BARCLAYS

Equity Research
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Consumer Staples

Quant analysis of crisis performance

We do a quantitative deep dive into which factors drive performance during a crisis: Last year we built a factor model of what drives share price performance in global Consumer Staples (see *A quant approach to Staples selection*, 26 Sep 2019). In this report we use the same approach but specifically look at what drives performance in the build-up to, and recovery from, a crisis. We feel it is too soon to tell whether equity markets have bottomed out in the COVID-19 crisis, so we consider each possibility.

Crisis recovery basket – value and growth outperform, quality less important: We identify five separate factors where the top quintile outperformed MSCI World Consumer Staples by 15%+ from end 1Q09 to end 4Q09, such as high dividend and FCF yields, and high forecast OSG. Lower quality (using FCF / tangible assets as a proxy) outperforms. **Swedish Match, Carlsberg, Kerry,** and **Essity** are among the suggested European names. **Coty, Estee Lauder, Brown Forman**, and **PMI** among the US names.

Build-up to a crisis basket – quality outperforms, dividends still matter: We also look at what factors drove outperformance from end 2Q08 to end 1Q09, when a credit crunch-induced recession morphed into the Global Financial Crisis. Factors are less important here than during the rebound (perhaps because problems are more company-specific) but still look to add value. High free cash flow / tangible assets, a high dividend yield, and a low price/book are among the drivers of performance.

Our through-the-cycle model outperformed by 262bp end 3Q19 to 1Q20. We launched our through-the-cycle model at the end of 3Q19 – see *A quant approach to Staples selection*, 26 Sep 2019. Our model outperformed the MSCI World Consumer Staples index by 173bp in 4Q19 and 75bp in 1Q20. We now have a longer data series to train our model on, and tweak its treatment of market cap (using a logarithmic rather than linear relationship) to temper its dislike of mega-caps (this yields a small performance improvement on backtesting).

Most and least preferred: Our current most preferred names include: **Altria, BAT, Church & Dwight, Clorox, Hershey, Imperial Brands, Ingredion, Kraft Heinz, Monster Beverage, Mowi, PMI, and Swedish Match.** Our current least preferred names include: **Beiersdorf, Constellation, Danone, Kerry, L'Oréal, and Nestlé.** Our factorial model misses out on company-specific detail and is designed to work in aggregate. Limited importance should be attached to any individual name.

Deep dive into sector turning points since early 2000s. As well as the financial crisis, we observe turning points in sector behaviour, such as the "taper tantrum". We discuss how the contribution of factors to returns evolves and changes.

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Scenario positioning in a crisis

Visibility on 2020 is very limited, the duration and intensity of the COVID-19 crisis remains to be seen. Given that, we use factor based quantitative analysis to build two baskets of Consumer Staples stocks for different scenarios. We can easily envisage equity markets being up or down 20%+ on a 6m view, and consider how to position for each.

Our Bull Basket

It is possible that we are at, or near to, the bottom for equity markets. We can envisage a scenario where lockdowns gradually ease throughout 2Q20e, the global economy swiftly bounces back, and equity markets rally meaningfully from here. What stocks should global Consumer Staples investors own in this eventuality?

To help answer this question we look at how global Consumer Staples performed from the end of 1Q09 to the end of 4Q09. This largely covers the initial equity market bounce from the Global Financial Crisis. This analysis covers the components of the MSCI World Consumer Staples Index.

Rather than simply looking at which stocks performed best during this period (and assuming the same stocks will outperform this time), we look at which factors drove outperformance. We then look at which stocks are currently suggested by those factors.

Our most preferred quintile contains the 20% of names we would expect to perform best during a strong equity market recovery over the next 6m or so, based on the precedent of the recovery from the Global Financial Crisis. Our least preferred quintile contains the 20% of names we would expect to perform worse in this scenario (but likely still up in absolute terms, just underperforming the sector). As this is a purely quantitative screen, it will not capture stock specific factors.

FIGURE 1

Bull basket – how to position for a recovery

Most preferred quintile	Least preferred quintile
Coty	Bunge
Jeronimo Martins	Imperial Brands
Tyson Foods	Japan Tobacco
Coca-Cola Amatil	Henkel
Estee Lauder	Ahold Delhaize
Swedish Match	Wm Morrison
A2 Milk	Nisshin Seifun
Costco Wholesale	Suntory Beverage & Food
Brown-Forman	Lawson
Campbell Soup	Ajinomoto
Coles Group	Ingredion
Welcia Holdings	Yakult Honsha
Mowi	Colruyt
Philip Morris International	MEIJI Holdings
Woolworths Group	Yamazaki Baking
Hershey	Seven & i Holdings
Carlsberg	Dairy Farm International
Tsuruha Holdings	Walgreens Boots Alliance
Barry Callebaut	FamilyMart Co
Kerry Group	Coca-Cola Bottlers Japan
Treasury Wine Estates	Molson Coors Beverage
ICA Gruppen	Kraft Heinz
Essity	J Sainsbury
Orkla	

Source: Barclays Research

We describe our methodology in more detail later in this note, but it is essentially that set out in our 26 September 2019 note *Quantamental factors for Consumer Staples*. However, in this instance we are only training our model on performance over the crisis recovery period (end 1Q09 to end 4Q09), in order to isolate for factors that perform during a post-crisis rally.

We use a variety of statistical techniques to select a combination of factors that are most correlated with company-level outperformance versus the market. These factors are chosen because of their effect in combination, thus the exclusion of a factor does not mean that it is not “important”, merely that it does not do anything to improve correlation beyond factors already chosen. We consider 13 separate factors.

Our model finds that stocks that perform well in the recovery from a crisis tend to have the following characteristics:

- Relative share price outperformer over the last 12m-1m period (so ignoring the most recent month’s performance)
- Low free cash flow yield (on trailing data)
- High dividend yield (on trailing data)
- Low free cash flow return on tangible assets (on trailing data)

- High organic sales growth (on consensus data)

Parts of this initially seem somewhat counter-intuitive. We suspect relative share price performance may play a screening role in the context of the low cash yield and return metrics. A company with poor cash generation but a share price which has outperformed likely has poor cash generation because it has continued to invest through the crisis, boding well for future performance. That our model rewards high organic sales growth supports this interpretation.

A high dividend yield is a sign of a healthy balance sheet despite near-term cashflow weakness, but a high dividend yield coupled with share price weakness might suggest that the market is pricing in a dividend cut. Thus we think share price outperformance is best viewed as a screening mechanism that works in combination with the other factors.

FIGURE 2

Bull Basket factor heatmap (5 = best quintile, 1 = worst quintile)

Company	12m_1m share price	FCF yield	Div yield	FCF / Tangible Assets	Organic Sales Growth
Coty	1	5	5	4	5
Jeronimo Martins	4	5	5	4	5
Tyson Foods	2	2	2	4	1
Coca-Cola Amatil	4	5	4	2	5
Estee Lauder	5	1	2	3	1
Swedish Match	5	5	1	1	4
a2 Milk Co	5	1	5	1	1
Costco Wholesale	5	1	3	2	3
Brown-Forman	5	1	2	2	1
Campbell Soup	5	4	3	2	2
Coles Group	4	2	5	3	5
Welcia Holdings	4	1	4	1	3
Mowi	4	5	5	5	5
Philip Morris International	5	5	5	3	4
Woolworths Group	4	4	1	2	5
Hershey	5	4	2	3	1
Carlsberg	3	3	3	2	2
Tsuruha Holdings	3	1	5	1	2
Barry Callebaut	4	1	3	4	4
Kerry Group	4	1	5	2	2
Treasury Wine Estates	3	3	3	3	4
ICA Gruppen	2	4	5	3	5
Essity	3	4	5	1	3
Orkla	2	4	2	4	5

Source: Barclays Research

Single factor analysis

We think it's also useful to know how factors in isolation drive performance during the crisis recovery period. Our multi-factor model looks at how factors drive performance in the context of other factors, which means some factors are included to play a balancing role. However, isolating for individual factors allows us to see what impact they have, if any.

