

# Franklin Political Risk and Opportunity Index (FRISKOP)

*Technical Report*  
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The Franklin Political Risk and Opportunity Index (FRISKOP) is an initiative by Oliver Strijbis, Bernd Bucher, Juliette Schwak, and Elisa Volpi, Professors of Political Science or Political Economy at Franklin University Switzerland (FUS). It is the first political risk index that combines quantitative measures of the probability of geopolitical events and an assessment of their potential economic impacts. This technical report describes the methodology of FRISKOP.

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## 1. Introduction

The Franklin Political Risk and Opportunity Index (FRISKOP) is an initiative by Oliver Strijbis, Bernd Bucher, and Juliette Schwak, Professors of Political Science or Political Economy at Franklin University Switzerland (FUS). It is the first political risk index that combines quantitative measures of the probability of geopolitical events and an assessment of their potential economic impacts. This technical report describes the methodology of FRISKOP. Political risk is generally understood as any political change or event that alters the expected value of a given economic action (Bremmer and Keat 2010; Gould-Davies 2019; McKellar 2017; Toksöz 2014). FRISKOP conceptualizes political risk more specifically as the combination of the probability of a political event happening and its potential impact on the economy. Here it is similar to best practice in the industry that also combines estimates of probabilities for political scenarios and their expected impact on the economy (e.g. EIU 2022; BlackRock 2022). However, in contrast to the available risk indices FRISKOP fully quantifies both the likelihood of geopolitical events, its potential economic impact, and – most importantly – its interaction.

This documentation is divided into four parts: First, it is described how the likelihood of events is estimated. Second, we make transparent how we measure the potential economic impact of these political events. Third, we describe how we combine the two pieces of information into one index. Finally, we indicate the list of experts and the events covered in each wave.

## **2. Probability of political events**

FRISKOP bases its selection of events and the probability attached to it from *A Prediction Market with Integrated Algorithms (PREMIA)* – a research project at the University of Zurich (see [www.premia-forecasts.com](http://www.premia-forecasts.com)). Prediction markets are virtual stock markets, which use the information contained in market values to make forecasts. Prediction markets have proven themselves in the prediction of elections in the USA (Berg, Nelson, and Rietz 2003, 2008, Berg et al. 2008) and been widely used in Europe to predict election results where they have outperformed other forecasting models based on polls, expert panels, and economic indicators (Graefe 2017). Prediction markets have also been successfully applied to forecast the success of replication studies in social and behavioral science (Gordon et al. 2021) and to migration movements (Morgenstern and Strijbis, under review), among others.

FRISKOP accesses PREMIA's prediction market on geopolitical events by choosing political events and derives their probability estimates from their website. FRISKOP does not cover all events, but selects events that would have a particularly strong impact on the global economy. The impact of the events, in case they materialize, on the global economy is estimated in two steps. In a first step, the authors select around 30 events that they judge to have the highest potential impact (positive and negative) on the global economy. Among the 30 events approximately 20 events with very strong potential negative effects are chosen and among 10 with potentially very positive effects. In a second step, they present this selection of events to an expert panel that rates the potential economic impact of the events (see section 2: Expert ratings on economic impact).

For its monthly FRISKOP ranking, it calculates the probability of the political events by averaging PREMIA's probability over the last week. FRISKOP might add new events at any time for its monthly updates. If probability estimates are not available over the last week, it will average the average the estimates over the last number of days for which the estimates are reported. The probability of the selected geopolitical events ranges between 0% and 100%. However, those events with high potential impact tend to be very unlikely consisting of the "fat tail" of possible geopolitical events (Bremmer and Keat 2010). Consequently, we can expect the events to have a mean probability that is clearly lower than 50%. Our estimate based on previous forecasts on geopolitical events is that the mean probability will be around 25%.

## **3. Expert survey on the hypothetical economic impact**

In order to estimate the economic impact of the political events selected in the first stage (see above), we conduct an expert survey. Between 50 and 100 experts on political economy, international relations, and politics from academia, business, and state agencies are asked every six months to fill in a survey. The experts are selected based on the large professional networks of the authors. Expert surveys tend to have low response rate, but due to the personal contacts to the selected experts, response rate is expected to be around 50%. Hence, we expect to be able to count on the expertise of 25 to 50 experts for each survey. We will provide basic information about the experts (e.g. gender, industry, discipline) and list those that do not insist on remaining anonymous.

