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THE STOXX EUROPE 600 PARIS-ALIGNED BENCHMARK: A BETTER PATH TO SUCCESS?

Melissa R. Brown, CFA, Head of Applied Research, Qontigo

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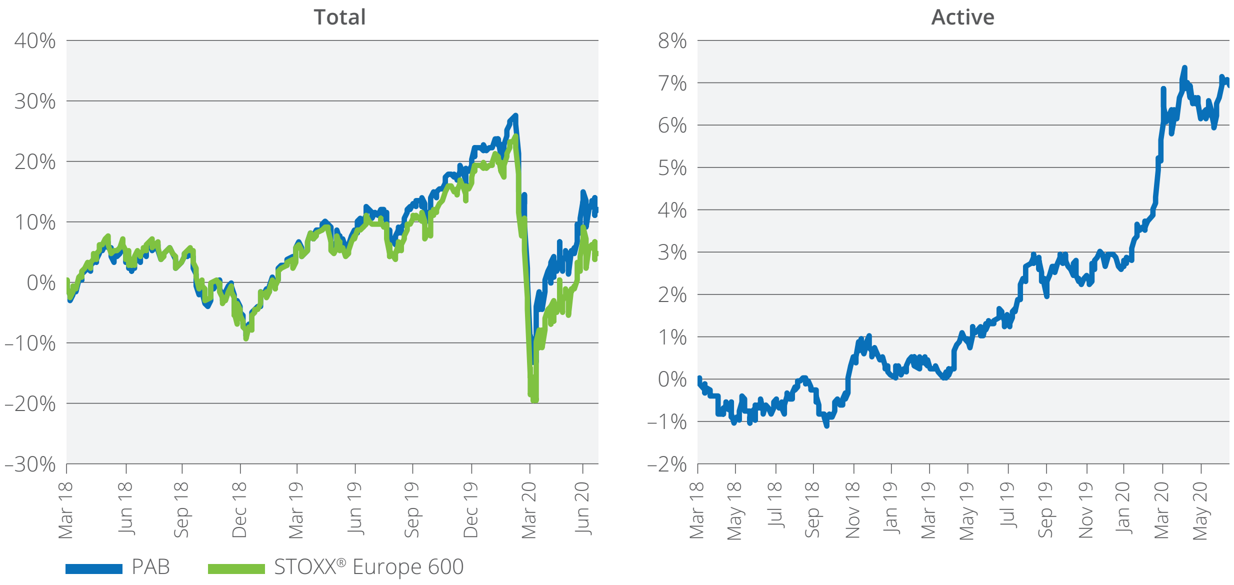
1. INTRODUCTION

The STOXX® Europe 600 Paris-Aligned Benchmark Index (STOXX® Europe 600 PAB Index) was launched in June 2020. In backtested data since March 2018, we find that the strategy has offered a higher return and lower volatility versus its benchmark. This paper drills down into some of the factors driving those results.

First, a brief look at returns:

The STOXX® Europe 600 PAB Index had outperformed its benchmark fairly steadily in the period between October 2018 and very recently, with a few bursts of more substantial relative gains (Figure 1). The outperformance also came with a lower level of expected risk (18.7% vs. 19.9% annualized volatility). With a relatively low 2.4% realized tracking error for the full period, the index has produced an information ratio of 1.2 over this period compared with its benchmark index. Even given the recent underperformance from mid-April through May, the STOXX® Europe 600 PAB Index has had a strong year so far in 2020 – something we will outline in more detail after we have discussed the index's risk characteristics.

FIGURE 1: Cumulative Returns



Source: Qontigo

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2. RISK ANALYSIS: LOWER VOLATILITY AND LOWER TRACKING ERROR

For most of its lifetime, the STOXX® Europe 600 PAB Index has exhibited slightly lower expected volatility (by 20–30 basis points) than its underlying benchmark, the STOXX® Europe 600 Index (Figure 2). In addition, the STOXX® Europe 600 PAB Index's predicted active risk has hovered around 1.5%, although it shot up to almost 3% when equity markets tanked in February of this year. The active risk of many other portfolios did the same, driven by higher volatilities for most underlying risk factors plus substantial changes in correlation (see here for further details).[1] Although both were up, the volatility of the STOXX® Europe 600 Index jumped much more than that of the STOXX® Europe 600 PAB Index at this time.

