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**KINGDOM OF LOSS: political crises and global stock market
crashes**

REINO DA PERDA: crises políticas e colapsos globais no mercado de ações

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Leandro Terra Adriano

KINGDOM OF LOSS: political crises and global stock market crashes

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Ad Deum qui laetificat juventutem meam...

... and to Lorraine and the boys.

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Abstract

This doctoral dissertation examines the relationship between non-economic shocks and financial instability by challenging neoclassical views that treat politics as a mere externality. Utilizing a dataset of 638 acute stock market depreciations exceeding -6% across 50 major global indices between 1989 and 2024, the study employs a 2x2 matrix to typify triggers into four categories: domestic politics, domestic private business, international politics, and transnational private business. The research applies Ordinary Least Squares regressions, Multilevel Linear Models, and Structural Equation Modeling to test the primary hypothesis that politics “hits harder” than money. The empirical results provide robust support for this hypothesis, demonstrating that while non-private events – comprising political, geopolitical, and social crises – account for only 25% of the sample, they impose a statistically significant penalty on valuations, driving losses deeper than purely private shocks. Key findings reveal that domestic events are the primary drivers of stock loss variation, reflecting the persistence of the state’s role and the domestic life in a highly globalized financial world. However, the analysis also confirms that international politics has become increasingly hazardous over time, a shift attributed to the rise of “weaponized interdependence” and an acceleration of historical change. Furthermore, structural analysis identifies a “Domestic Penalty” (both political and private business-related) construct that acts as a systemic market depressor, while the lack of regional variance indicates that modern financial risk is not related to historical prejudices regarding emerging economies. Ultimately, the thesis suggests that the neoliberal proposal of an insulated private market is becoming impossible (if it ever was not) as politics regains its strength in our century.

Key-words: Stock exchanges; Financial instability; Political Risk Analysis.

Resumo

Esta tese de doutorado investiga a relação entre choques não econômicos e instabilidade financeira, questionando as visões neoclássicas que tratam a política como mera externalidade. Utilizando uma base de dados de 638 depreciações acionárias agudas superiores a -6%, observadas em 50 dos principais índices globais entre 1989 e 2024, o estudo emprega uma matriz 2x2 para tipificar os gatilhos em quatro categorias: política doméstica, negócios privados domésticos, política internacional e negócios privados transnacionais. A pesquisa aplica regressões por Mínimos Quadrados Ordinários, Modelos Lineares Multinível e Modelagem de Equações Estruturais para testar a hipótese principal de que a política “bate mais forte” do que o dinheiro. Os resultados empíricos oferecem sólido respaldo a essa hipótese, demonstrando que, embora os eventos não privados – que compreendem crises políticas, geopolíticas e sociais – representem apenas 25% da amostra, eles impõem uma penalidade estatisticamente significativa às avaliações de mercado, aprofundando as perdas mais do que os choques puramente privados. Os principais achados revelam que os eventos domésticos são os principais determinantes da variação das perdas acionárias, refletindo a persistência do papel do Estado e da vida doméstica em um mundo financeiro altamente globalizado. Contudo, a análise também confirma que a política internacional se tornou progressivamente mais perigosa ao longo do tempo, deslocamento atribuído à ascensão da “interdependência instrumentalizada” (*weaponized interdependence*) e a uma aceleração da mudança histórica. Ademais, a análise estrutural identifica um construto de “Penalidade Doméstica” (*Domestic Penalty*) – de natureza tanto política quanto privada – que atua como um depressor sistêmico do mercado, ao passo que a ausência de variância regional indica que o risco financeiro contemporâneo não está relacionado a preconceitos históricos a respeito das economias emergentes. Em última análise, a tese sugere que a proposta neoliberal de um mercado privado isolado está se tornando impossível (se é que em algum momento não o foi), à medida que a política recupera sua força em nosso século.

Palavras-chave: Bolsas de valores; Instabilidade financeira; Análise de Risco Político.

