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THE IMPACT OF "BREXIT" ON STOCK PRICES – REVENUE EXPOSURES MATTER

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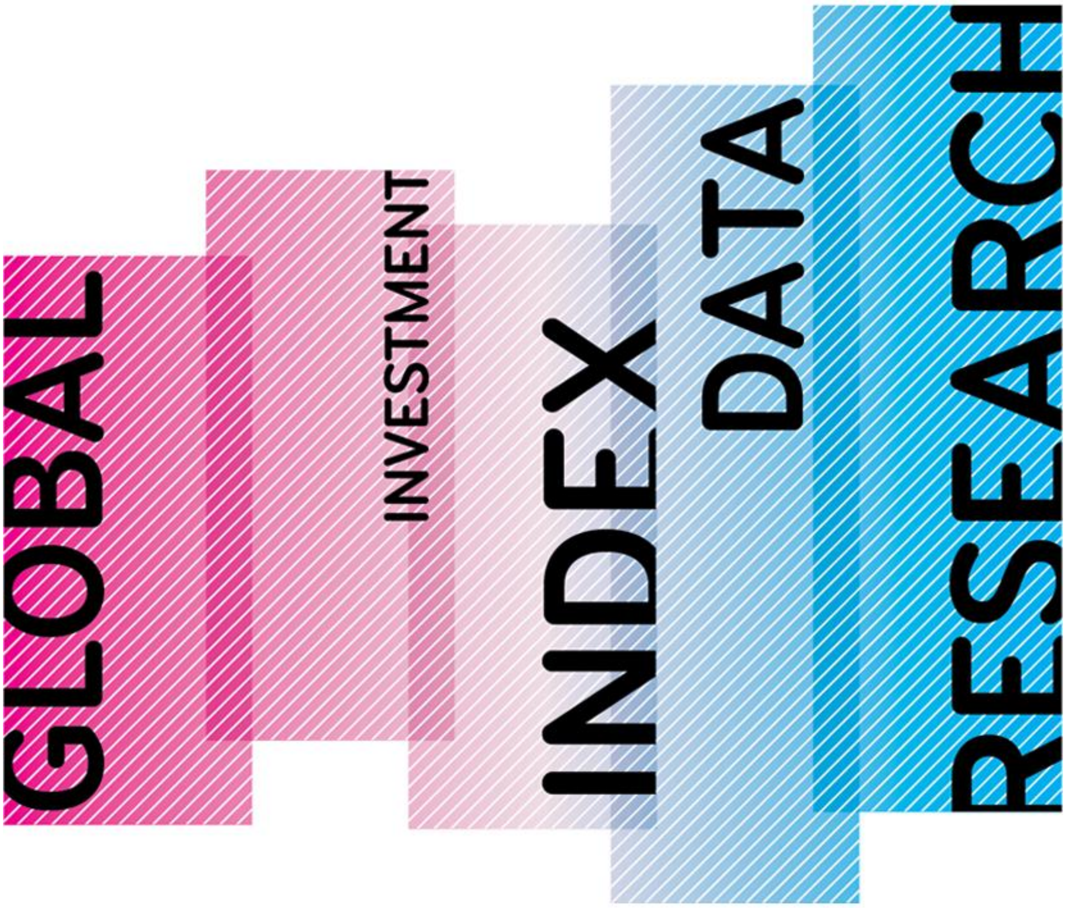

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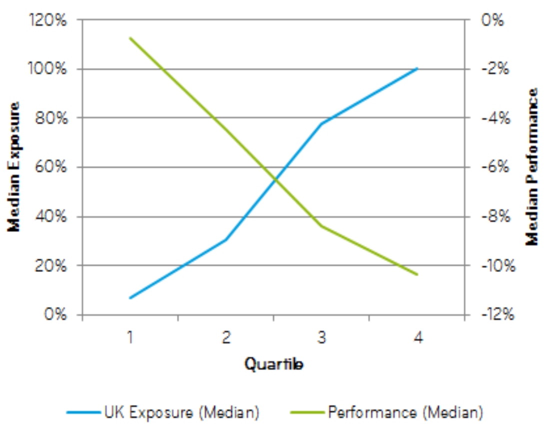
The vote of UK citizens in favor of leaving the EU affected stock prices not only in the UK but around the globe. On Friday, Jun. 24, 2016, the day following the referendum, equity markets opened with a huge discount compared to the previous day's close.

But has the referendum affected stock prices equally within markets? We investigate two markets, the UK and the USA more closely and find that drawdowns were substantially driven by companies' revenue exposure to the UK, i.e., the higher their revenue entanglement with the UK is, the higher was the negative impact of the vote in favor of "Brexit" on firm value.

In order to demonstrate this effect, we will have a closer look at the relation between company-level revenue exposures to the UK and performance, measured over the course of the day immediately following the referendum.