Experts engage in rating of paired comparisons of the political events that we have chosen in a first step (see section 1: Probability of political events). Experts are asked for ten pairs of events the question: “Which of two events impacts global economy more negatively? In the following, we will present you with ten pairs of political events. For each pair, we would like you to choose the event (should it take place) that would have the more negative (or less positive) overall effect on the global economy over the next year. By ‘global economy’, we refer in particular to central macroeconomic indicators such as gdp growth, unemployment, inflation, and sovereign debt. If you think that no clear answer is possible, please choose the event of which you think it would have a more negative effect on the S&P 500.” The experts receive ten pairs of descriptions of political events that are randomly chosen among a larger set of events. While political events can have positive effects on one set of indicators, they can at the same time have a negative impact on other indicators and thus cancel each other out. This is why we add the option to rely on its effect on the S&P 500 instead. Here we follow the idea that the state of the global economy is approximated by very general financial indices and are inspired by the empirical analysis in Caldara and Iacoviello (2022)

Based on the pair-wise comparisons, we calculate the relative frequency with which the events are rated as having a more negative effect relative to the comparison group. This gives us a standardized ranking from most positive effect (0) to most negative effect (1). Based from this distribution and our assumption about which events should have a positive impact on world economy, we recategorize the events in to such having strongly negative impact, negative impact, inconsequential, and positive impact. We categorize those as “strongly negative” that we have pre-selected as events with negative impact and that were among those also rated by the expert as having most negative effect. We draw the boundaries to events with (only) negative effect at around the upper 75% of the distribution. However, we take clusters into account: In case there is a group of events with similarly high values, we group them together even if the boundary results to be somewhat lower or higher than the 75th percentile. According to the same method, we rate the next group of events that cluster around the upper 50% to 75% of the distribution as (only) “negative” impact. The events that are around the lower 25% to 50% of the scale are categorized as “inconsequential”. Finally, we categorize the events that we have pre-categorized as opportunities and that receive scores that among the lowest 25% are rated as having a “positive” impact. Again, we do not draw a strict boundary at these intervals but also consider clusters around it.

In a final step, we assign the following scores to the categories:

- “strongly negative” = 0.5
- “negative” = 0.25
- “Inconsequential” = 0
- “positive” = -0.5

The values of these scores range between -0.5 and 0.5 because in practice most of the events covered will have probabilities lower than 50% and a mean probability of 25% is expected (see above). Hence, when multiplying the two scales with each other to combine them, the scale will receive about the same weight (without additional standardization) as the probability of the events.

#### 4. Combining event probability and expected impact

FRISKOP conceptualizes political risk as the combination of the probability of a political event happening and its potential impact on the economy. Hence, in a final step we multiply the two dimensions in order to receive one risk and opportunity index. The final scores can theoretically range from -0.5 to 0.5.

As a final step we transform these scores into four final categories:

- "high risk"  $\geq 0.1$
- "risk" 0.025 to 0.999
- "minimal" -0.025 to 0.024
- "opportunity"  $\leq -0.025$

This final scoring should do right to typical intuitions about political risk and opportunities. Table 1 shows the probabilities that events need to have in order to fall into one of the four categories based on the classification of their impacts. An event classified to have a very negative expected impact is considered a high risk if its probability is 20% or more. The same is true for events considered to have a negative impact if their probability is 40% or higher. Events considered highly negative are categorized as a risk if their probability is between 5% and 19.9%. The same is true for events considered negative if they have a probability of 10% to 40%. All other combinations with lower probabilities are categorized as minimal risks. An event is categorized as an opportunity if it is considered to have a positive impact and a probability to materialize of 10% or more.

Table 4.1: Critical values for FRISKOP categories

Impact	Probability ranges	FRISKOP score	FRISKOP category
0.5	$\geq 0.2$	$\geq 0.1$	high risk
0.25	$\geq 0.4$	$\geq 0.1$	high risk
0.5	$\geq 0.05$	$\geq 0.025$	moderate risk
0.25	$\geq 0.1$	$\geq 0.025$	moderate risk
0.5	0.001 to 0.049	0.001 to 0.024	small risk
0.25	0.001 to 0.099	0.001 to 0.024	small risk
0	0 to 1	0	minimal
-0.5	0.001 to 0.049	-0.001 to -0.025	minimal
-0.5	$\geq 0.05$	$\leq -0.025$	opportunity

## 5. List of experts and events covered

Table 5.1: List of experts in the first wave (Q1 and Q2 of 2023)

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Alexander Reichwein	Senior Lecturer Department of Political Science, Justus-Liebig University Giessen
Daniel Chachu	Postdoctoral Researcher, University of Zurich
David Welch	Professor of Political Science, University of Waterloo
Felix Schmutz	Consultant at PPCmetrics
Frank Gadinger	Senior Researcher, Centre for Global Cooperation Research/University of Duisburg-Essen
James Davis	Professor of International Politics, University of St.Gallen
Julian Eckl	Postdoctoral Research Fellow, University of St.Gallen
Lukas Rühli	Senior Fellow, Avenir Suisse
Marco Salvi	Senior Fellow, Avenir Suisse
Moritz Weiss	Senior Lecturer in International Relations, LMU Munich
Pieter De Wilde	Professor in Political Science, Norwegian University of Science and Technology
Stefan Graber	Investment Strategist (Commodities) at Credit Suisse
Stephan Engelkamp	Lecturer in International Relations Education, King's College London
Stephan Stetter	Professor for International Politics and Conflict Research, Universität der Bundeswehr München

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Four University researchers that preferred not to be listed.

