



Quantifying Headlines: From Populism to Brexit

Is media coverage of potential sources of economic disasters proportionate to their likely impact on the economy and institutional portfolios? Investors form their perception of the magnitude of risk based on large number of public sources. Political biases, different estimation approaches and assumptions may result in unfair attention to things that do not matter and lack of attention to significant risks. We use Mira ABM to evaluate the impact of two widely covered global geopolitical risks with surprising results.*



In this issue of Risk Wire we introduce two global risk scenarios:

- i. Advancement of populist economic policies in the USA
- ii. Hard Brexit

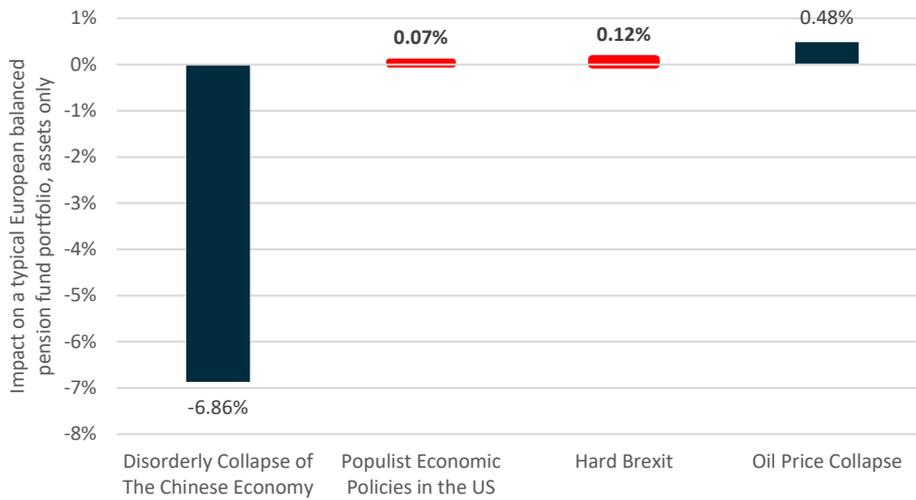
In contrast with our earlier work, these risk scenarios do not originate in our frameworks. Instead, we opted for collecting key generic global risks that attract the most attention in the investment community. We introduced these risks in Mira ABM* and found that despite their headline-grabbing nature, geopolitical scenarios appear to have no meaningful impact on a typical pension fund portfolio at least in the time frame of up to three years. Figure 1 represents a comparison of these two scenarios with two economically-driven scenarios covered by LINKS.

* Links Mira Agent Based Model (ABM) is asset pricing, allocation, stress testing and scenario analysis framework for institutional investors. You can download and run the framework by clicking on the link:

[Download LINKS Mira ABM](#)



Figure 1: Results of LINKS Mira Agent Based Model simulation of four economic scenarios



There are multiple reasons behind the moderate impact conclusion of Mira ABM:

- i. All events and scenarios have both negative and positive effects on the economy; there are always winners and losers. Headline-grabbing geopolitical scenarios tend to have more pronounced wealth distribution effects and smaller net effects. Mira ABM considers all effects in the economy, including the positive ones.
- ii. We examine the impact of events exclusively on the pricing of asset classes that are in the institutional portfolios. These tend to be highly diversified in terms of economic exposure. Furthermore, they may have little exposure to net losers of trade wars and nationalistic economic policies, such as small businesses and households.

There are two important caveats in this study:

- i. we are concerned only about the economic impact on pricing of financial assets here, which means the impact on non-financial assets, wages, overall economic growth, environment, social justice and the impact these may have on financial assets in the decades to come are outside the scope of this study,
- ii. the time dimension in this study is a key metric and to some extent an unknown: for instance, an oil price fall of 50% in a week “may be felt” more acutely than similar price change stretched over two years.



The Populist Economic Policies in the US

Why Is the Scenario Risky?

Recently, the global political scene has been flooded by a seemingly new toxic cocktail of right-wing social conservatism and economic populism. The social and political consequences of what is happening today are not clear and are far from decided, but the economic consequences of the change can be gauged with a few simple assumptions.

Historical analysis of populism (Bridgewater, 2017) is not an effective tool: first, pre-existing economic and institutional conditions as well as how individuals reacted at the time might have been responsible for the outcome and not the populist leaders; secondly, only reasonably successful populist parties and leaders can be researched, which creates a bias in the sample. While interesting, drawing conclusions based on historical analysis is not practical.

