates
 - do not have actual/beneficial ownership of one percent or more in securities of the subject company;
 - is not engaged in any investment banking activities for Indian companies, as such;
 - have not managed or co-managed a public offering in the past twelve months for any Indian companies;
 - have not received any compensation for investment banking services or merchant banking services from the subject company in the past 12 months;
 - have not received compensation for brokerage services from the subject company in the past twelve months;
 - have not received any compensation or other benefits from the subject company or third party related to the specific recommendations or views in this report; and
 - do not currently, but may in the future, act as a market maker in the financial instruments of the companies covered in the report.

SCB India or its associates may have received compensation for products or services other than investment banking, merchant banking or brokerage services from the subject company in the past twelve months.

The principal research analyst(s) who prepared this report, members of the analysts' team, and members of their households are not an officer, director, employee, or advisory board member of the companies covered in the report.

LEGAL

This publication has been published and distributed in accordance with the Firm's policy for management of conflicts of interest in investment research, a copy of which is available from Sanford C. Bernstein & Co., LLC, Director of Compliance, 1345 Avenue of the Americas, New York, N.Y. 10105. Additional disclosures and information regarding Bernstein's business are available on our website www.bernsteinresearch.com.

This publication is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of, or located in any locality, state, country, or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would subject any of the entities referenced herein or any of their subsidiaries or affiliates to any registration or licensing requirement within such jurisdiction. This publication is based upon public sources we believe to be reliable, but no representation is made by us that the publication is accurate or complete. We do not undertake to advise you of any change in the reported information or in the opinions herein. This publication was prepared and issued by entity referred to herein for distribution to eligible counterparties or professional clients. This publication is not an offer to buy or sell any security, and it does not constitute investment, legal or tax advice. The investments referred to herein may not be suitable for you. Investors must make their own investment decisions in consultation with their professional advisors in light of their specific circumstances. The value of investments may fluctuate, and investments that are denominated in foreign currencies may fluctuate in value as a result of exposure to exchange rate movements. Information about past performance of an investment is not necessarily a guide to, indicator of, or assurance of, future performance.

This report is directed to and intended only for our clients who are "eligible counterparties", "professional clients", "institutional investors" and/or "professional investors" as defined by the aforementioned regulators and must not be redistributed to retail clients as defined by the aforementioned regulators. Retail clients who receive this report should note that the services of the entities noted herein are not available to them and should not rely on the material herein to make an investment decision. The result of such act will not hold the entities noted herein liable for any loss thus incurred as the entities noted herein are not registered/authorized/ licensed to deal with retail clients and will not enter into any contractual agreement/arrangement with retail clients. This report is provided subject to the terms and conditions of any agreement that the clients may have entered into with the entities noted herein . All research reports are disseminated on a simultaneous basis to eligible clients through electronic publication to our client portal. The information is private and confidential and for the use of the clients only.

This report has been prepared for information purposes only and is based on current public information that we consider reliable, but the entities noted herein do not warrant or represent (express or implied) as to the sources of information or data contained herein are accurate, complete, not misleading or as to its fitness for the purpose intended even though the entities noted herein rely on reputable or trustworthy data providers, it should not be relied upon as such. Opinions expressed are the

author(s)' current opinions as of the date appearing on the material only. The information in this report does not constitute a personal recommendation, as defined by any of the aforementioned regulators, or take into account the particular investment objectives, financial situations, or needs of individual investors. The report has not been reviewed by any of the aforementioned regulators and does not represent any official recommendation from the aforementioned regulators.

The analysis contained herein is based on numerous assumptions. Different assumptions could result in materially different results. The information in this report does not constitute, or form part of, any offer to sell or issue, or any offer to purchase or subscribe for shares, or to induce engage in any other investment activity. The value of any securities or financial instruments mentioned in this report can fall as well as rise subject to market conditions. Past performance is not necessarily indicative of future results. Estimates of future performance mentioned by the research analyst in this report are based on assumptions that may not be realized due to unforeseen factors like market volatility/fluctuation. In relation to securities or financial instruments denominated in a foreign currency other than the clients' home currency, movements in exchange rates will have an effect on the value, either favorable or unfavorable. Before acting on any recommendations in this report, recipients should consider the appropriateness of investing in the subject securities or financial instruments mentioned in this report and, if necessary, seek for independent professional advice.

The securities described herein may not be eligible for sale in all jurisdictions or to certain categories of investors where that permission profile is not consistent with the licenses held by the entities noted herein. This document is for distribution only as may be permitted by law. It is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country, or other jurisdiction where such distribution, publication, availability, or use would be contrary to law or regulation or would subject the entities noted herein to any regulation or licensing requirement within such jurisdiction.

No part of this material may be reproduced, distributed, or transmitted or otherwise made available without prior consent of the entities noted herein. Copyright Bernstein Autonomous LLP, Sanford C. Bernstein & Co., LLC, and Sanford C. Bernstein (Hong Kong) Limited 盛博香港有限公司. All rights reserved. The trademarks and service marks contained herein are the property of their respective owners. Any unauthorized use or disclosure is strictly prohibited. The entities noted herein may pursue legal action if the unauthorized use results in any defamation and/or reputational risk to the entities noted herein and research published under the Bernstein and Autonomous brands.

BERNSTEIN GLOBAL SALES OFFICES

AMSTERDAM

WTC Schiphol Airport, A-Tower
+31-20-201-4982

BOSTON

53 State Street
+1-617-788-3705

CHICAGO

227 West Monroe Street
+1-312-696-7800

DUBLIN

4 Earlsfort Terrace
+353-1-246-3100

FRANKFURT

Bockenheimer Landstrasse 51
+49-69-5050-77-181

HONG KONG

One Island East, Taikoo Place
+852-2918-5762

LONDON

50 Berkeley Street
+44-207-170-5000

LOS ANGELES

1999 Avenue of the Stars
+1-310-407-0027

MILAN

Via Monte di Pietà 21
+39-02-30304-400

MUMBAI

Maker Maxity, BKC
+91-22-6842-1401

NEW YORK

1345 Avenue of the Americas
+1-212-969-2204

SINGAPORE

One Raffles Quay, South Tower
+65-6230-4600

STOCKHOLM

Hamngatan 11
+46-8-535-274-80

TORONTO

161 Bay Street
+1-416-572-2466

ZURICH

Talstrasse 83
+41-44-227-7910



BERNSTEIN