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INTRODUCTION

Finance circulates “life” between people around the world, being faster than anything but information about finance itself. The reality proposed by this assertion is not fair and hardly desirable. It is also historically conditionate and would only hold convincible from the 1970s on, when Nixon forced the end of the gold standard’s global observance – and still, politologists and sociologists would rise their eyebrows skeptical about another materialist belief over the importance of religion, ideologies and other forms of “power”. And they are not wrong: money itself needs subtler ways to circulate properly, being the “*fiat* currency” concept triggered by Nixon the completion of the proto-institutionalist remark offered by James Madison on the birth of the American Constitution. Money circulates high and swift when people trust each other, and barely moves – which is characteristic of every financial crisis – when the “social tissue” was thorn by any reason. The theoretical spectrum between the extremes would not be exaggerated and is methodologically used today to imply levels of “democracy”, “transparency”, “violence perception” and “economic freedom”, which are used by multiple analytical ends, being the approximation or distancing from a sovereign default and subsequent economic crisis, one of the main ones.

Money – and even more, its reproductive and rarer form: capital – is essential to sustain all forms of human life and activity. It is needless to explain here the hubris of poverty and the company it offers to the violation of Human Rights. The same to socioeconomic inequality in and among countries. A world in which capital is growingly concentrated in speculative financial markets and driven out from productive activity and employment (the “*rentier* capitalism” predicted by Marx, theoretically denounced and morally condemned by Susan Strange after the abovementioned dismissing of the gold standard – not that the political economic life before that was Eden) is a world which could hardly diminish but intensify poverty and human suffering. The ability to intensify other people’s suffering is power, and so is hard to put money out of the power equation again. Additionally, we should not trust the 1990s- “End-of-History” naïve rhetoric on the conciliatory and war-avoiding power of interdependent markets in a globe destined to democratic regimes and cosmopolitanism. This is an empirically observed phenomenon about the recent past and the present, and not a normative hope for the future. It is pessimist especially because it observes that states and their private sectors do not need to be institutionally similar to trust themselves in capitalist exchanges. It is

political and regulatory ambiguity that creates opportunities across global markets.

One could say that finance is not power, but a medium through it. Indeed, like Robert Keohane and Joseph Nye reminded us in *Power and Interdependence* (2011), even Hans Morgenthau himself proposed that money, being “fungible” to military assets, could be treated as power with not too much ontological pedantry. Henceforth, it is the main goal of this dissertation to empirically test how power transits between financial markets and government branches; to understand how power fluidity through money could cause more or less human suffering. To put it in hypothetical-deductive reasoning, we are rivaling the idea that the global financial market (with the private sector) and the political-socio-cultural realm could be phenomenologically treated as separate worlds. This idea is still alive in the 21st-century in what we call liberism, but especially in the liberalist ideology trying to hide in the technicisms of neoclassical economic theory. It also counters the Marxian belief that the political and the economic social layers, especially when dealing with their respective leaders, are all but one transnational elite, which sounds not only naïve like Fukuyama’s ethnocentric view cited above but as a conspiracy theory. It is level-headed to acknowledge that serious cleavages also exist between politicians and businessmen – and also between “imperialist elites” in a Leninist take. We need to measure how much politics is able to hit and make finance bleed, and how much those markets are able to absorb political punches (and even fight back with their own weapons), and if international politics with all its anarchy and Armageddon-bringing threats hits markets harder than constitutionally-encircled domestic events. Here, we get closer to the Political Economy’s nationalist school of thought and work with the hypothesis that politics hits harder than money. To quote a fictitious but very interesting character – Frank Underwood from *House of Cards* – from an acclaimed TV-show about high politics:

Such a waste of talent. He chose money over power. In this town, a mistake nearly everyone makes. Money is the McMansion in Sarasota that starts falling apart after 10 years. Power is the old stone building that stands for centuries. I cannot respect someone who doesn’t see the difference.