We follow a traditional definition of populist policies (Rudgiger Dornbusch, 1991), namely, presence of initial conditions: population dissatisfied with economic performance, very moderate growth, uneven income distribution, some room for highly expansionary program, rejection of constraints: policymakers explicitly reject constraints – no fiscal impact due to higher activity created by the new policies; and policy prescription: reactivation, redistribution of income and restructuring of the economy with active use of macroeconomic policy to redistribute income.

Where Does the Risk Come From?

Actual policies contemplated or enacted in the US include a border adjustment tax, exit from group trade agreements and infrastructure spending.

Border adjustment tax assumes a shift from origin- to destination-based tax system. Among other things, practical implications are:

- i. Export revenues will be entirely tax exempt, which places industries with larger proportion of exports as share of total revenues at an advantage.
- ii. Cost of imported materials/supplies can no longer be deducted from the tax base, which puts on the losing end a) US industries with significant share of imports in their bill of materials and b) foreign industries that predominantly export to the US.

Exit from trade agreements will mean an immediate switch to the tariffs regulated by WTO. This means industries exporting to the US will have a significant price disadvantage. Direct infrastructure spending will benefit companies involved in public infrastructure – mostly construction and project management industries.

The Initial Impact

The initial impact on industries is estimated based on their share of foreign costs and revenues as proportion of tot, and an assumption on sensitivity of volumes to price changes: industries with



more elastic demand (sensitivity of volumes to prices) will see bigger volume drops due to the tariffs.

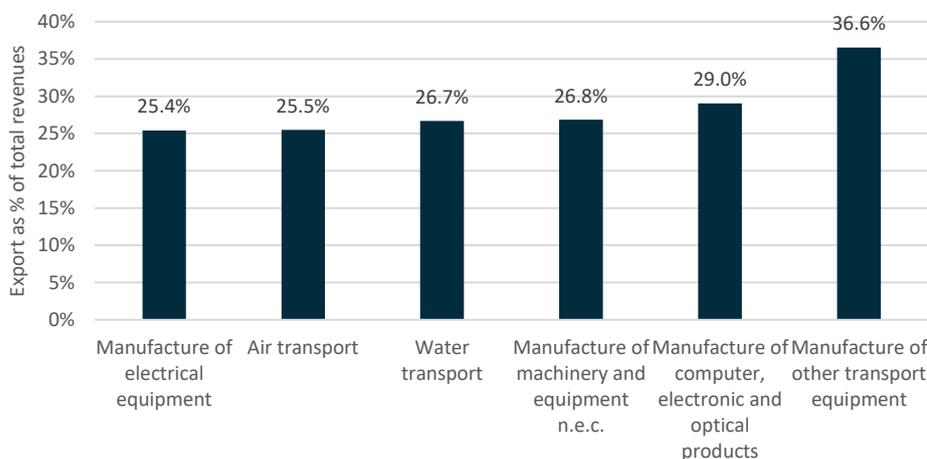
Infrastructure spending will affect construction and machinery industries; we have assumed the \$1 trillion in infrastructure spending ambition announced by the Trump administration is successfully carried out. However, we do not include any impact of higher infrastructure spending by the private sector due to lighter regulation and new tax benefits.

Table 1: The Initial Impact Assumptions for the populist policies in the US.

Country	Industry	Price	Volume
CAN	Manufacture of chemicals and chemical products	0.0%	-9.2%
CAN	Manufacture of rubber and plastic products	0.0%	-11.4%
CAN	Mining and quarrying	0.0%	-6.5%
MEX	Manufacture of electrical equipment	0.0%	-13.3%
MEX	Manufacture of machinery and equipment i.e.	0.0%	-13.3%
MEX	Manufacture of other transport equipment	0.0%	-15.5%
US	Air transport	8.9%	0.0%
US	Construction	0.0%	6.2%
US	Manufacture of coke and refined petroleum products	0.0%	-2.3%
US	Manufacture of computer, electronic and optical products	10.2%	-4.9%
US	Manufacture of electrical equipment	8.9%	-2.9%
US	Manufacture of machinery and equipment i.e.	9.4%	4.3%
US	Manufacture of motor vehicles, trailers and semi-trailers	0.0%	-3.4%
US	Manufacture of other transport equipment	12.8%	-3.6%
US	Manufacture of rubber and plastic products	0.0%	-1.7%
US	Mining and quarrying	0.0%	-0.8%
US	Water transport	9.3%	0.0%

US industries that have significant export proportion in sales will experience immediate tax relief due to the exemption of exports from profit tax calculation provided by the Border Adjustment Tax. Industries most exposed to this are electrical equipment manufacturing, machinery, air transport, computer, electronic and optical product manufacturing, and transport equipment manufacturing (Figure 2).