FIGURE 3

Factors in isolation that drive outperformance in the rally

Factor	High or Low?	Confidence
12m_1m share price	Low	99%+
FCF yield	Low	99%+
Div yield	High	99%
FCF / Tangible Assets	Low	98%
OSG	High	92%

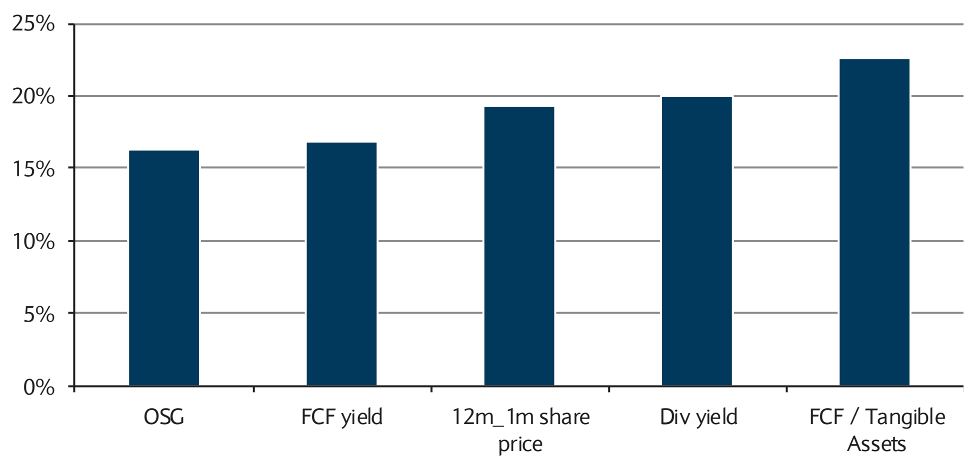
Source: Barclays Research

Our single factor analysis finds that the same five factors look to be the most important drivers of performance whether considering them in isolation or as part of a more nuanced model. However, what is interesting is that, when considered in isolation, weak recent share price performance is one of the single most powerful predictors of future performance.

There are two separate ways to measure the predictive power of a single factor. One of them is the metric we use above, to use statistical analysis to determine how confident we are that the factor in question was a driver of outperformance during the period in question. An alternative is the method we use below, to compare how well the best positioned quintile on the factor in question performed vs. the benchmark index over the period in question.

FIGURE 4

Excess return over index of top quintile by single factor from end 1Q09 to end 4Q09



Source: Barclays Research

This is rather more intuitive. All else being equal we would expect the companies that had performed the worst during the crisis to perform the best in the recovery from the crisis. We are intrigued that low free cash flow metrics continue to be reliable indicators when considered in isolation.

We suspect one possible explanation is that we regard FCF / Tangible Assets as the single best proxy for quality within Consumer Staples. Companies with low FCF / Tangible Assets are more likely to be lower quality, value names. As such they are likely to fall furthest going into a crisis, and then bounce furthest coming out of it.

The difference between factors in isolation and our model shows the potential dangers of simply cherry picking 'desirable' traits. By considering factors in isolation and then combining them, it's possible to end up choosing a combination of factors that actually work together undesirably.

Our Bear Basket

It is possible that there is another meaningful leg down to come in equity markets. We can envisage a scenario where lockdowns are not eased for much of 2020e, or eased but then reintroduced. In the event that the global economy significantly underperforms market expectations this year, which stocks should global Consumer Staples investors own?

To help answer this question we look at how global Consumer Staples performed from the end of 2Q08 to the end of 1Q09. This largely captures the period where equity markets moved from pricing in recession to crisis. Rather than simply looking at which stocks performed best during this period (and assuming the same stocks will outperform this time), we look at which factors drove outperformance.

As with our bull basket earlier, our most preferred quintile contains the 20% of names we would expect to perform best during a strong equity market recovery over the next 6m or so, based on the precedent of the recovery from the Global Financial Crisis. Our least preferred quintile contains the 20% of names we would expect to perform worse in this scenario (but likely still up in absolute terms, just underperforming the sector). As this is a purely quantitative screen, it will not capture stock specific factors.

FIGURE 5

Bear basket – how to position for another meaningful drop

Most preferred quintile	Least preferred quintile
Monster Beverage	Ajinomoto
Pigeon	Treasury Wine Estates
Ingredion	Coca-Cola
McCormick	Molson Coors
Hershey	Yamazaki Baking
Constellation Brands	Archer-Daniels-Midland
Church & Dwight Co	Loblaw Cos
General Mills	Seven & i Holdings
Kellogg	Wm Morrison
Campbell Soup	British American Tobacco
Pola Orbis Holdings	Colgate-Palmolive
Colruyt	Calbee
Kimberly-Clark	NH Foods
Brown-Forman	Aeon
Dairy Farm International Holdings	Coca-Cola Bottlers Japan Holdings
Clorox	Carrefour
Lamb Weston Holdings	Kraft Heinz
Philip Morris International	Imperial Brands
JM Smucker	Coles Group
Swedish Match	Casino
FamilyMart	Nisshin Seifun Group
Sysco	Wilmar International
Altria Group	J Sainsbury
Estee Lauder	

Source: Barclays Research

Our model finds that stocks that perform well in the transition from recession to crisis tend to have the following characteristics:

- High trailing dividend yield
- Low price to book
- High trailing free cash flow / tangible assets
- Low PEG
- Low market cap

The bulk of these are value metrics. In particular, a high dividend yield and a low price to book are classic deep value metrics. We suspect that high free cash flow / tangible assets moderates this slightly by weeding out companies that, while cheap, struggle to cover their cost of capital. We are interested that PEG makes an appearance, and that smaller companies seem to outperform.

FIGURE 6

Bear Basket factor heatmap (5 = best quintile, 1 = worst quintile)

Company	Dividend yield	Price / book	FCF / Tangible Assets	PEG	Market cap
Monster Beverage	5	1	5	3	5
Pigeon	5	2	2	5	5
Ingredion	2	4	5	2	4
McCormick	5	2	3	4	5
Hershey	5	4	4	3	5
Constellation Brands	3	2	4	4	4
Church & Dwight	5	2	4	3	5
General Mills	4	5	2	4	5
Kellogg	5	5	4	4	2
Campbell Soup	5	4	3	4	4
Pola Orbis Holdings	3	4	1	1	3
Colruyt	3	4	4	5	2
Kimberly-Clark	5	4	4	4	2
Brown-Forman	5	1	4	4	5
Dairy Farm International	4	5	1	2	2
Clorox	5	4	5	2	5
Lamb Weston	5	1	3	4	5
Philip Morris International	5	5	1	3	2
JM Smucker	1	5	3	2	4
Swedish Match	5	5	5	5	2
FamilyMart	2	2	3	4	5
Sysco	5	3	5	4	4
Altria	4	5	4	5	3
Estee Lauder	5	1	5	3	5

Source: Barclays Research

Single factor analysis

We think it's also useful to know how factors in isolation drive performance during the crisis sell off. Our multi-factor model looks at how factors drive performance in the context of other factors, which means some factors are included to play a balancing role. However, isolating for individual factors allows us to see what impact they have, if any.

FIGURE 7

Factors in isolation that drive outperformance in a crisis

Factor	High or low	Confidence
Forecast OSG	Low	94%
PEG	Low	92%
Forecast sales growth	Low	91%
Price / Book	Low	89%
Dividend yield (historic)	High	84%

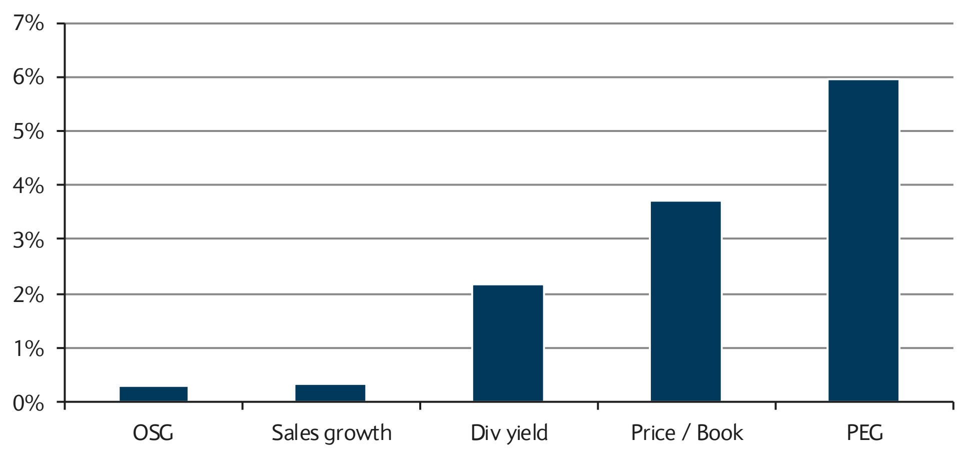
Source: Barclays Research

Companies that go into a crisis with low forecast sales growth and organic sales growth tend to outperform, this is perhaps because the lower starting point means they see smaller downgrades. A low price / book and a high dividend yield are classic deep value metrics, suggesting less room for derating before screening attractively to value funds. Low PEG also suggests value outperforms into a crisis.

There are two separate ways to measure the predictive power of a single factor. One of them is the metric we use above, to use statistical analysis to determine how confident we are that the factor in question was a driver of outperformance during the period in question. An alternative is the method we use below, to compare how well the best positioned quintile on the factor in question performed vs. the benchmark index over the period in question.

