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## Initial Reactions to the Brexit: What it means for Probability, Markets, and the English Language

by Robert Michaud, CIO

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There has been much discussion and speculation of the political and economic consequences of yesterday's vote for the UK to leave the European Union. Ignoring politics altogether, and anything speculative about economics or financial markets, what can be said based on probability, financial theory, and an understanding of economic equilibrium?

First, let's put the surprise of the news in context. It was unexpected of course—markets were pricing in a 75% or greater probability of vote to remain in the EU. That may seem as if the market predicted a certain outcome, but really the market only valued one outcome as more likely than the other. Our surprise should therefore be comparable to the surprise of incorrectly predicting two coin tosses in a row.

Next, are markets reacting to this unexpected news according to financial theory? Generally, yes. Interest rates are approximately matching lows from the weeks before the vote. Markets (particularly European markets), which had been gradually rising for weeks as they discounted the potential impact of the Brexit, gave up those gains (and more) overnight. Reversing recent trends, the dollar strengthened moderately and the pound fell dramatically. This is what financial theory predicts would happen as the market gradually increases the likelihood of an event that abruptly doesn't happen.

These are times where a globally diversified portfolio should be constructed for many potential market scenarios. Had we bet with the markets, selling seemingly expensive treasuries and taking advantage of cheap valuations in Europe, we would have lost.

First order effects:

- 10 years of uncertainty and higher costs of international trade. Paul Krugman (who won a Nobel Prize for his work on the economic effects of international trade) estimates this as a permanent 2% reduction of wealth of the UK.
- Impact on the remaining EU is harder to measure, but clearly negative.

- London's position as financial capital of Europe (never mind the world) called into question.
- Heightened volatility and global transfer of capital from impacted volatile securities to more distant safer securities.

### Spillover speculation:

- Speculation abounds about the political future of the EU. The good scenario for the UK may be a bad scenario for the EU, since the success of the UK would make it more likely other EU members would also leave. Unfortunately, the bad economic scenario for the UK isn't particularly good for the EU either, since the strength gained from fear of leaving the EU will be a small consolation for the economic cost.
- The UK could cease to exist. Northern Ireland and especially Scotland were firmly in favor of remaining in the EU. They could have their own referenda on leaving the UK and rejoining the EU, leaving just England and possibly Wales in the "United Kingdom".
- Shift to Paris, Frankfurt, or Brussels as the financial capital of Europe
- Shift to New York as world financial capital
- Dollar strengthened as global reserve currency
- Europe's loss may be China's gain—increased likelihood of RMB as secondary global currency and NY/Shanghai as global financial capitals.
- Finally, English could be less likely to become sole primary global language if it loses whatever legal status it had in Europe (thereby dashing the hopes of generations of students who've struggled learning foreign languages).

*This note was posted as an entry on New Frontier's investment blog on June 24, 2016. Read this entry and other posts at: [blog.newfrontieradvisors.com](http://blog.newfrontieradvisors.com).*