Figure 2: US industries with greater proportion of export revenues, source: Mira ABM, US census

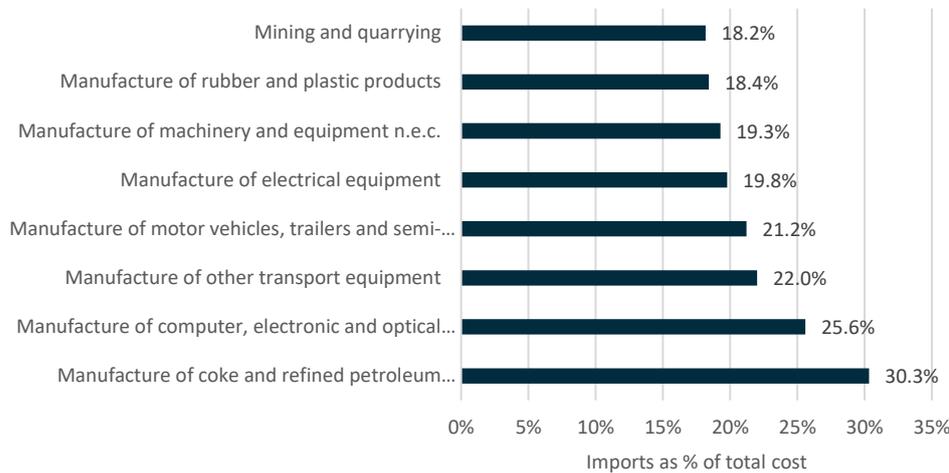




Machinery and equipment manufacturing as well as construction industries will also benefit from the infrastructure spending investments – this will increase physical volumes of the business.

On the losing side, industries that are significant importers into the US will suffer: coke and refined petroleum, automotive, rubber and plastic, electrical equipment (Figure 3).

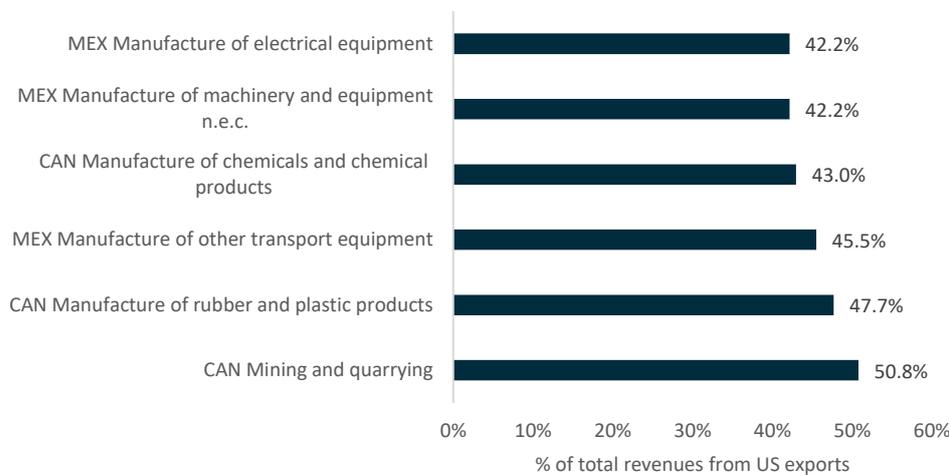
Figure 3: Industries importing greater proportion of their bill of materials, source: Mira ABM, US census



Some industries, such as computer, electronic products manufacturing, are global in nature and will gain due to exports and lose due to imports.

Finally, foreign industries that export to the US will suffer: top industries in this category are Mexican transport equipment, machinery and electrical equipment manufacturers as well as Canadian miners, rubber and plastic and chemical product manufacturers (Figure 4).

Figure 4: Non-US industries with greatest exposure to the US sales, source: Mira ABM, US census



Values in figures 2 to 4 are then converted to price and volume impact assuming that both the border adjustment tax and the WTO rules come into effect. We use the WTO tariff rate of 35% as



an average, which is the rate applied to the largest number of products imported into the US. We also use the tax benefit rate of 15%, which is the average tax rate of the US companies, as opposed to the marginal tax rate of 35%. Table 2 suggests that companies that rely on imported parts from Mexico and Canada will see a 50% increase in costs if both measures are passed. The resulting disincentive to do business will cause shrinking business volumes of 2 to 15%.