FIGURE 8

Excess return over index of top quintile by single factor from end 2Q08 to end 1Q09



Source: Barclays Research

Interestingly, single factor analysis looks to have less predictive power during the bear market phase of a crisis than during the recovery. Confidence levels are lower on our single factor analysis, and the level of absolute outperformance is lower. The level of absolute performance is distorted by underlying index performance. The MSCI World Consumer Staples index fell 26% end 2Q08 to end 1Q09 but gained 35% end 1Q09 to end 4Q09. Adjusting for this, outperformance in the crisis bear period should be scaled up by 1.82 in order to compare it to outperformance in the post-crisis rally.

However, even adjusting for this, factors have less predictive power during a crisis than in the recovery from it. We think that this is because during a crisis companies are to a certain extent impacted by harder to quantify factors such as how discretionary their product portfolios are, or, during this crisis their exposure to closed channels. However, in the crisis recovery period, these single factors are already captured in the share price (and hence momentum and valuation metrics).

Deeper dive into crisis factors

Study the factors that worked during the 2008 financial crisis

Given recent events, we seek to isolate the 2008-2009 period and ascertain which factors performed best during these periods. Specifically, we note that the period from January 2008 until the start of Q22009 contained the main slide in the consumer staples index, 31% fall vs trough value of 38%. Whereas the period from Q22009 until the start of 2010 encompasses the recovery.

Separate pre-crisis, from the fall and the recovery

Hence we utilise our quarterly periods to discuss performance at distinct points in time: peak to trough, the early crisis, and during the recovery. For each period we regress on a single point in time set of factors vs the risk adjusted returns.

We find in all three periods, FCF and returns to shareholders contribute amongst the most important factors. Debt matters strongly before the crisis, but falls away with valuation replacing it. Price momentum is important throughout, but swings from anti-correlated at the start of 2008 to strongly correlated in the recovery. Whilst valuation in the form of Price to Book is hardly important at the start of 2008, it is strongly differentiating in both the fall and recovery.

At the top (start 2008Q1) to the bottom (end 2009Q1)

At the top, debt the most important factor, alongside FCF and returns metrics

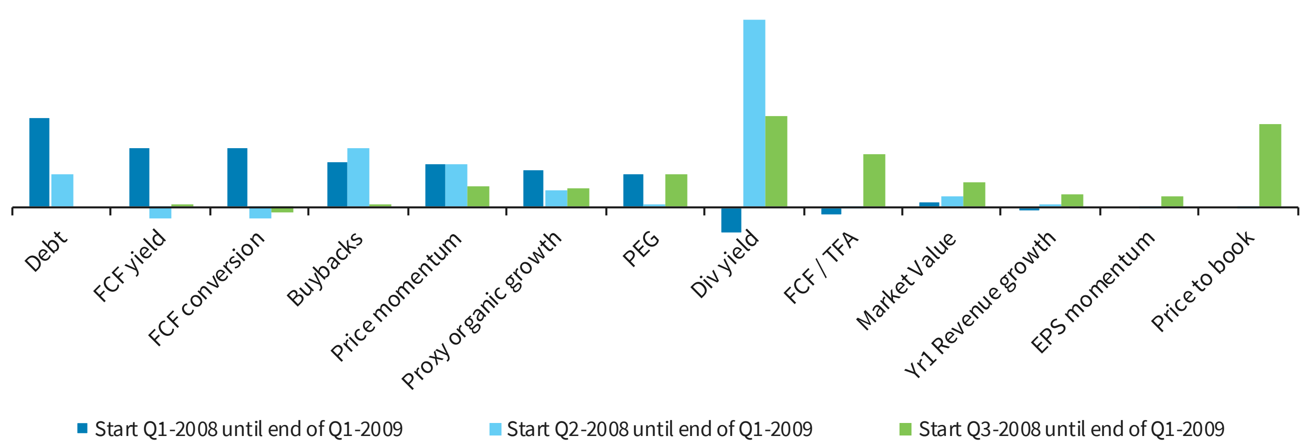
Low debt is, perhaps unsurprisingly the single biggest factor for outperformance in the downwards trajectory period. However high FCF yield and conversion companies, along with high dividend or buyback yields also screen well. We suggest these metrics screen for companies with sufficient cash generating abilities to tighten belts and survive the tightening of credit and lower consumer spending.

Price Momentum and organic growth negatively correlated

Additionally, price momentum and organic growth also have some predictive power, but with opposite sign to our broader model, i.e. companies with strong price momentum into the crisis performed poorly as did the highest growing companies.

FIGURE 9

Excess factor scores over mean for top quintile securities, starting in the first three quarters of 2008 until the end of 2009Q1 (~the trough of the sector). The impact of factors such as debt and PEG wane as the crisis unfolds, whereas the impacts of Price to Book and FCF/TFA increase.



Source: Barclays Research, Bloomberg, Refinitiv

During the early crisis (2008Q2 and Q3)

But what about in the early crisis period?

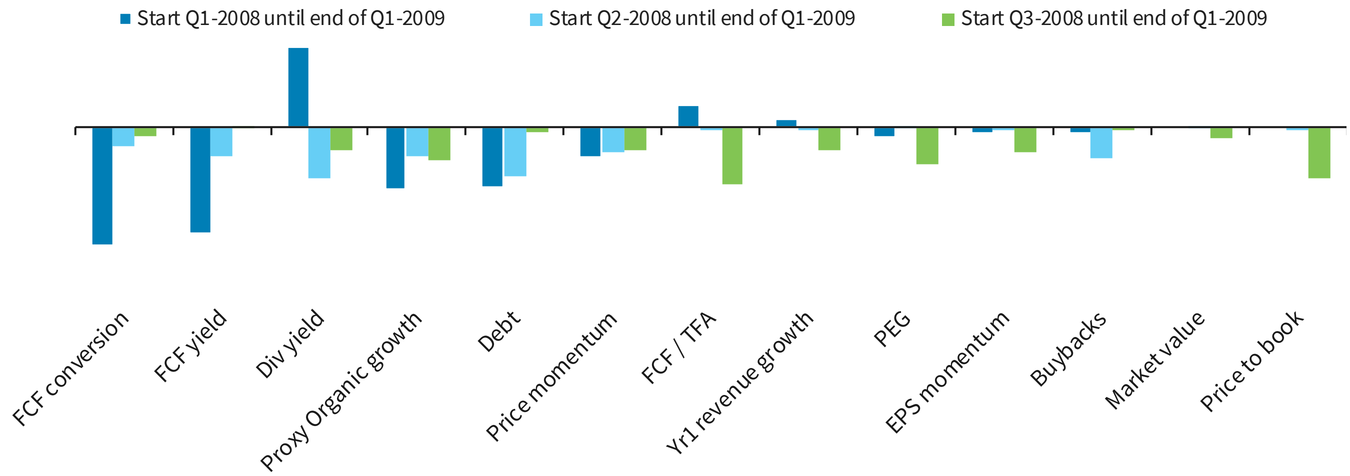
It is rarely possible to make investment decisions with the knowledge a crisis will soon occur. So which factors were most prominent in the first two quarters of the crisis (5% and 26% of the index fall respectively) to the trough?

Debt falls in importance, with valuation appearing in its place Price momentum no longer negatively correlated.

We note firstly that debt fell in importance as the crisis developed. Dividend yield and price momentum increase in predictive power, with FCF/TFA and (high) Price to Book additionally becoming important factors all rise in the mix. Importantly, the sign of correlation coefficient for price momentum flips, trailing price momentum is then positively correlated with forward returns.

FIGURE 10

Excess factor scores over mean for bottom quintile securities starting in the first three quarters of 2008 until the end of 2009Q1 (~the trough of the sector). Note here that high dividend yielding stocks before the crisis end up in the bottom model quintile.