Breaking down the active risk components, we can see that factors contributed the most (Figure 3), and also that this proportion increased substantially beginning in March 2020. Digging a little deeper, we can see that, over time, most factor risk was attributable to industry risk. An overweight in pharmaceuticals and an underweight in oil & gas companies were the largest industry contributors to the risk model. While the overweight in pharmaceuticals is due to companies in the sector generally setting climate reduction targets and meeting their 2050 carbon budgets, the underweight in oil & gas can be traced to the activity exclusions required by the Paris-Aligned Benchmarks. Since the value of oil & gas stocks declined during this period, the size of the PAB Index underweight relative to its benchmark in this industry also decreased, and the latter contributed less and less to overall risk. At the same time, the active weight for pharmaceuticals fluctuated between about 4% and 5% while, except for very early on, the industry accounted for between 3% and 5% of the index's active risk. Most other industry exposures were smaller and contributed little to overall active risk.

3. STYLE RISK COMES TO THE FORE

More recently, style risk came into play in both active exposure and contribution to active risk. The index maintained a negative exposure to market sensitivity (in other words, it had a tilt toward low-beta stocks) over time. However, this exposure declined suddenly and substantially in February, as many individual stocks' exposures were recast as a result of the coronavirus crisis. In addition, traditionally high-volatility sectors (e.g., technology) turned into lower-volatility ones and vice versa (e.g., utilities). We have written extensively on this phenomenon (see e.g., here and here). The decrease in active exposure (or the increase in the magnitude of exposure) for the STOXX® Europe 600 PAB Index, which remains low as of June 2020, was accompanied by a 11 percentage-point increase in the factor's risk contribution, making it the largest contributor among all the risk factors. We remain comfortable with this exposure, however, as the market sensitivity factor has produced a negative return over time, and a negative exposure times a negative return can therefore lead to higher returns.

The STOXX® Europe 600 PAB Index methodology also means that some countries will be represented to a greater or lesser extent in the index than in the underlying benchmark. For example, since inception the United Kingdom's active weight has remained range-bound between –4% and –5%, and therefore so has the weight of sterling (GBP) as well. This underweight is largely due to the weights of UK companies involved in oil & gas, mining and utilities that were screened out as a result of activity exclusions. Although the weights are the same, countries and currencies make distinct contributions to portfolio active risk[2,3]. While the UK country underweight accounted for a small portion of active risk (between 1% and 3%), the underweight in GBP made up as much as 13% of the overall active risk early in the period. However, this high figure has since declined to just around 2%.

[1] We use the Axioma Europe medium-horizon fundamental model (EU4-MH) for this analysis.
[2] Contributions to risk are based not just on the weight, but also on the factor's volatility and its correlation with other factors.
[3] An active weight in a euro-based country would obviously add only country risk, not currency.