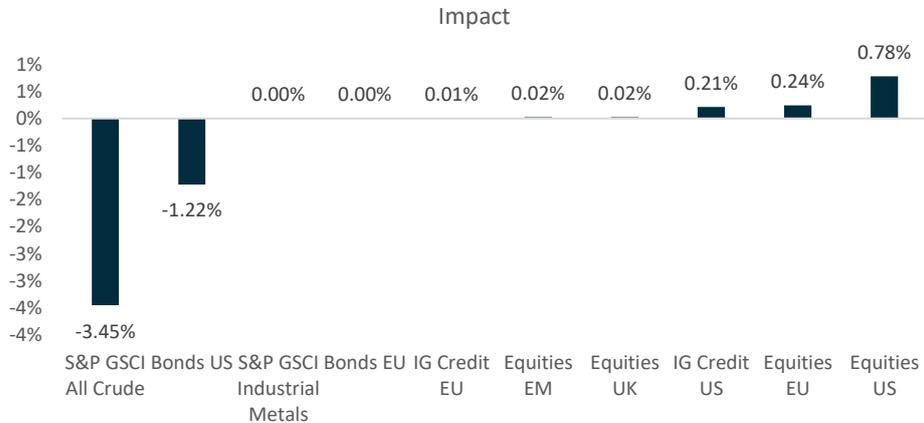
Table 2: The combined effect of exit from trade agreements and border adjustment tax on price of imported goods in the US

	WTO Rules	BAT	Combined effect
Rate	35.0	15.0	50.0

The Contagion Effect

While the introduction of populist policies can have drastic wealth re-distribution effects between the industries and respective shareholders, the net effect on the asset returns is relatively small. The policies will increase the overall profitability of the US companies, although the effect will be limited due to the simultaneous losses. The asset class that is likely to be impacted the most is the US Bonds, with an impact of ~-1.2%. Crude prices are likely to fall marginally (Figure 5) due to the pressure on demand in Emerging Markets.

Figure 5: Impact of the populist policies in the US, source: Mira ABM estimates





Hard BREXIT

Why is it risky?

Positions on both sides with respect to the post-exit relationship between Britain and the EU are becoming harder and more entrenched. Key disagreements remain too significant to reconcile, including the jurisdiction of European Court of Justice, cost compensation for programmes that the UK has already committed to, and of course, access to the single market.

The risk of hard Brexit stems from potentially ceasing access to the single market, i.e. emergence of trade barriers between the UK and EU. Trade barriers are likely to dampen the existing business activity, while the local substitution effect (or trade deals with other parties) may take a long time to materialize.

Where Does the Risk Come From?

In theory, all companies involved in cross-border trade are impacted in terms of costs and profits. Britain is currently a member of WTO through the EU. Exiting EU means that EU will apply its WTO tariffs to the UK agricultural and non-agricultural exports: on the average 14.4% and 6.9% respectively (Table 3).

Table 3: WTO EU tariff schedule summary, source: WTO

Frequency distribution		Duty-free	0 <= 5	5 <= 10	10 <= 15	15 <= 25	25 <= 50	50 <= 100	> 100
		Tariff lines and import values (in %)							
Agricultural products									
Final bound		32.3	11.0	17.1	14.4	11.1	9.4	2.3	0.4
MFN applied	2015	31.7	11.2	17.8	14.1	10.6	8.4	2.4	0.3
Imports	2014	46.7	11.0	16.9	10.2	4.8	7.7	2.5	0.1
Non-agricultural products									
Final bound		28.4	37.2	26.6	6.9	0.9	0.0	0	0
MFN applied	2015	26.5	37.5	27.1	7.3	1.5	0.1	0	0
Imports	2014	63.1	20.0	10.0	5.9	1.0	0.0	0	0

Mutual exposure, however, is far from symmetric (Table 4). To be clear, these numbers appear to be low because they take into account domestic costs and revenues. Typically quoted export/import numbers to the EU are relative to total exports/imports and not total production value, which exaggerates the extent of the issue.

Table 4: Relative exposure of trade partners, UK and EU, source: Mira ABM data, LINKS calculations

Companies	Importers	Exporters
Based in EU ex UK	Substitution easy	0.49% of revenues
Based in the UK	10.2% of cost	5.7% of revenues



By far the greatest burden falls on UK-based importers of the EU-based components: 10.2% of their total cost is impacted. Chemical, petroleum and automotive industries will have the biggest issues, with between 24% and 30% of costs sourced from EU. UK-based exporters to the EU will suffer too, as 5.7% of their revenues originate from the EU.