Source: Barclays Research, Bloomberg, Refinitiv

From the trough up (Q22009 onwards)

Price momentum and valuation become very prominent, with organic growth now positively correlated

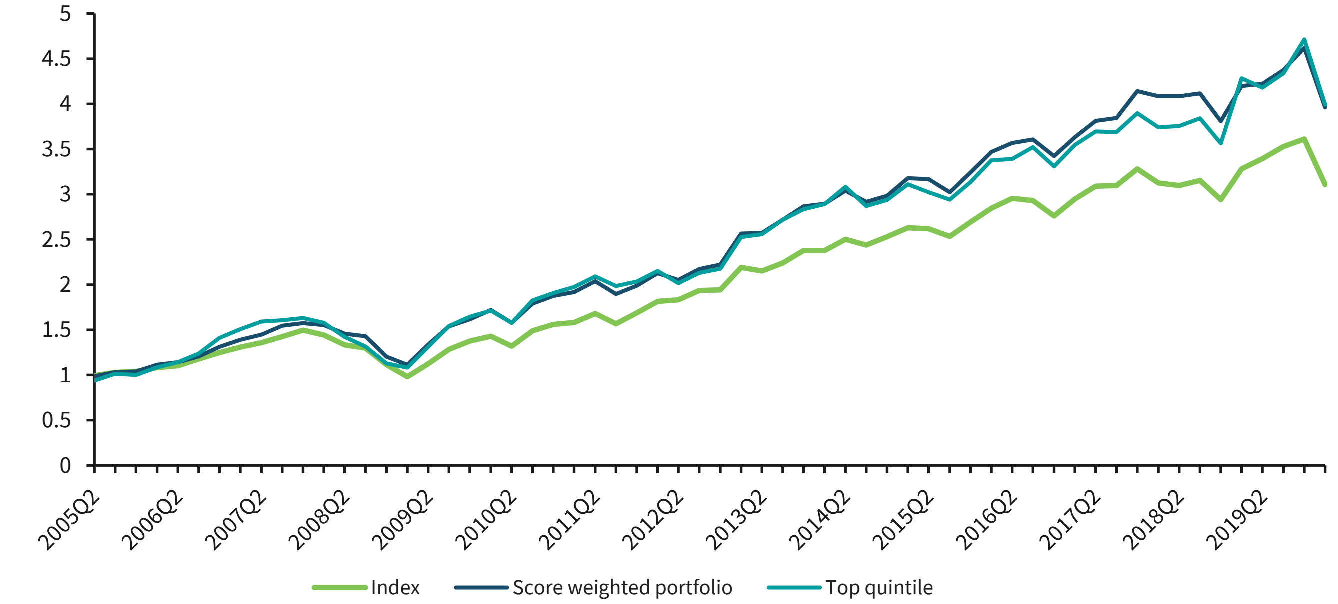
On the recovery, price momentum is the dominant factor, whereas debt is hardly present. Price to Book continues its increased importance, first seen a quarter into the crisis. The ability to pay a dividend and to a lesser extent FCF yield remain important from the prior period. Organic revenue growth is also an important factor, with high growth correlation with better future returns.

Quality outperforms through the cycle

Last year we set out our factor driven approach to global Consumer Staples (see *A quant approach to Staples selection* 26 Sep 2019). We have recently increased our data availability to 2000 (prior 2008) and find our overall approach is still valid. Quality consistently outperforms. The below chart shows the performance of our model, first trained on data from 1Q00-1Q05, and then running from 2Q05 onwards with ongoing optimisation.

FIGURE 11

Cumulative returns of "score weighted" Consumer Staples securities at each point in time, with our model trained on historical data (to avoid retrofitting). Also shown, returns of the top 20% of scored securities for each quarter and the Consumer Staples index. Annualised returns of 9.6%, 9.6% and 7.9% respectively.



Source: Barclays Research, Bloomberg, Refinitiv

Our through the cycle model finds the following factors to be the most significant (in decreasing order of importance):

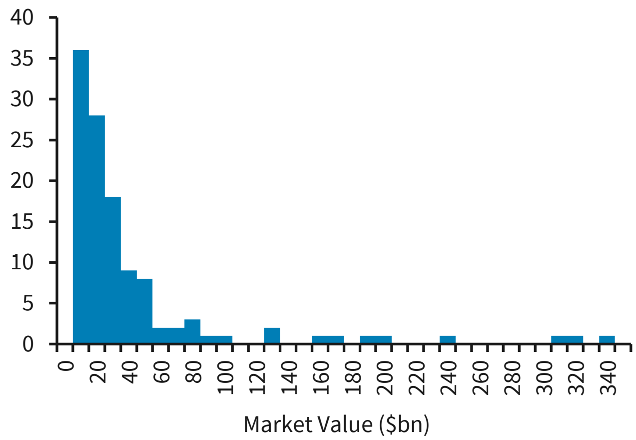
- High trailing dividend yield
- High forecast organic sales growth
- High trailing free cash flow return on tangible assets
- High trailing buyback yield
- Strong 12m-1m price momentum

Refining our through the cycle model

A source of feedback from the first note was that the model's dislike of large companies was unduly harsh on the mega-cap names. In practise many of our clients can't avoid large securities just because of their market value.

FIGURE 12

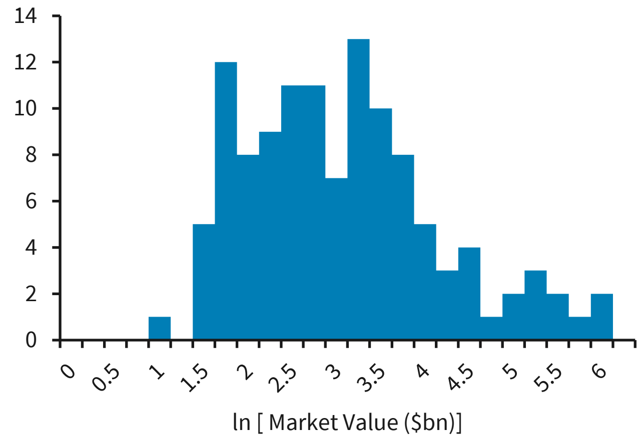
Distribution of dollar Market Values for the sector at the beginning of Q22020



Source: Barclays Research, Bloomberg, Refinitiv

FIGURE 13

Distribution of log (Market Values) for the sector at the beginning of Q22020



Source: Barclays Research, Bloomberg, Refinitiv

However, the purpose of our model is to seek insights from the data without layering subjective restrictions onto the model. As a first pass we acknowledged that a strictly linear approach to market value had its limitations, but that preserving simplicity and ease of interpretation was paramount. We have now considered more nuanced approaches and utilised the log of dollar market value as a modified factor.

We show above that the distribution of Market Values is not normal, with a large number of smaller companies and a tail of large caps. Using the new factor retains preference for small companies, but less powerfully marks down companies about $100bn market value, also shown above. Previously the bottom quintile of securities has over twice the mean market value of the sector, suggesting mega cap stocks were congregating here. Now the mean of the bottom quintile is only 16% larger than the sector average.

FIGURE 14

Spread of market values in top and bottom quintiles, before and after change of size factor

	Raw market value factor	Log market value factor
Top quintile average $bn market value	58.5	3.2
Sector average $bn market value	33.3	2.8
Bottom quintile average $bn market value	23.4	2.6

Source: Barclays Research, Bloomberg, Refinitiv

Performance improves with new approach

Our risk adjusted quarterly outperformance for a score weighted portfolio improves from by 0.04 with this new factor, or in raw excess returns 9bps. We also observe that the coefficient/weight for this modified factor no longer has any trend over time, becoming relatively stable, albeit with increased noise.

To what do we attribute this improved performance? The modification to the approach lessens the difference in scores between midcaps and mega caps. As discussed in our initial note, we saw that small caps outperform in general, but most of the outperformance is relative to above average mid-caps, not mega caps.

Our most and least preferred names

Applying our updated model to the MSCI Global Consumer Staples universe, the following names are our most and least preferred quintiles.

FIGURE 15

Through the cycle most and least preferred

Most preferred	Least preferred
Altria Group	Aeon
British American Tobacco	Alimentation Couche-Tard
Casino	Beiersdorf
Church & Dwight	Carrefour
Clorox	Constellation Brands
Coca-Cola Amatil	Costco Wholesale
Dairy Farm International	Danone
Hershey	FamilyMart
Imperial Brands	Kao
Ingredion	Kerry
Japan Tobacco	Kikkoman
Jeronimo Martins	L'Oreal
Ahold Delhaize	MEIJI Holdings
Kraft Heinz	Nestle
Lawson	Nissin Foods
METRO	Seven & i Holdings
Monster Beverage	Shiseido
Mowi	Tesco
Philip Morris International	Toyo Suisan Kaisha
Swedish Match	Unicharm
Treasury Wine Estates	Walmart
Walgreens Boots Alliance	Yakult Honsha
Wm Morrison	Yamazaki Baking
a2 Milk	

Source: Barclays Research

Looking at our most preferred names in more detail, we use a heatmap to show how each scores on the most important factors. At this point our model has a distinct preference for tobacco, largely as the result of the high levels of cash return typically seen in this subsector.

FIGURE 16

Through-the-cycle most preferred factor heatmap (5 is better, 1 is worse)

Name	Dividend yield	Organic sales growth	FCF / Tangible Assets	Buyback yield	12m-1m share price
Altria	5	2	3	4	2
British American Tobacco	5	3	5	3	4
Casino	5	3	1	5	3
Church & Dwight	2	5	5	4	2
Clorox	4	2	5	5	1
Coca-Cola Amatil	5	4	1	2	5
Dairy Farm International	5	4	2	1	1
Hershey	4	3	5	4	5
Imperial Brands	5	2	2	4	1
Ingredion	4	1	4	5	1
Japan Tobacco	5	2	3	1	1
Jeronimo Martins	5	5	1	1	5
Ahold Delhaize	4	3	3	5	2
Kraft Heinz	5	1	2	1	1
Lawson	5	2	3	1	1
METRO	5	2	3	1	2
Monster Beverage	1	5	5	5	4
Mowi	5	5	1	1	4
Philip Morris International	5	4	2	1	4
Swedish Match	5	5	2	5	5
Treasury Wine Estates	3	5	2	3	4
Walgreens Boots Alliance	4	3	4	5	1
Wm Morrison	5	2	1	3	1
a2 Milk	1	5	5	1	5

Source: Barclays Research

We repeat this exercise for our least preferred names, using a heatmap to show how they perform on the most important factors. It's harder to generalise about the types of companies included here.