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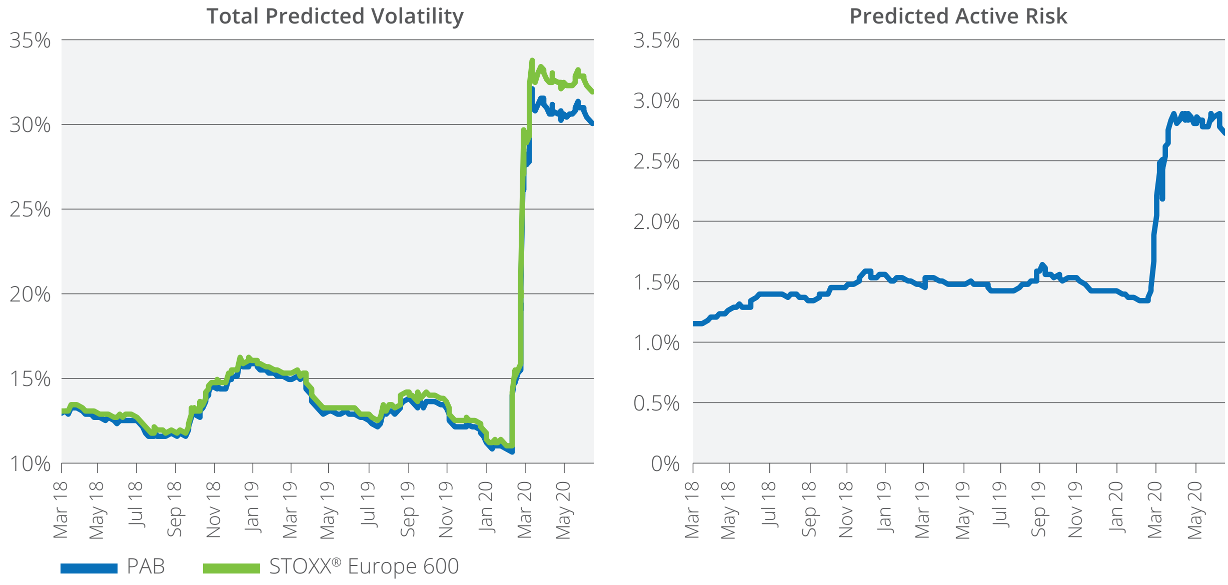
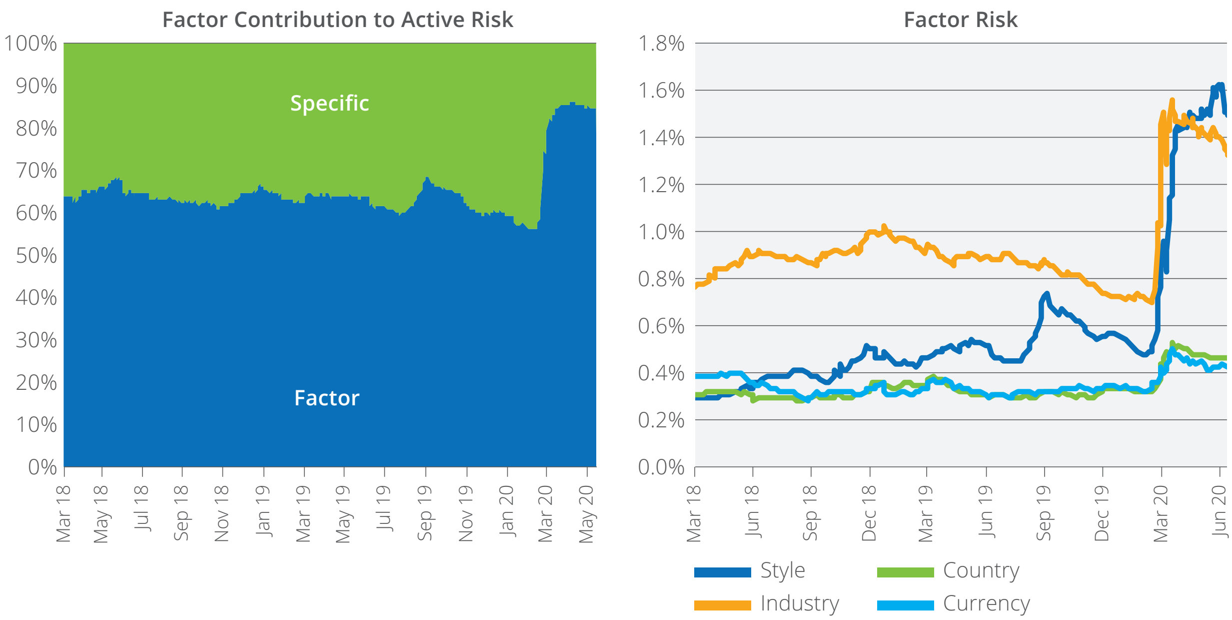
FIGURE 2: Total Predicted Volatility and Active Risk