Finally, EU-based companies that export to the UK will suffer, however the total impact there is very muted – at only 0.5% of revenues. Some industries and geographies are disproportionately exposed, of course: systemic exposure to the UK market exists in Ireland and Malta (on the average between 20% and 30% of all revenues). The widely quoted and politically charged automotive industry of Germany, for instance, is exposed at only 5.7% of revenues (assuming a 10-20% decline in UK sales this translates into only up to 1% impact on global revenues).

The Not So Obvious

Reverting to WTO rules is not as straightforward as it may appear. Since the UK does not have own tariff schedules – lists of tariffs the country applies on trade with all other countries that are part of the WTO membership, these must be developed and launched. The problem is that Britain will not be able to deviate from the EU standard external schedules for quite some time, as any preferential tariffs agreed with EU would have to be granted to other nations too (due to the intricacies of WTO rules).

The Initial Impact

The initial impact is calculated separately for two groups of industries: UK exporters to EU and EU exporters to the UK. The estimates on volume change is driven by the application of 14.4% and 6.9% tariffs to mutual imports of agricultural and non-agricultural goods respectively. The resulting volume changes are driven by price elasticities of demand: changing prices result in lower sales volumes. The full list of affected industries can be accessed via [LINKS Mira ABM](#).

The Contagion Effect

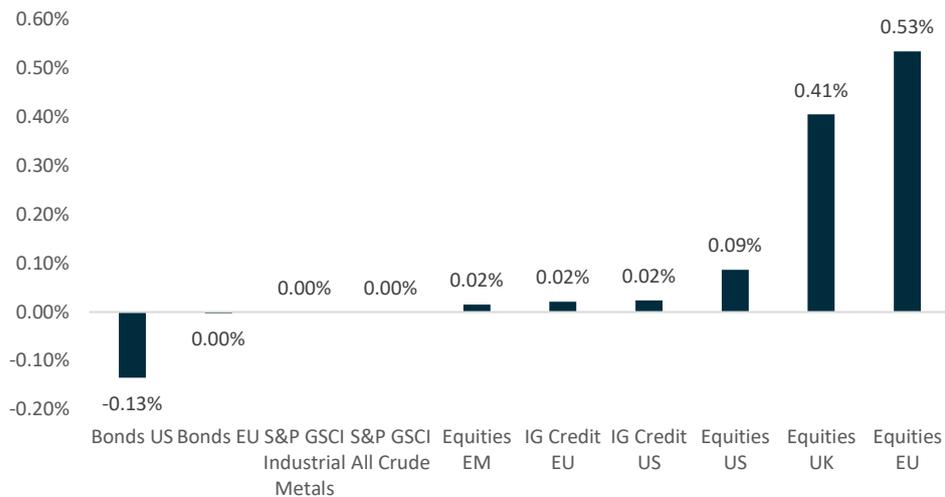
The impact on asset class pricing of the Hard Brexit scenario is truly marginal: returns of all asset classes remain well below one percent mark, which is the margin of error (Figure 6).

The reasons for such an outcome are multiple: i. reverting back to the WTO rules still provides a certain control over the average level of tariffs imposed that are manageable, ii. there are many industries that benefit from the corresponding domestic price increases, iii. domestic economies both in the UK and EU, in principle, are not affected, iv. companies listed in the UK have very broad global exposure and do not participate in the EU-UK trade to the full extent.

There are of course drastic wealth redistribution effects, particularly in the UK and countries that have direct strong exposure to the UK: Ireland and Malta. Furthermore, the consumers in the UK will indeed suffer, which may in fact translate into lower GDP, but not necessarily into lower profits for the UK equities, which have large global exposure.



Figure 2: Impact of Hard Brexit scenario, source: Mira ABM



Conclusion

Our perception of risk is often tied to our beliefs, view of the world and possibly the media coverage that we expose ourselves to. What makes things considerably worse, our estimate of potential impact of risky events may be based on media sources that are inherently biased; nearly all major risk sources have political angle and impact wealth distribution more than overall asset returns, which makes it very hard to find an unbiased assessment of the economic impact.

The risk sources we have found to be major concern for investors come from broad media coverage and various risk intelligence sources. It is then interesting to discover that an unbiased assessment of these risks suggests that there should be no significant economic impact for a diversified investor given our understanding of the economic policies put in place.

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About LINKS:

LINKS Analytics B.V. has a focused offering of industry leading systemic risk management solutions for institutional investors. Our unique and proven methodology of estimating the degree of systemic risk is based on the assessment of asset valuation dislocations globally (Graham Risk) and the degree of interconnectedness and concentration (Network Risk).

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