Of course we are not relying ourselves on Kevin Spacey’s charisma. The interpolation between rule and markets, or between politics and the economy, is not new to Social Sciences, even in its most philosophical treatment. Initially, the following theories are important to our understanding of this “frontier” phenomenon: “market as community” by Max Weber (1994 [1922]), the public intervention of the modern state in the economy (Reis, 2003), and the power dilemma between democracy’s containment and effectiveness (Reis, 2010). We are not interested in taking a liberal, neoliberal, or libertarian stance when referring to the nation-state

as a “hindrance” to the market, but understand that at least from a cultural and ideological standpoint, this view is common among financial market players and part of the private business world. They feel that the public authority is prone to be “against the Market” (like it was a unitary social actor), reflecting precisely a kind of sentiment of the average financial market investor or operator regarding the state as a source of unexpected interventions and political-social crises that threaten investment stability. Of course, this is merely a stereotypical feeling, since many investors and entrepreneurs thrive precisely alongside the state or a specific government. In any case, we propose that state interventions are not as unexpected as they seem.

The reader may be familiar with Weber’s classic distinction between “society” (*gesellschaft*) and “community” (*gemeinschaft*). Society would be the cooperation between individuals toward a common goal based on distinct individual interests, while community is cooperation toward a common goal and self-preservation based on shared values and mutual identification. Reflecting on the social nature of the market, Weber (1994 [1922]) bypasses the common sense that it is a society, suggesting instead that it is a community. After all, aren’t market participants known for bringing their selfish interests to a place of exchange where such behavior is productive? They buy and sell based only on their own needs, not those of the other party to the contract. Wouldn’t that make it a society? Weber argues that it is not, as he identifies a crucial detail: the possibility of making impersonal exchanges is a value in itself, and merchants form a community within the market where this possibility is allowed to exist and be preserved from other social spheres. These latter spheres do not fare well with impersonality: you would be judged morally if you failed to forgive a debt owed by an impoverished younger brother; if you charged a relatively high price for a product in great demand to a fellow parishioner, you could be accused of abuse; becoming a partner in a Korean company, you might be reprimanded by your xenophobic Japanese political allies. In all these social contexts, the ethics of impersonality are not protected. In the “true” market, they are, and only the exchange and the possibility of continuing to make exchanges in the future matter.

Here, we touch on another issue regarding the market’s participation in society: if impersonality is not allowed in most community contexts, there is a reason. One possible reason is that this impersonality perpetuates socioeconomic inequalities through the market itself. If I am the child of poor generations, I will have fewer opportunities and limited reach in market exchanges, and, because it is impersonal, my condition will never be recognized or remedied. However, in the realms of politics, religion, and other contexts, this factor carries moral weight that is hard to ignore. Bruno Reis (2003) teaches us that there is a kind of paradox between the market, the State, democracy, and freedom. The State, supposedly created by equals in a

democratic manner, provides the institutions to maintain these equals in a state of freedom, and they use this freedom to create the market for the purpose of transacting freely. However, this freedom, operating within impersonality, begins to create sharp socioeconomic inequalities, threatening the very political institutions. Hence, the modern State must intervene in the economy to rebalance equality by suppressing part of the market's freedom... generating a new incentive for the return of liberal democratization for old and new players, restarting the cycle.

“Political Risk Analysis” consists of the market's ability to know which part of the “State-democracy-market-inequality-State” cycle the polity is in, giving investors and entrepreneurs the chance to anticipate the type of state intervention that will come: whether more centralizing (more taxes, more regulations, etc.) or more decentralizing (or liberalizing). Investor and writer Howard Marks (2018) works with the thesis that the market (or “markets”) is always going through cycles. Assets appreciate until they reach a point where they are considered too expensive, increasing in supply and losing in demand, leading them to become cheaper until they are considered undervalued, increasing in demand and losing in supply, restarting the cycle. The cycles are multiple and parallel, influencing each other: credit cycle, real estate cycle, confidence cycle, industry cycles, etc. Our proposal is: the market also observes a modestly predictable political-institutional cycle of state intervention, according to Reis' paradox (2003). Of course, such a cycle is not observed outside democracies and does not explain other spheres of politics besides the state, such as the anarchy of international politics.