Source: Qontigo

FIGURE 3: Components of Active Risk



Source: Qontigo

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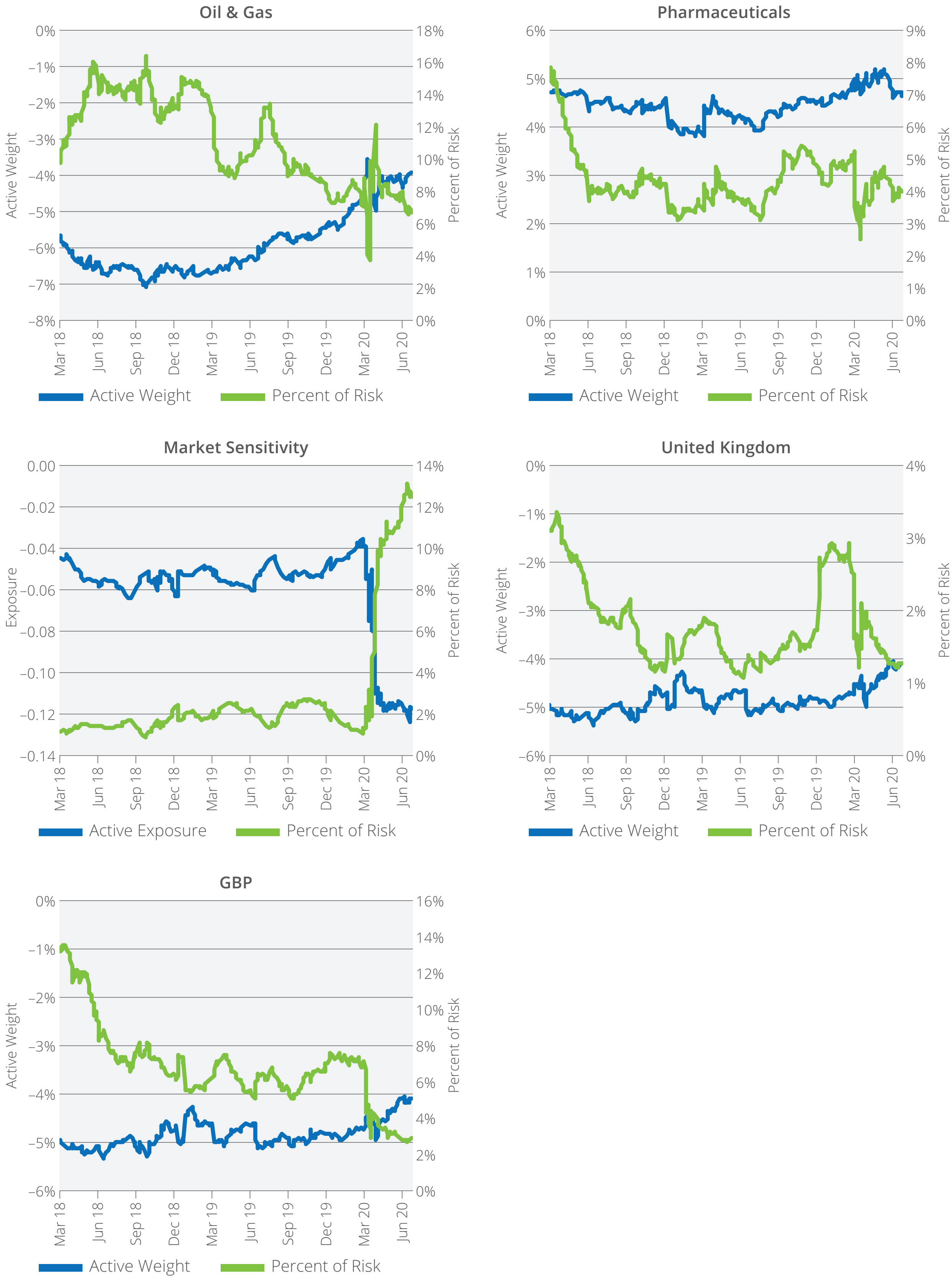
FIGURE 4: Individual Factor Exposures and Risk Contributions



Source: Qontigo

To sum up the risk picture, we can say that the predicted active risk of the STOXX® Europe 600 PAB Index has been and remains relatively low, and that it has been driven mainly by risk model factors as opposed to the inclusion or exclusion of specific stocks. Specifically, these factors are its underweight in oil & gas and its overweight in pharmaceuticals. An underweight in the UK and therefore in sterling was a risky tilt early in the life of the index, especially in the case of the currency. As the industry contribution to risk fell, exposure to market sensitivity increased and its contribution to risk also grew substantially. Although the stock-specific contribution has remained small relative to factor contribution, it has the potential to impact return – and as we will see later, it has.

4. PERFORMANCE ATTRIBUTION: LOWER RISK AND HIGHER RETURNS

Let us now turn our attention to performance attribution. As has been noted, the STOXX® Europe 600 PAB Index has substantially outperformed the STOXX® Europe 600 Index. From inception through June 30, 2020, the portfolio returned an annualized return of 5.0%, 2.9% higher than the 2.1% return for the underlying index. The realized active risk of 2.4% produced a healthy information ratio of 1.2.

These results are not due to one good period alone. In fact, the STOXX® Europe 600 PAB Index has outperformed its underlying not only in the period between its inception and the end of 2018, but also throughout 2019 and for the year to date in 2020. Most of the return in the full period since its inception came from style factors and industries – the largest risk factor contributors. As noted above, pharmaceuticals (overweight) and oil & gas (underweight) were the largest contributors to portfolio risk. Since the largest risk contributors may make either positive or negative contributions to returns, these sometimes cancel each other out over time. As a result, other factors can potentially produce the best or worst contributions to returns over longer periods, and with the exception of pharmaceuticals, that was typically the case here. Interestingly, relatively few factors made negative contributions over the full period, and even where they did these were quite small (the largest negative contribution, driven by the underweight in electric utilities, was only 20 basis points).

Contributions to active returns were typically fairly muted even on a year-by-year basis. In 2018, the largest risk contributors were also the largest contributors to active returns, with oil & gas detracting more that year than any other factor and pharmaceuticals making the highest positive contribution. Market sensitivity helped returns in 2018, but most other contributions were small.