FIGURE 17

Through-the-cycle least preferred factor heatmap (5 is better, 1 is worse)

Name	Dividend yield	Organic sales growth	FCF / Tangible Assets	Buyback yield	12m-1m share price
Aeon	2	1	1	2	2
Alimentation Couche-Tard	1	2	5	1	4
Beiersdorf	1	5	3	1	3
Carrefour	2	3	1	1	2
Constellation Brands	2	1	4	4	3
Costco Wholesale	1	5	3	3	5
Danone	1	3	5	1	4
FamilyMart	2	1	5	3	1
Kao	2	4	3	4	2
Kerry	1	5	4	1	5
Kikkoman	1	4	2	2	1
L'Oreal	2	5	4	3	4
MEIJI Holdings	3	1	2	1	1
Nestle	3	1	3	5	4
Nissin Foods	2	3	1	2	3
Seven & i Holdings	3	1	1	1	1
Shiseido	1	5	2	3	3
Tesco	2	2	2	4	3
Toyo Suisan Kaisha	2	2	1	1	4
Unicharm	1	5	4	4	2
Walmart	3	3	3	5	4
Yakult Honsha	1	2	3	2	1
Yamazaki Baking	2	1	1	4	1

Source: Barclays Research

EU Staples – how companies score and why

For those only able to invest in European stocks we also include a heatmap of European companies and how they scored on the most important factors.

FIGURE 18

European factor heatmap (5 is better, 1 is worse)

Name	Overall rank	Dividend yield	Organic sales growth	FCF / Tangible Assets	Buyback yield	12m-1m share price
British American Tobacco	5	5	3	4	3	4
Casino	5	5	3	5	5	3
Imperial Brands	5	5	2	3	4	1
Jeronimo Martins	5	5	5	5	1	5
Ahold Delhaize	5	4	3	2	5	2
METRO	5	5	2	5	1	2
Mowi	5	5	5	5	1	4
Swedish Match	5	5	5	5	5	5
Wm Morrison	5	5	2	4	3	1
Coca-Cola European Partners	4	4	3	3	5	3
Colruyt	4	4	2	4	4	1
J Sainsbury	4	5	1	1	3	1
Orkla	4	4	3	5	4	4
Unilever	4	5	4	4	5	3
Anheuser-Busch InBev	3	5	2	3	1	4
Carlsberg	3	3	4	2	3	5
Coca-Cola HBC	3	3	4	3	3	2
Campari	3	1	5	2	4	3
Diageo	3	3	4	4	5	3
Essity	3	4	3	2	1	5
ICA Gruppen	3	4	2	5	1	5
Reckitt Benckiser	3	4	1	3	1	2
Remy Cointreau	3	1	5	1	4	3
Associated British Foods	2	3	4	2	3	4
Barry Callebaut	2	1	4	4	3	5
Lindt & Spruengli	2	1	4	3	4	3
Heineken	2	3	4	4	3	4
Henkel	2	3	2	2	3	2
Metro	2	2	2	4	4	4
Pernod Ricard	2	2	4	3	3	3
Alimentation Couche-Tard	1	1	2	1	1	4
Beiersdorf	1	1	5	2	1	3
Carrefour	1	2	3	5	1	2
Danone	1	1	3	2	1	4
Kerry	1	1	5	3	1	5
L'Oreal	1	2	5	3	3	4
Nestle	1	3	1	4	5	4
Tesco	1	2	2	1	4	3

Source: Barclays Research

Markets have seen several "regime changes" since 2000

In addition to looking at how factors influenced returns in the crisis, we can also assess how this influence has changed overtime. In this section we dive into further detail on when regime changes occur, utilising statistical tests on the factor coefficients over time

Look for step changes in factor strengths

We want to test for a sustained step change in the coefficient for a factor coefficient, identifying a "turning point" past which the model is significantly different. The model trained before this "turning point" would then be distinctly different for the model trained on all periods. We use a t-test in this case[1].

As well as a factor's contribution to top quintile score outperformance

We also compare the spread of values in each factor between the top and bottom quintile of securities. Does this factor strongly contribute to selecting our most/least preferred securities?

The model often rotates between similar metrics, so we consider how groups of similar factors evolve.

FCF metrics stronger through the financial crisis, but still relevant

As we noted in our original paper, the factor FCF/TFA had the largest coefficient of any single factor in our regression in data from 2008 onwards.

The best securities 'overruled' FCF/TFA prior to 2013!

Prior to 2013, the quintile of lowest overall scoring securities had higher FCF/TFA than the highest scoring. This suggests, the contribution from this factor was over-ruled by other factors. However, since 2013, the names with highest FCF conversion have also been those favoured by the model.

Model balances high FCF/TFA with a smaller preference for low FCF conversionFCF conversion also gained prominence during in the financial crisis, although the strength of the factor fell in the immediate aftermath and subsequently regained magnitude post 2014. FCF conversion has an order of magnitude smaller correlation coefficient than FCF/TFA and a negative sign. Our model combines factors linearly for the maximised risk adjusted returns, so signs should be considered simultaneously. Hence we see a model preference for high FCF/TFA conversion, alongside a weaker preference for low FCF conversion.

Free cash flow yield persistently has a very low weighting in our model. For the 90th quintile of securities in FCF yield, the score for this factor contributes only 63bps to their average total score. However, considering the financial crisis in isolation, yield has greater impact.

Quality remains a long term outperformance factor, which also was important during the last crisis. During the relatively stable and benign period post 2013, FCF/TFA and the overall scoring regularly agree on the most favoured stocks.

In normal markets organic revenue growth is most important, but during a crisis overall growth comes in to play also

Our model includes two revenue factors, forward year 1 revenue growth and growth from forward year 1 to year 2. We label the latter as a proxy for organic growth. Post the financial crisis we see how the organic growth factor has stronger predictive power, as it 'sees' through' M&A and currency effects.

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[1] For each point in time, we train the model on historical data to form a time series of correlation coefficient. Subsequently a 1 tailed t-test is performed at each point in time, comparing the times series before and after the point in time. Hence, we can assess if the change in coefficient shape is significant at any given time.

We observe that the spread of the organic revenue factor scores between top and bottom quintiles has grown since 2010. However, in 2019, this trend sharply reversed; at the end of the year, the average organic revenue factor was similar in top and bottom quintiles. We suggest that this reflects the quality/value rotation observed in the year.

During and immediately after the crisis, both revenue factors rose in prominence. During this time, M&A rates were lower as capital became constrained, in this case FY1 revenue growth is more than usually similar to organic growth.

Returns favour buybacks recently

For return to shareholders, we observe three regimes over time. Before and after the financial crisis, high dividend yield companies were preferred. However, from 2013 onwards, high buyback yield gains importance. We believe this reflects stable, mature companies returning capital via buybacks in the bull run.

Price momentum's impact mainly in the crisis, but direction changes

Overall we see price momentum has a relatively small impact compared to other factors. However, as discussed earlier, during the financial crisis it had a greater impact. Care should be taken though, as price momentum changes sign through this period. price momentum is only significantly different between our top and bottom quintiles in short bursts, coinciding with strong trading periods for the sector overall.

Debt levels less importance since the crisis

Our net debt to market value ratio factor is not a strong predictor and has been falling in importance since the financial crisis. Indeed, if we were to re-run the selection of factors on an extended time frame, this debt factor would drop out of the analysis. However, as we see when we consider the crisis in isolation, it was very important indeed.

For valuation, expensive stocks favoured in bull run

We see a clear turning point in 2012 for valuation, from cheap stocks to expensive. This would support a view that high quality names justify and maintain high valuations. The PEG factor supports this view recently with smaller values preferred, suggesting expensive stocks with cheap growth have been best in the bull run.

Securities with recent changes in rankings

During 2019, despite a poor Q2 and Q3 with the quality/value rotation, the top quintile basket outperformed the index by 8.5%. However, during the market turmoil of Q1, the top quintile underperformed by 1.4%.

In this period, with large price moves and forecast changes, a larger than usual movement in ranking occurred. This included Sysco and Coca Cola HBC moving from a mid rank to the top rank, whilst WH Group, George Weston and Kroger moving from rank 4 to the bottom quintile.