Knowing that the market's opinion usually prefers the liberal part of the cycle to the interventionist one, we can say that the state is seen as a nuisance, a phenomenon “against the Market”. On the other hand, we know that this stance is nothing more than a terribly shallow and misguided ideological bravado. There is no John Galt: the market would never survive without the state. The libertarian ideology only looks at what freedom gains with the reduction of the state but fails to see that freely made contracts are only possible within the environment of trust provided by the legal and coercive services of public power.

Thus, the state finds itself in another paradox, this time observed by Fábio Wanderley Reis (2010): the State that guarantees democracy is the same one that must, from time to time, contain its freedom and plurality to also guarantee its effectiveness. In other words, the pure ideal of democracy places so many free interests in conflict that the decision-making process “stalls” and the state apparatus becomes ungovernable, in the sense of paralysis and inefficiency. Thus, the state must act discretionarily, reducing plurality and centralizing power in moments when it needs to be more agile and effective in a series of social, political, and geopolitical agendas of national interest, with the ultimate goal of preserving the very survival

of the constitution – because, without it, nothing will survive: neither democracy, nor freedom, nor private contracts, nor the market.

It is common in democratized Brazil, and probably also in other Western democracies, for journalists to question what the “Market’s feelings” (*sentimento do mercado*) or stances are toward a given candidate, or a possible or ongoing political agenda. The reciprocal influence between economy and politics is obvious, but a question any social scientist could ask is: does a social actor called the ‘market’ even exist?

It is not only banks, stock exchanges, brokers, and large companies that form this hypothetical voice in society, but practically all agents of a national economy, reaching even workers and their private interests. Everyone participates in the market, and their differences show that the market is segmented, which is why journalists often prefer to refer to something like the “financial market”. Here, several observations can be made, such as the existence of an elite economy and a mass economy, retail concerns and energy anxieties – all without overlooking the fact that all these economies are interdependent, and this interdependence also entangles political institutions. What interests us here, therefore, is a more accurate specification of what the market would be as a political and social actor. We argue that the market is not an actor, but a place, just like the ‘forum’ of democracy. We then ask whether the behavior within the market should be replicated in the forum, exploring the tensions between public and private interests, and we encounter theories that interpret democracy as a market. Is this desirable or just inevitable? Are we not facing a theoretical colonization of politics by the market? We will seek another possible solution.

To do so, we heavily rely on Jon Elster’s chapter “*The Market and the Forum: Three Varieties of Political Theory*” (1997), part of the collection “*Deliberative Democracy*” edited by James Bohman and William Rehg, although other authors important to the topic will also be cited, with no pretense of exhausting the subject.

If the market is not a social actor, but a desired place, then “the economy” could be synonymous with the market – at least from a semantic point of view. Using Set Theory, we can say that the market is contained within the economy, but the latter does not need the market to exist. The fact is, societies without markets are very rare and fleeting, even though they have economies. Similarly, the market is more like a place for exchanges that would make no sense without its population of various social actors: it is a subset. These actors, yes, have political agency, and it never makes sense to refer to the market as a social actor without a qualifier, such as “financial”, “agrarian”, among others. A towering figure like Max Weber (1994 [1922]) might take issue with this statement, as he interpreted the market (as exposed above) as a

“*gemeinschaft*” organized by its members to continue existing in the polity and as an end in itself. Still, we dare say that the market is a place, or better, a social institution that many seek to preserve, but not an actor, something imbued with agency. This would not contradict Weber’s teaching, as many communities strive to protect a place, such as a sacred site or even “home”.