2019 proved to be a strong year for the STOXX® Europe 600 PAB Index, both in terms of absolute returns and relative to its counterpart. Industry exposures were by far the largest driver of the substantial excess return, with oil & gas contributing +0.6%. The overweight in household & personal products was the largest negative contributor, although it only detracted slightly from the return. Sterling was the largest detractor among all the factors during the year.

From January through June 2020, absolute returns were in negative territory once more, although the STOXX® Europe 600 PAB Index sharply outperformed. Once again, industry exposures were by far the largest drivers of outperformance, led by the underweight in oil & gas, which added 73 basis points. Oil & gas was a very close second in terms of the active return contribution. Very few industries created a drag on returns and the worst – from an underweight in Internet retailers – was only 21 basis points.

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FIGURE 5: Performance Attribution

	2018	2019	2020	Full Period (Annualized)
STOXX® Europe 600 PAB	−6.6%	30.2%	−8.0%	4.9%
STOXX® Europe 600	−7.0%	27.7%	−11.6%	2.1%
Active	**0.4%**	**2.5%**	**3.6%**	**2.8%**
Contribution from				
Style	0.8%	0.2%	0.7%	0.8%
Country	−0.5%	0.2%	0.3%	0.0%
Currency	0.2%	−0.4%	0.4%	0.1%
Industry	−0.8%	2.0%	2.5%	1.5%
Specific	0.8%	0.5%	−0.3%	0.4%
Market	0.0%	−0.1%	0.0%	0.0%
Largest Positive Contributors				
Style	Market Sensitivity	Profitability	Value	Profitability
Contribution	0.3%	0.6%	0.3%	0.3%
Exposure	−0.05	0.10	−0.09	0.09
Country	Netherlands	Netherlands	United Kingdom	Netherlands
Contribution	0.1%	0.1%	0.2%	0.1%
Exposure	1.8%	2.7%	−4.4%	2.3%
Currency	CHF	CHF	GBP	CHF
Contribution	0.1%	0.1%	0.3%	0.1%
Exposure	2.8%	1.1%	−4.5%	2.0%
Industry	Pharmaceuticals	Oil & Gas	Oil & Gas	Pharmaceuticals
Contribution	0.3%	0.6%	0.7%	0.5%
Exposure	4.3%	−6.0%	−4.4%	4.3%
Largest Negative Contributors				
Style	Liquidity	Value	Market Sensitivity	Exch. Rate Sensitivity
Contribution	−0.1%	−0.2%	−0.1%	−0.1%
Exposure	0.02	−0.09	−0.08	−0.01
Country	United Kingdom	Italy	Germany	Sweden
Contribution	−0.2%	−0.1%	0.0%	−0.1%
Exposure	−4.9%	−1.6%	−0.8%	−0.5%
Currency	PLN	GBP	DKK	RUB
Contribution	0.0%	−0.4%	0.0%	0.0%
Exposure	−0.2%	−4.8%	1.3%	0.0%
Industry	Oil & Gas	Hshld. & Pers. Products	Internet Retail	Electric Utilities
Contribution	−0.8%	−0.2%	−0.2%	−0.2%
Exposure	−6.3%	3.8%	−0.5%	−1.2%

Source: Qontigo

5. CONCLUSION

To repeat, since its inception the STOXX® Europe 600 PAB Index has offered a better risk-return profile than its benchmark counterpart, the STOXX® Europe 600 Index. It has a low tracking error – both predicted and realized – to the underlying index, which it outperformed by more than 2.9%, producing an information ratio in excess of 1.

Drilling down into the active risk components revealed few large active exposures in the STOXX® Europe 600 PAB Index, with most of the active risk coming from a couple of industries and a single style factor. This translated into many small (usually positive) contributions to the relative return, with no factor having an outsized impact. Finally, the stock-specific portion of both risk and return was also relatively small, although generally positive. This indicates that, over time, stocks offering a better climate profile performed better above and beyond their industry, country or style factor exposures.

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www.stoxx.com

CONTACTS

Theilerstrasse 1a
CH-6300 Zug
stoxx@stoxx.com
www.stoxx.com

Frankfurt: +49 (0) 69 211 0
Zug: +41 43 430 71 60
London: +44 (0) 20 7856 2424
New York: +1 212 991 4500

Atlanta: +1 678 672 5400
Buenos Aires: +54 11 5983 0320
Chicago: +1 224 324 4279
Geneva: +41 22 700 83 00
Hong Kong: +852 8203 2790
Paris: +33 (0) 1 55 27 67 76
San Francisco: +1 415 614 4170
Singapore: +852 8203 2790
Sidney: +61 (0) 2 8074 3104
Tokyo: +81 3 5847 824