FIGURE 19

Table of securities that have moved in or out of the top and bottom quintiles over Q1 2020

† Recall that low Free Cash Flow conversion is preferred by the model, balancing a preference for high FCF / TFA

Name	Q12020 rank	Q22020 rank	Commentary
WH Group Ltd	4	1	Materially worse dividend yield score. Also organics and price mix
George Weston Ltd	4	1	Lower buybacks. Also FCF conversion[†], organics and price mix
Pigeon Corp	2	1	
Conagra Brands Inc	2	1	Materially worse organic revenue score. Also price mix
Procter & Gamble Co	2	1	Various price factors and organics
Kroger CoThe	4	1	Materially worse buyback yield score. Also price mix and organics
L'Oreal SA	1	2	Improved organics and FCF/TFA
FamilyMart Co Ltd	1	2	
Shiseido Co Ltd	1	2	
Kikkoman Corp	1	2	
Kao Corp	1	2	
Jeronimo Martins SGPS	5	4	Score improved, but less than surrounding companies
Kraft Heinz Co	5	4	Score improved, but less than surrounding companies
Casino Guichard Perrachon	5	4	Score improved, but less than surrounding companies
Clorox CoThe	5	4	Score improved, but less than surrounding companies
Ingredion Inc	5	4	Small score decrease, mainly from buyback yield
Lawson Inc	5	4	
Pola Orbis Holdings Inc	4	5	
Bunge Ltd	4	5	Dividends, FCF conversion[†], organics and price
Sysco Corp	3	5	Materially better dividend, buyback yield and organics scores
Coca-Cola European Partners	4	5	Materially better dividend/buyback yield scores. Also FCF/TFA and organics
Coty Inc	4	5	Materially better dividend yield score. Also price and organics
Coca-Cola HBC AG	3	5	Materially better dividend yield score. Also FCF conversion[†], price and organics

Source: Barclays Research, Bloomberg, Refinitiv

ANALYST(S) CERTIFICATION(S):

We, Iain Simpson and Ben McSkelly, CFA, hereby certify (1) that the views expressed in this research report accurately reflect our personal views about any or all of the subject securities or issuers referred to in this research report and (2) no part of our compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

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Materially Mentioned Stocks (Ticker, Date, Price)

Ahold Delhaize (AD.AS, 22-Apr-2020, EUR 22.96), Equal Weight/Neutral, B/CD/FA/FC/J

Alimentation Couche-Tard Inc. (ATD-B.TO, 22-Apr-2020, CAD 40.80), Overweight/Neutral, CD/J/K/M/N/U

Altria Group Inc. (MO, 22-Apr-2020, USD 37.81), Overweight/Neutral, CD/CE/D/J/K/L/M

Anheuser-Busch InBev (ABI.BR, 22-Apr-2020, EUR 38.57), Equal Weight/Neutral, A/CD/CE/D/E/J/K/L/M/N

Associated British Foods (ABF.L, 22-Apr-2020, GBp 1920), Overweight/Neutral, J/K/L/M/N/Q

Barry Callebaut (BARN.S, 22-Apr-2020, CHF 1921.00), Equal Weight/Neutral, J

Beiersdorf AG (BEIG.DE, 22-Apr-2020, EUR 95.94), Overweight/Neutral, J/K/M

British American Tobacco Plc (BATS.L, 22-Apr-2020, GBp 2893), Overweight/Neutral, A/CE/D/J/K/L/M/N

Brown-Forman (BFb, 22-Apr-2020, USD 59.91), Equal Weight/Neutral, CD/J/K/M/N

Campbell Soup (CPB, 22-Apr-2020, USD 50.80), Underweight/Neutral, A/CD/CE/D/J/K/L/M

Carlsberg AS-B (CARLb.CO, 22-Apr-2020, DKK 807.60), Overweight/Neutral, J

Carrefour (CARR.PA, 22-Apr-2020, EUR 13.79), Overweight/Neutral, CD/D/J/K/L/M/N

Casino (CASP.PA, 22-Apr-2020, EUR 35.80), Underweight/Neutral, CD/J

Church & Dwight Co., Inc. (CHD, 22-Apr-2020, USD 71.41), Underweight/Neutral, CD/CE/J/K/N

Clorox Company (CLX, 22-Apr-2020, USD 191.93), Underweight/Neutral, CD/CE/J/K/M/N

Coca-Cola European Partners PLC (CCE.AS, 22-Apr-2020, EUR 36.80), Overweight/Neutral, CD/J/K/M

Coca-Cola European Partners PLC (CCEP, 22-Apr-2020, USD 40.29), Overweight/Neutral, CD/J/K/M

Coca-Cola Hellenic BC AG (CCH.L, 22-Apr-2020, GBp 1928), Overweight/Neutral, J

Colgate-Palmolive (CL, 22-Apr-2020, USD 71.21), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

Colruyt (COLR.BR, 22-Apr-2020, EUR 56.50), Underweight/Neutral, J

Conagra Brands (CAG, 22-Apr-2020, USD 34.30), Overweight/Neutral, CD/CE/J/K/M

Constellation Brands (STZ, 22-Apr-2020, USD 155.22), Overweight/Neutral, CD/CE/J/K/N

Costco Wholesale Corp. (COST, 22-Apr-2020, USD 309.42), Equal Weight/Neutral, CD/CE/J/K/M/N

IMPORTANT DISCLOSURES CONTINUED

Coty Inc. (COTY, 22-Apr-2020, USD 5.59), Equal Weight/Neutral, CD/CE/J/K/M

Danone (DANO.PA, 22-Apr-2020, EUR 62.40), Overweight/Neutral, CD/E/FA/FB/J/K/L/M

Davide Campari-Milano SpA (CPRI.MI, 22-Apr-2020, EUR 6.66), Equal Weight/Neutral, CD/J/K/M/N

Diageo PLC (DGE.L, 22-Apr-2020, GBp 2658), Overweight/Neutral, A/CE/D/E/J/K/L/M/N

Essity (ESSITYb.ST, 22-Apr-2020, SEK 311.60), Underweight/Neutral, CD/J

General Mills (GIS, 22-Apr-2020, USD 60.19), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M/N

Heineken NV (HEIN.AS, 22-Apr-2020, EUR 75.00), Overweight/Neutral, CD/E/J/K/L/M/N

Henkel (HNKG_p.DE, 22-Apr-2020, EUR 77.50), Equal Weight/Neutral, CD/J

Hormel Foods Corp. (HRL, 22-Apr-2020, USD 48.40), Equal Weight/Neutral, CD/CE/E/J/K/L/M

ICA GRUPPEN AB (ICAA.ST, 22-Apr-2020, SEK 463.20), Underweight/Neutral, CD/J

Imperial Brands Plc (IMB.L, 22-Apr-2020, GBp 1533), Overweight/Neutral, A/D/E/J/K/L/M/N/Q

Japan Tobacco Inc. (JAPAY, 22-Apr-2020, USD 9.05), Underweight/Neutral, CD/J/K/N

Jeronimo Martins (JMT.LS, 22-Apr-2020, EUR 15.93), Equal Weight/Neutral, J/K/N

Kellogg Co. (K, 22-Apr-2020, USD 64.68), Underweight/Neutral, CD/CE/D/J/K/L/M/N

Kerry Group PLC (KYGa.L, 22-Apr-2020, EUR 104.30), Underweight/Neutral, A/D/J/K/L/M/N

Kimberly-Clark Corp. (KMB, 22-Apr-2020, USD 142.80), Overweight/Neutral, A/CD/CE/D/J/K/L/M/N

Kroger Co. (KR, 22-Apr-2020, USD 32.31), Equal Weight/Neutral, CD/CE/J

L'Oréal SA (OREP.PA, 22-Apr-2020, EUR 248.10), Underweight/Neutral, J/K/N

Lamb Weston Holdings, Inc. (LW, 22-Apr-2020, USD 56.33), Overweight/Neutral, CD/CE/J

Lindt & Spruengli (LISN.S, 22-Apr-2020, CHF 84000.00), Equal Weight/Neutral, CD/J/K/N

Loblaw Cos., Ltd. (L.TO, 22-Apr-2020, CAD 74.95), Equal Weight/Neutral, CD/J

McCormick & Co. (MKC, 22-Apr-2020, USD 153.37), Equal Weight/Neutral, CD/CE/J

Metro AG (B4B.DE, 22-Apr-2020, EUR 7.87), Equal Weight/Neutral, CD/J/K/M

Metro Inc. (MRU.TO, 22-Apr-2020, CAD 60.02), Equal Weight/Neutral, CD/J

Molson Coors Beverage Company (TAP, 22-Apr-2020, USD 42.10), Equal Weight/Neutral, CD/CE/J/K/N

Mondelez International (MDLZ, 22-Apr-2020, USD 52.22), Overweight/Neutral, A/CD/CE/D/J/K/L/M