We return, then, to the segmented market – perhaps from there, actors do emerge. In various legal and illegal ways, from lobbying to the so-called “boss-vote” (where employers pressure employees to vote for a particular candidate), passing through campaign financing, economic sector obviously influence political outcomes. In 2018 Brazilian presidential elections, something that became known as the “financial market” showed preferences for one or another candidate, such as João Amoêdo (Novo) and Henrique Meirelles (MDB), and both were unsuccessful. However, this is a sector of Brazilian society more powerful in its influence over bureaucracy throughout a government than in presidential elections, as we can see from Central Bank president Campos Neto calling André Esteves from BTG Pactual to ask his opinion on the government’s new interest rate adjustment (Nexo Jornal, 2021). Nevertheless, as Leonardo Avritzer (2018, n/p) observes: “*In general, the financial system does not elect candidates anywhere in the world*”.

Beyond particular cases, we could say the problem is much more complex. It is not only in the empirical world that the market tries to colonize politics: there is also an economic, elitist reasoning that values the private sphere in theorizing about the functioning of democracy and public affairs. Elster (1997) proposes, for example, that major names in both Economics and Political Science, like Joseph Schumpeter, proposed a true economic theory of democracy, or a “market theory of politics” (*op. cit.*, p. 25). What would the implications of this be?

The discussion about the separation between public and private interest is as old as the very idea of democracy. A tension arises as the central point of philosophical disagreements about the nature of political participation: is democracy a means to achieve other ends or an end in itself? In the latter case, public interest would predominate in society, and in the former, private interest. In Social Choice theory, it is already accepted in advance that democracy aggregates pre-defined private preferences that are incompatible with others (Elster, 1997). However, it is hard to imagine that social actors truly have isolated and immutable preferences, since it is more plausible that we make our choices only after observing the preferences and choices others are making. Not to mention the difference between real preferences and those that are declared. Borrowing Elster's words (1997, p. 9):

(...) preferences may be shaped by adaptation to what is possible, to what other people do or what one has been doing in the past – or they may be shaped by the desire to differ as much as possible from these. In all of these cases the source of preference

change is not in the person, but outside him – detracting from his autonomy.

It is not the “fault” of democracy, participation, or even politics that individuals seeking their private interests in the market are unable to have, even, a private and individual preference. Social interaction itself takes away the autonomy of actors and puts them at risk. Every decision comes loaded with “responsibility costs”, meaning speculating about what others would do in your place or in reaction to what you will do, both represent risks. Thus, the free market will have failures, and politics will be the tool to correct them (Elster, 1997).

For Social Choice theory, aggregated preferences seek something like the “common good”, but already admitting that each decision will privilege a majority at the expense of a minority, which is the “best possible” that democracy can offer. Other approaches, like those influenced by Habermas, propose a deliberative, argumentative democracy, as opposed to this ‘decisionism’ that equates the will of the majority with the common good, in a tradition dating back to Rousseau. In deliberative democracy, popular participation mechanisms beyond the election of representatives would allow public communication and debate to mold and adapt predefined private preferences, beyond a solitary rational choice process, generating more creative and inclusive political decisions, thus avoiding the ‘sacrifice’ of minorities (Avritzer, 2000).

We can identify in Social Choice and rational choice theories spread across various social sciences, a colonization – intentional or not – of non-market social processes (like politics) by market logic. Thus, we are led to interpret the political choices of a “financial market” as those justified in purely particular terms, since ultimately all of society is condemned to act this way, they just haven’t professionalized themselves in this logic yet. It is like an elitist prejudice that praises Wall Street’s analytical capacity at the expense of the usual confusion of the people. Schumpeter, for example, refers to the desires of individuals in democracy as “*vague impulses operating in relation to available slogans and false impressions*” (1942, p. 253 *apud* Avritzer, 2000, p. 30).