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Table 5.2: List of experts in the second wave (Q3 and Q4 of 2023)

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Alessandro Guasti	Postdoctoral Research Fellow, University of Oxford
David Welch	Professor of Political Science, University of Waterloo
Giacomo Cucignatto	Postdoctoral scholar at Sapienza University
Kai Gehring	Professor, University of Bern
Klaus Armingeon	Professor, University of Zurich
Laurent Belet	Political Consultant
Markus Kaim	Senior Fellow, Stiftung Wissenschaft und Politik
Martin Koch	Senior Lecturer, University of Bielefeld
Moritz Weiss	Senior Lecturer in International Relations, LMU Munich
Peter Fischer	Chief Economist and Editor-in-Chief NZZ Pro Global, Neue Zürcher Zeitung
Pieter De Wilde	Professor in Political Science, Norwegian University of Science and Technology
Stefan Graber	Investment Strategist (Commodities) at Credit Suisse
Stefanie Walter	Professor, University of Zurich
Thomas Biersteker	Professor Honoraire at the Graduate Institute, Geneva
Ulrich Franke	Senior Lecturer (Privatdozent), University of Erfurt
Four experts preferred not to be listed.	

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Table 5.3: List of events in the first wave (Q1 and Q2 of 2023)

<b>Event</b>	<b>Definition</b>
Italian government instability	The Italian government is considered to be in crisis if at least one of the following three events have happened: New elections have been called At least one party of the current coalition has announced to leave the government Giorgia Meloni is no longer prime minister.
Chinese sea blockade	China attempts to block Taiwan from accessing the sea or from conducting trade or other activities through the sea by using military or other means involving blockading ports, intercepting and inspecting ships, or using naval or air forces to patrol and enforce the blockade.
Russia detonates nuclear device	Amid successful counterattacks by Ukrainian forces in the east of the country, there are concerns that Russia could resort to using nuclear weapons. With "nuclear weapons" we refer to atomic bombs, hydrogen bombs, and other weapons that use fission or fusion reactions to generate an explosion. A radiological device (aka "dirty bomb") is not counted as a nuclear weapon.
China - India conflict	China and India have a border dispute in the Himalayas. According to this scenario there is a violent incident between China and India about this border conflict or another issue that result in the deaths of at least 25 military personnel and/or civilians.
Debt ceiling not extended	According to this scenario the US fails to raise its debt ceiling by July 31, 2023. The US debt ceiling is a statutory limit on the total amount of debt that the federal government of the United States is allowed to incur. It is set by Congress and is periodically raised or suspended as needed to allow the government to borrow money to meet its financial obligations.
Decoupling of US from Chinese economy	The U.S. has decided for semiconductor export restrictions against China and is weighing additional measures for decoupling from China with regards to critical technology. According to this scenario the U.S. government announces export controls similar to the one on semiconductors for other technologies and a new mechanism to review outbound investment flows to China.
China attacks Taiwan	An action by the Chinese military result in the deaths of at least 25 Taiwanese military personnel and/or civilians.
Terrorist attack in the US	According to this scenario, a terrorist attack takes place on US territory. A terrorist attack is defined as the actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation. The incident must be intentional, entail some level of violence or immediate threat of violence including violence against people, and the perpetrators must be sub-national actors.
Political upheaval in Egypt	Political upheaval in Egypt Violent riots and/or large scale protest in Egypt take place. Violent riots are defined as at least two incidences of distinct, continuous and violent action directed toward members of a distinct "other" group or government authorities. The participants intend to cause physical injury and/or property damage. At least 100 individuals involved in at least two of the events, at least ten individuals insured. Large scale protest are defined as protest with grievances against the authorities of Egypt and at least 1 million participants during one week as estimated by Western media.
Syriza wins elections	Syriza wins majority of seats Legislative elections are scheduled to be held in Greece by July 2023. In this scenario Syriza (or a political formation of which