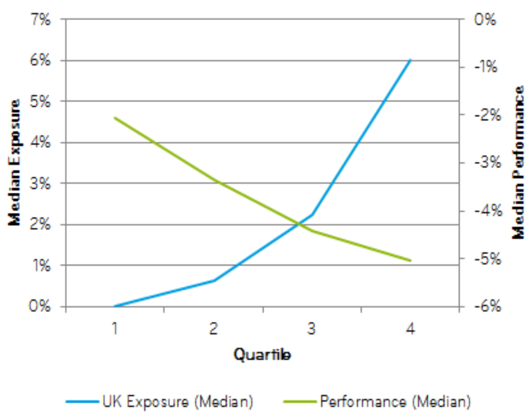
Figures 1 and 2 as well as Tables 1 and 2 provide median revenue exposures and performance figures of UK and US companies to the UK. Performance figures are hereby measured over the course of Friday, Jun. 24.

FIGURE 1



Median revenue exposure of UK companies to the UK as well as median performance over the course of Jun. 24. Medians are computed based on constituents of the STOXX UK 180. Hereby, companies are allocated to quartiles according to their revenue exposure to the UK.

FIGURE 2



Median revenue exposure of US companies to the UK as well as median performance over the course of Jun. 24. Medians are computed based on constituents of the STOXX USA 900. Hereby, companies are allocated to quartiles according to their revenue exposure to the UK.

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STOXX UK 180		
Quartile	UK Exposure	Performance
1	7.0%	0.8%
2	30.7%	-4.5%
3	78.0%	-8.4%
4	100.0%	-10.3%

Table 1: Median revenue exposure and performance figures corresponding to Figure 1.

STOXX USA 900		
Quartile	UK Exposure	Performance
1	0.0%	-2.1%
2	0.6%	-3.3%
3	2.3%	-4.4%
4	6.0%	-5.0%

Table 2: Median revenue exposure and performance figures corresponding to Figure 2.

Hereby, companies of two broad market benchmark indices, the STOXX UK 180 as well as the STOXX USA 900 , are allocated to quartiles according to their revenue exposure to the UK. The first quartile includes companies with the lowest UK exposure while the 4th quartile includes companies with the highest UK exposure.

It can be directly observed that companies that fall into the 4th quartile displayed a significantly higher drawdown compared to those that fall into the quartile with the lowest UK exposure. In fact, the performance differential among UK firms was an impressive 9.5 percentage points while the performance differential of a market as remote to the UK as the USA was still 2.9 percentage points.

Knowing about this direct relationship between exposure and performance, investors can act upon this information by tilting their portfolios in desired directions. The STOXX True Exposure Indices, in short STOXX TRU, allow investments in predefined countries or regions by selecting companies that have a dominant economic exposure to the targeted area.
Thus, STOXX revenue exposure data as well as derived indices (STOXX TRU) enable investors to decrease their UK exposure if desired.

- A UK based investor who might be subject to investment constraints and needs to maintain a minimum UK equity exposure, may, for example, focus on those UK domiciled stocks that are well diversified internationally and display a comparably small UK exposure (i.e. companies that fall into the 1st quartile)
- Investors domiciled outside of the UK, e.g. in the US, may, on the other hand, focus on those companies that are less or not at all exposed to the UK (i.e. US domiciled companies that fall into the 1st quartile)

To further demonstrate this "immunizing" effect, Table 3 contains performance figures, again measured over the course of Jun. 24, 2016, for two standard benchmark indices, the STOXX UK 180 and the STOXX USA 900, as well as for derived (sub-)indices that include only those stocks that generate a predefined minimum share of revenues in the respective local market.[1]

[1] Minimums hereby range from 25% to 100% in 25 percentage point increments.

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	Benchmark	TRU 25%	TRU 50%	TRU 75%	TRU 100%
UK	-3.69%	-7.87%	-11.20%	-12.12%	-14.03%
USA	-3.61%	-3.32%	-3.23%	-2.56%	-2.13%

Table 3: Performance of STOXX UK 180 and STOXX USA 900 indices on Jun. 24, 2016 in local currency (referred to as benchmark indices). Additionally, the performance of STOXX TRU UK and STOXX TRU USA Indices with minimum revenue exposures to respective market of 25%, 50%, 75% and 100% are displayed.

It can be observed that, for the case of the UK, index performance was the lower, the higher the "required" revenue exposure to the local market. For the US, on the other hand, the opposite holds true. The higher the required exposure to the local market is, and in turn, the lower the exposure to the UK, the more immune the portfolio was. Thus, US investors would have been able to substantially mitigate the effect of "Brexit" on their portfolio by focusing on companies that are less entangled with the UK.

To summarize: the higher the revenue exposure of UK and foreign based companies to the UK, the higher their drawdown in the context of the recent referendum. STOXX TRU USA Indices are found to be more immune towards UK shocks while the opposite holds true for STOXX TRU UK Indices. Knowing about the relationship between exposure and performance, investors can act upon this information by tilting their portfolios in desired directions.

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