Given the natural possibility of the markets modifying preferences both due to risks regarding others’ behavior and through political deliberation, it is false to claim that private preferences have absolute legitimacy in public affairs. Elster (1997, p. 10) clarifies this once again:

We can now state the objection to the political view underlying social choice theory. It is, basically, that it embodies a confusion between the kind of behavior that is appropriate in the market place and that which is appropriate in the forum. The notion of consumer sovereignty is acceptable because, and to the extent that, the consumer chooses between courses of action that differ only in the way they affect him. In

political choice situations, however, the citizen is asked to express his preference over states that also differ, in the way in which they affect other people.

Of course, no one is proposing that an investor voting, individually, with the hope of increasing or depreciating an asset, should be considered immoral or criminal. The problem lies in the predominant political philosophy and the type of interpretation of reality that legitimizes a skeptical privatism (regarding the public) in all of one's relations with the government, not just in elections. It might seem more ethical that "consumer sovereignty" be exercised only when purchasing products and contracting services in the market. Meanwhile, the citizen, when entering the forum, would have a broader and more complex set of responsibilities than his economic life. It is no longer possible, and perhaps not even desirable, for electoral authorities to mobilize an enforcement for such a stance. That would revive the old debate between open voting and secret voting, imagining that the former could refresh the civic conscience of the voter who sees themselves as a consumer. Such historical regression would generate the opposite problem from what we are addressing and equally dangerous: if politics were "100% forum" and "0% market", it becomes an end in itself, suffocating all private life with public interest – which is largely undemocratic (Elster, 1997).

Alexis de Tocqueville, in his famous elitist stance, argued that, as a form of government, democracy is less effective than aristocracy in the long run. The constancy of the same elite in power has a better chance of fostering and implementing public policies, as it will face fewer interruptions and challenges to power. Moreover, centralization can produce a more agile and coordinated Leviathan. However, Tocqueville also adds that, in the long run, democracy would be more effective in another aspect, which is also superior to the others: social creativity and inventiveness to solve complex problems, thereby bringing greater robustness and prosperity to a nation (Elster, 1997). This would be one of the political dilemmas that surround us: liberty versus security, stability versus transparency, integrity versus creativity, public versus private.

Regarding the latter, there is a way out? For Elster (1997), politics is public in nature, but its purpose is merely instrumental and can be directed towards any objective, primarily private ones. As mentioned above, it would be undesirable for this purpose to be entirely directed towards public interest. A middle ground between the forum and the market would be more appropriate. The author concludes (Elster, 1997, p. 26):

One can argue that the forum should differ from the market in its mode of functioning, yet be concerned with decisions that ultimately deal with economic matters. Even higher-order political decisions concern lower-level rules that are directly related to economic matters. Hence constitutional arguments about how laws can be made and changed, constantly invoke the impact of legal stability and change on economic affairs.

Economy and politics are inseparable. Scenarios of pure politics or pure market are authoritarian fantasies in reverse. It is not fair to view politics as an extension of the market, but it should, indeed, be part of the public authority's priorities. This discussion has been sparked by taking big market players and their fortunes as colonizers of democracy, and such a danger is real. But it is also worth remembering that the private sphere is where the individuals, their families, and their friends – even those who are poor – live and experience some happiness.

In this way, we need to empirically test how much destruction politics can bring to markets. Also, how much more the absence of authority in international anarchy could impair. This problematization is not animated by empathy by multinational corporations, banks and moguls. Some economic “destruction” might be necessary for important social and political reforms in order to make them fairer. Nevertheless, when “trickle-down economics” does not function to make the masses richer, it is a way more effective to make them poorer. When a stock exchange busts, credit shrinks, and afterwards a global financial crisis stays for years, normal families lose sleep first.

Being so, the present dissertation seeks to draw a structural equation model to answer two questions provoked by the reflections above:

- i. are changes in stock exchanges more sensitive to factors of an economic-private nature than to political factors? H_1 : No, politics hits harder. Stock losses are predominantly driven by non-private business-related impacts, such as political, geopolitical, social and other public crises.
- ii. Consequently, the null hypothesis would be: H_0 = Stock losses are predominantly driven by private business-related impacts, being them domestic or transnational.