Morrison (MRW.L, 22-Apr-2020, GBP 1.90), Underweight/Neutral, A/CD/D/J/K/L/M/N

Nestle SA (NESN.S, 22-Apr-2020, CHF 106.20), Overweight/Neutral, CD/D/FA/J/K/L/M/N

PepsiCo Inc. (PEP, 22-Apr-2020, USD 132.62), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

Pernod-Ricard SA (PERP.PA, 22-Apr-2020, EUR 136.50), Equal Weight/Neutral, A/CD/D/J/K/L/M/N

Philip Morris International Inc. (PM, 22-Apr-2020, USD 73.06), Overweight/Neutral, A/CD/CE/D/J/K/L/M

Procter & Gamble (PG, 22-Apr-2020, USD 119.40), Overweight/Neutral, A/CD/CE/D/J/K/L/M

Reckitt Benckiser Group PLC (RB.L, 22-Apr-2020, GBp 6496), Overweight/Neutral, CD/J/K/N

Rémy Cointreau (RCOP.PA, 22-Apr-2020, EUR 101.30), Underweight/Neutral, CD/J

Sainsbury (J) plc (SBRY.L, 22-Apr-2020, GBP 2.05), Overweight/Neutral, CD/J/K/M/N

Swedish Match (SWMA.ST, 22-Apr-2020, SEK 614.40), Overweight/Neutral, CD/J

SYSCO Corp. (SYY, 22-Apr-2020, USD 51.35), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M/N

Tesco (TSCO.L, 22-Apr-2020, GBP 2.40), Rating Suspended/Neutral, A/CD/D/E/J/K/L/M/N/Q

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The Coca-Cola Company (KO, 22-Apr-2020, USD 45.68), Overweight/Neutral, CD/CE/D/J/K/L/M/N

The Estée Lauder Companies (EL, 22-Apr-2020, USD 165.98), Overweight/Neutral, CD/CE/J/K/N

The Hershey Company (HSY, 22-Apr-2020, USD 143.28), Equal Weight/Neutral, CD/CE/J

The J.M. Smucker Company (SJM, 22-Apr-2020, USD 118.56), Equal Weight/Neutral, CD/CE/J

The Kraft Heinz Company (KHC, 22-Apr-2020, USD 28.76), Equal Weight/Neutral, A/CE/E/J/L

Tyson Foods, Inc. (TSN, 22-Apr-2020, USD 59.92), Overweight/Neutral, CD/CE/D/J/K/L/M/N

Unilever NV (UNA.AS, 22-Apr-2020, EUR 46.70), Equal Weight/Neutral, CD/CE/J/K/M

IMPORTANT DISCLOSURES CONTINUED

Unilever PLC (ULVR.L, 22-Apr-2020, GBp 4243), Equal Weight/Neutral, CD/CE/J/K/M/N

Walgreens Boots Alliance (WBA, 22-Apr-2020, USD 43.31), Equal Weight/Neutral, CD/CE/J/K/N

Walmart Inc. (WMT, 22-Apr-2020, USD 131.59), Overweight/Neutral, A/CD/CE/D/J/K/L/M/N/R

Non-covered Stocks (Ticker, Date, Price)

A2 MILK CO LTD (ATM.NZ, 22-Apr-2020, NZD 19.75, Bloomberg), J

AEON CO LTD (8267.T, 22-Apr-2020, JPY 2152, Bloomberg), CD/J/K/M

AJINOMOTO CO INC (2802.T, 22-Apr-2020, JPY 1928, Bloomberg), CD/J

ARCHER-DANIELS-MIDLAND CO (ADM, 22-Apr-2020, USD 35.40, Bloomberg), A/CD/CE/D/J/K/L/M/N

ASAHI GROUP HOLDINGS LTD (2502.T, 22-Apr-2020, JPY 3502, Bloomberg), CD/J

BUNGE LTD (BG, 22-Apr-2020, USD 37.80, Bloomberg), CD/CE/D/J/K/L/M/N

CALBEE INC (2229.T, 22-Apr-2020, JPY 3270, Bloomberg), J/K/N

COCA-COLA AMATIL LTD (CCL.AX, 22-Apr-2020, AUD 8.52, Bloomberg), CD/J

COCA-COLA BOTTLERS JAPAN HOL (2579.T, 22-Apr-2020, JPY 1942, Bloomberg), CD/J

COLES GROUP LTD (COL.AX, 22-Apr-2020, AUD 16.18, Bloomberg), J

DAIRY FARM INTL HLDGS LTD (DAIR.SI, 22-Apr-2020, USD 4.68, Bloomberg), J/K/N

EMPIRE CO LTD 'A' (EMPa.TO, 22-Apr-2020, CAD 33.97, Bloomberg), J/V

FAMILYMART CO LTD (8028.T, 22-Apr-2020, JPY 1718, Bloomberg), CD/J

GOLDEN AGRI-RESOURCES LTD (GAGR.SI, 22-Apr-2020, SGD 0.15, Bloomberg), D/J/K/L/M

INGREDION INC (INGR, 22-Apr-2020, USD 77.36, Bloomberg), CD/J

KAO CORP (4452.T, 22-Apr-2020, JPY 8844, Bloomberg), CD/J/K/N

KIKKOMAN CORP (2801.T, 22-Apr-2020, JPY 4630, Bloomberg), CD/J

KIRIN HOLDINGS CO LTD (2503.T, 22-Apr-2020, JPY 2036, Bloomberg), CD/J

KOBAYASHI PHARMACEUTICAL CO (4967.T, 22-Apr-2020, JPY 11040, Bloomberg), J

KOSE CORP (4922.T, 22-Apr-2020, JPY 13970, Bloomberg), J

LAWSON INC (2651.T, 22-Apr-2020, JPY 5760, Bloomberg), J

LION CORP (4912.T, 22-Apr-2020, JPY 2416, Bloomberg), FA/J

MEIJI HOLDINGS CO LTD (2269.T, 22-Apr-2020, JPY 7600, Bloomberg), CD/J/K/N

MONSTER BEVERAGE CORP (MNST, 22-Apr-2020, USD 60.12, Bloomberg), CE/J

MOWI ASA (MOWI.OL, 22-Apr-2020, NOK 169.00, Bloomberg), CD/J

NH FOODS LTD (2282.T, 22-Apr-2020, JPY 3405, Bloomberg), CD/J

NISSHIN SEIFUN GROUP INC (2002.T, 22-Apr-2020, JPY 1649, Bloomberg), CD/J

NISSIN FOODS HOLDINGS CO LTD (2897.T, 22-Apr-2020, JPY 9070, Bloomberg), J

ORKLA ASA (ORK.OL, 22-Apr-2020, NOK 96.86, Bloomberg), CD/J

PIGEON CORP (7956.T, 22-Apr-2020, JPY 4050, Bloomberg), J

POLA ORBIS HOLDINGS INC (4927.T, 22-Apr-2020, JPY 2084, Bloomberg), J

SAPUTO INC (SAP.TO, 22-Apr-2020, CAD 34.99, Bloomberg), CD/J

SEVEN & I HOLDINGS CO LTD (3382.T, 22-Apr-2020, JPY 3494, Bloomberg), CD/J

SHISEIDO CO LTD (4911.T, 22-Apr-2020, JPY 6574, Bloomberg), CD/J/K/N

SUNDRUG CO LTD (9989.T, 22-Apr-2020, JPY 3665, Bloomberg), J

SUNTORY BEVERAGE & FOOD LTD (2587.T, 22-Apr-2020, JPY 4100, Bloomberg), CD/J/K/M/N

TOYO SUISAN KAISHA LTD (2875.T, 22-Apr-2020, JPY 5540, Bloomberg), J

TREASURY WINE ESTATES LTD (TWE.AX, 22-Apr-2020, AUD 10.05, Bloomberg), J

TSURUHA HOLDINGS INC (3391.T, 22-Apr-2020, JPY 15060, Bloomberg), J

UNICHARM CORP (8113.T, 22-Apr-2020, JPY 4031, Bloomberg), CD/D/J/K/L/M

VITASOY INTL HOLDINGS LTD (0345.HK, 22-Apr-2020, HKD 27.55, Bloomberg), J

WELCIA HOLDINGS CO LTD (3141.T, 22-Apr-2020, JPY 8760, Bloomberg), J

WESTON (GEORGE) LTD (WN.TO, 22-Apr-2020, CAD 105.49, Bloomberg), CD/J

IMPORTANT DISCLOSURES CONTINUED

WH GROUP LTD (0288.HK, 22-Apr-2020, HKD 7.66, Bloomberg), J/K/M

WILMAR INTERNATIONAL LTD (WLIL.SI, 22-Apr-2020, SGD 3.37, Bloomberg), CD/D/J/K/L/M

WOOLWORTHS GROUP LTD (WOW.AX, 22-Apr-2020, AUD 36.29, Bloomberg), CD/J

YAKULT HONSHA CO LTD (2267.T, 22-Apr-2020, JPY 6970, Bloomberg), J

YAMAZAKI BAKING CO LTD (2212.T, 22-Apr-2020, JPY 2338, Bloomberg), J

Other Material Conflicts

The supervisory analyst who reviewed and approved this research report has a long position in the common stock/ADRs of British American Tobacco (BAT/NYSE), Essity Aktie (ESSYY/OTC), Altria Group (MO/NYSE), L'Oreal (LRLCY/OTC), Pernod-Ricard (PDRDY/OTC), General Mills (GIS/NYSE), Coca Cola (KO/NYSE), Clorox (CLX/NYSE).