	(former) Syriza is the main organization) wins an absolute majority in the Hellenic parliament.
Tick tock ban in the US	In December 2022, the US Senate introduced a bill that would impose a ban on "all transactions from any social media company in, or under the influence of, China, Russia, and several other foreign countries of concern". A TikTok ban has taken place if the US government has taken action with the effect that a typical American cannot download the TikTok mobile app or use the app if it was previously downloaded.
Large scale protests in China	Large scale protest is defined as protest with grievances against the authorities of China and at least one million participants during one week as estimated by Western media. This scenario excludes protests in Hongkong.
Erdogan remains president	Recep Tayyip Erdoğan of the AKP has announced that he will run for reelection. Turkey's next presidential election is scheduled for 2023 with the first round of voting to take place on 18 June 2023, and a runoff is scheduled for 2 July 2023 if needed.
Riots in the US	According to this scenario at least two incidences of distinct, continuous and violent action directed toward members of a distinct "other" group or government authorities take place. The participants intend to cause physical injury and/or property damage. At least 100 individuals are involved in at least two of the events and at least ten individuals insured.
Putin no longer president	Vladimir Putin ceases to be president of Russia.
Large scale protest in Hongkong	Large scale protest is defined as protest with grievances against the authorities of China or Hongkong and at least one million participants during one week as estimated by Western media.
Lukashenko no longer president	Alexander Lukashenko ceases to be president of Belorussia.
Orban no longer president	Viktor Orban is no longer prime minister of Hungary.
Ceasefire between Russia and Ukraine	According to this scenario a ceasefire is announced that is acknowledged by both Russia and Ukraine and includes the whole of Ukraine. "Ukraine" includes the boundaries generally recognized by the international community, including Donbas and Crimea. The Ukrainian government as recognized by the European Union is party to the announced ceasefire.
Regime change in Iran	Where regime change is considered to be present if Ali Khamenei ceases to be "Supreme Leader" of the Islamic Republic of Iran.

Table 5.4: List of events in the first wave (Q3 and Q4 of 2023)

<b>Event</b>	<b>Definition</b>
Argentina to default	A country defaults when it is unable or unwilling to fulfill its financial commitments, notably its debt repayments. According to this scenario Argentina defaults by the end of the year.
Sea blockade by China against Taiwan	China attempts to block Taiwan from accessing the sea or from conducting trade or other activities through the sea by using military or other means involving blockading ports, intercepting and inspecting ships, or using naval or air forces to patrol and enforce the blockade.
Italian government instability	The Italian government is considered to be in crisis if at least one of the following three events have happened: New elections have been called At least one party of the current coalition has announced to leave the government Giorgia Meloni is no longer prime minister.
Russia detonates at least one nuclear weapon outside of its territory	Amid successful counterattacks by Ukrainian forces, there are concerns that Russia could resort to using nuclear weapons. With "nuclear weapons" we refer to atomic bombs, hydrogen bombs, and other weapons that use fission or fusion reactions to generate an explosion. A radiological device (aka "dirty bomb") is not counted as a nuclear weapon.
Violent action of China against Taiwan	An action by the Chinese military result in the deaths of at least 25 Taiwanese military personnel and/or civilians.
Terrorist attack in the USA	According to this scenario, a terrorist attack takes place on US territory. A terrorist attack is defined as the actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation. The incident must be intentional, entail some level of violence or immediate threat of violence including violence against people, and the perpetrators must be sub-national actors.
Pakistan to default	A country defaults when it is unable or unwilling to fulfill its financial commitments, notably its debt repayments. According to this scenario Pakistan defaults by the end of the year.
The US bans TikTok by December 2023	The US Senate introduced a bill that would impose a ban on "all transactions from any social media company in, or under the influence of, China, Russia, and several other foreign countries of concern". A TikTok ban has taken place if the US government has taken action with the effect that a typical American cannot download the TikTok mobile app or use the app if it was previously downloaded. (Source: Metaculus)
Ecuador to default	A country defaults when it is unable or unwilling to fulfill its financial commitments, notably its debt repayments. According to this scenario Ecuador defaults by the end of the year.
Javier Milei elected president of Argentina	Javier Milei is a presidential candidate for the upcoming elections in Argentina. He is a far-right economist who has pledged to dollarize the economy and shut the central bank.
Vladimir Putin replaced by	Vladimir Putin ceases to be president of Russia and is replaced by another leader or group of leaders that are in favor of halting the war in Ukraine.

anti-war government	
Ceasefire between Russia and Ukraine announced	According to this scenario a ceasefire is announced that is acknowledged by both Russia and Ukraine and includes the whole of Ukraine. "Ukraine" includes the boundaries generally recognized by the international community, including Donbas and Crimea. The Ukrainian government as recognized by the European Union is party to the announced ceasefire.
PiS not longer in government	Poland will hold parliamentary elections in fall 2023. It is unclear whether the current government party PiS (Law and Justice) will win enough seats to continue governing alone or in coalition. According to this scenario PiS is not able to form a new government by December 31.

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