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In addition to the stock rating, we provide industry views which rate the outlook for the industry coverage universe as Positive, Neutral or Negative (see definitions below). A rating system using terms such as buy, hold and sell is not the equivalent of our rating system. Investors should carefully read the entire research report including the definitions of all ratings and not infer its contents from ratings alone.

Stock Rating

Overweight - The stock is expected to outperform the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

Equal Weight - The stock is expected to perform in line with the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

Underweight - The stock is expected to underperform the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

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Industry View

Positive - industry coverage universe fundamentals/valuations are improving.

Neutral - industry coverage universe fundamentals/valuations are steady, neither improving nor deteriorating.

Negative - industry coverage universe fundamentals/valuations are deteriorating.

Below is the list of companies that constitute the "industry coverage universe":

Americas Agribusiness

AmBev (ABEV)	Arca Continental (AC.MX)	Becle SAB de CV (CUERVO.MX)
Beyond Meat, Inc. (BYND)	Bimbo (BIMBOA.MX)	BRF SA (BRFS)
Coca-Cola FEMSA (KOF)	FEMSA (FMX)	Gruma (GRUMAB.MX)
Hormel Foods Corp. (HRL)	JBS SA (JBSS3.SA)	Lala (LALAB.MX)
Marfrig Global Foods SA (MRFG3.SA)	Pilgrim's Pride Corp (PPC)	Sanderson Farms, Inc. (SAFM)
Tyson Foods, Inc. (TSN)		

European Consumer Staples

A.G. Barr PLC (BAG.L)	Altria Group Inc. (MO)	Anheuser-Busch InBev (ABI.BR)
Associated British Foods (ABF.L)	Bakkavor (BAKK.L)	Barry Callebaut (BARN.S)
Beiersdorf AG (BEIG.DE)	British American Tobacco Plc (BATS.L)	Britvic PLC (BVIC.L)
C&C Group (CCR.L)	Carlsberg AS-B (CARLb.CO)	Chr. Hansen Holding A/S (CHRH.CO)
Coca-Cola Hellenic BC AG (CCH.L)	Danone (DANO.PA)	Davide Campari-Milano SpA (CPRI.MI)
Diageo PLC (DGE.L)	Essity (ESSITYb.ST)	Glanbia PLC (GL9.I)

IMPORTANT DISCLOSURES CONTINUED

Greencore Group PLC (GNC.L)	Heineken NV (HEIN.AS)	Henkel (HNKG_p.DE)
Imperial Brands Plc (IMB.L)	Japan Tobacco Inc. (JAPAY)	Kerry Group PLC (KYGa.L)
L'Oréal SA (OREP.PA)	Lindt & Spruengli (LISN.S)	Nestle SA (NESN.S)
Ontex Group (ONTEX.BR)	Pernod-Ricard SA (PERP.PA)	Philip Morris International Inc. (PM)
Reckitt Benckiser Group PLC (RB.L)	Rémy Cointreau (RCOP.PA)	Swedish Match (SWMA.ST)
Tate & Lyle PLC (TATE.L)	Unilever NV (UNA.AS)	Unilever PLC (ULVR.L)

European Food Retail

Ahold Delhaize (AD.AS)	Carrefour (CARR.PA)	Casino (CASP.PA)
Colruyt (COLR.BR)	ICA GRUPPEN AB (ICAA.ST)	Jeronimo Martins (JMT.LS)
Metro AG (B4B.DE)	Morrison (MRW.L)	Ocado (OCDO.L)
Rallye (GENC.PA)	Sainsbury (J) plc (SBRY.L)	Sonae (YSO.LS)
Tesco (TSCO.L)		

North America Food & Staples Retailing

Alimentation Couche-Tard Inc. (ATD-B.TO)	Big Lots, Inc. (BIG)	BJ's Wholesale Club Holdings, Inc. (BJ)
Casey's General Stores Inc (CASY)	Costco Wholesale Corp. (COST)	Dollar General Corporation (DG)
Dollar Tree Inc (DLTR)	Dollarama Inc. (DOL.TO)	Empire Co., Ltd. (EMP-A.TO)
Five Below, Inc. (FIVE)	Grocery Outlet Holding Corp (GO)	Kroger Co. (KR)
Loblaw Cos., Ltd. (L.TO)	Metro Inc. (MRU.TO)	SpartanNash Co (SPTN)
Sprouts Farmers Market Inc (SFM)	Target Corp. (TGT)	United Natural Foods, Inc. (UNFI)
Walmart Inc. (WMT)		

U.S. CHPC & Beverages

Brown-Forman (BFb)	Church & Dwight Co., Inc. (CHD)	Clorox Company (CLX)
Coca-Cola European Partners PLC (CCE.AS)	Coca-Cola European Partners PLC (CCEP)	Colgate-Palmolive (CL)
Constellation Brands (STZ)	Coty Inc. (COTY)	Edgewell Personal Care Company (EPC)
Energizer Holdings, Inc (ENR)	International Flavors & Fragrances (IFF)	Keurig Dr Pepper (KDP)
Kimberly-Clark Corp. (KMB)	Molson Coors Beverage Company (TAP)	Newell Brands Inc. (NWL)
PepsiCo Inc. (PEP)	Procter & Gamble (PG)	Reynolds Consumer Products (REYN)
Sundial Growers, Inc. (SNDL)	The Coca-Cola Company (KO)	The Estée Lauder Companies (EL)

U.S. Food

B&G Foods (BGS)	BellRing Brands (BRBR)	Campbell Soup (CPB)
Conagra Brands (CAG)	General Mills (GIS)	Hain Celestial (HAIN)
Kellogg Co. (K)	Lamb Weston Holdings, Inc. (LW)	McCormick & Co. (MKC)
Mondelez International (MDLZ)	Nomad Foods Ltd. (NOMD)	Post Holdings, Inc. (POST)
The Hershey Company (HSY)	The J.M. Smucker Company (SJM)	The Kraft Heinz Company (KHC)
TreeHouse Foods (THS)		

U.S. Health Care Services

Align Technology (ALGN)	American Renal Associates Holdings Inc. (ARA)	AmerisourceBergen Corp. (ABC)
Anthem (ANTM)	Brookdale Senior Living Inc. (BKD)	Capital Senior Living Corporation (CSU)
Cardinal Health (CAH)	CareTrust REIT, Inc. (CTRE)	Centene (CNC)
Cerner (CERN)	Cigna (CI)	Community Health Systems Inc. (CYH)
CVS Health (CVS)	DaVita Inc. (DVA)	Dentsply Sirona (XRAY)
eHealth (EHTH)	HCA Healthcare, Inc. (HCA)	Healthpeak Properties, Inc. (PEAK)

IMPORTANT DISCLOSURES CONTINUED

Henry Schein (HSIC)	Humana (HUM)	McKesson (MCK)
Medical Properties Trust Inc. (MPW)	Molina Healthcare (MOH)	Owens & Minor (OMI)
Patterson Companies (PDCO)	Premier Inc. (PINC)	Sabra Health Care REIT, Inc. (SBRA)
Teladoc Health (TDOC)	Tenet Healthcare Inc. (THC)	UnitedHealth Group (UNH)
Universal Health Services Inc. (UHS)	Ventas, Inc. (VTR)	Walgreens Boots Alliance (WBA)
Welltower, Inc. (WELL)		

U.S. Restaurants

BJ's Restaurants Inc (BJRI)	Bloomin' Brands, Inc. (BLMN)	Brinker International (EAT)
Chipotle Mexican Grill, Inc. (CMG)	Darden Restaurants (DRI)	Dine Brands Global (DIN)
Domino's Pizza (DPZ)	Dunkin' Brands Group (DNKN)	Jack in the Box Inc. (JACK)
McDonald's Corp. (MCD)	Performance Food Group Co. (PFGC)	Restaurant Brands International (QSR)
Shake Shack Inc. (SHAK)	Starbucks Corp. (SBUX)	SYSCO Corp. (SYY)
Texas Roadhouse, Inc. (TXRH)	The Cheesecake Factory (CAKE)	The Wendy's Company (WEN)
US Foods Holdings Corp (USFD)	Wingstop Inc. (WING)	Yum! Brands Inc. (YUM)

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