Considering the globalized nature of financial markets and its consequences on public and private relations necessary to capitalism, other questions can be made and tested empirically, such as: predominantly, are financial crises prompted by domestic or international (or global, or transnational) events? This and other secondary questions are going to be addressed with specific econometric models as well.

To this end, more than 600 of the worst stock market index depreciations around the world, between 1989 and (April) 2024, will be regressed in relation to the presence of one or more political, private, external or domestic events, organized into four dummy variables. The calculation will offer, in addition to regression coefficients between depreciations and dummy variables, the suggestion of latent variables constructed by the observable variables, as such

variables are unlikely to “work alone”, given their nature. This will also suggest causal mechanisms that can then be interpreted qualitatively. Finally, such correlations will also show their group behavior (by continent, by political regime, etc.), through the multilevel character of the model, which will allow us to make generalizations in more coherent niches.

This dissertation is organized into four main chapters that guide the reader from theoretical foundations to empirical validation. Chapter 1 is dedicated to conceptualizing the field of Political Risk Analysis (PRA) by exploring its historical and religious roots, as well as appraising the hybrid literature that connects the nature of finance to contemporary political reality. Chapter 2 deepens the debate regarding the divergences in theorizing financial crises, integrating the perspectives of authors such as Keynes, Strange, and Minsky with Reinhart Koselleck’s conceptual history to examine how non-economic forces influence markets. Chapter 3 details the research methodology, which includes the creation of a database covering 35 years of stock market fluctuations and the use of a 2x2 matrix to typify events (public/private and domestic/international), alongside the application of Structural Equation Modeling (SEM). Finally, Chapter 4 presents the analysis of the results, demonstrating statistically that politics “hits harder” than the market and that the public sector has regained prominence over the private sector in global stock exchanges throughout the first decades of the century.

The empirical findings provide robust support for the central hypothesis that politics ultimately crashes stock markets more intensively than private business idiosyncrasies, demonstrating that non-private shocks – comprising political, geopolitical, and social crises – impose a statistically significant additional penalty on valuations, driving market losses deeper than purely private business events. While localized domestic entanglements between the public and private sectors act as systemic market depressors, transnational private forces appear structurally insulated, maintaining a distinct logic of growth despite political interference. Key results indicate that domestic events remain the primary drivers of stock loss variation, though international politics has become increasingly hazardous over time, and stronger democratic institutions appear to provide a statistically notable buffer against the severity of market losses. Furthermore, the lack of significant regional variance suggests that modern financial risk is a globalized phenomenon that transcends traditional geographic or developmental prejudices, confirming that the neoliberal illusion of an insulated private market is fading as political authority regains its prominence in the current century.

“The circulation of confidence is better than the circulation of money”.

(James Madison¹)

CHAPTER 1: DESTRUCTION PREVENTER

The history of risk mapping and control goes far as any organized philosophy for human well-being and its consequences to politics, war, peace and statecraft, but its systematization as we know today is a characteristic offspring of Modernity. As Peter Bernstein (2008) put it, it had profound religious origins in the clash between 16th-century Roman Catholicism and the Protestant Reformation in Europe, and in the practical maritime navigation challenges that led to the colonization of the New World, Africa, Asia and further. “*Risco*” was a Portuguese word used in the cartographic context to define unknown seas and its dangers to maritime explorers, generating the contemporary idea of “risk”, “*risque*” and “*risco*” (or the Italian verb “*riscare*”) as the undertaking of highly uncertain enterprises in order to achieve unprecedented wealth and fame. It is a central concept of contemporary Capitalism and its mandatory relationship with novelty, invention and chances of failure.

Roman Catholic theology on the Divine Providence filled with suspicions any attempt to predict the future in order to protect, prepare and profit oneself from it. Depending on the methods relied on in order to do so, it was interpreted either as magical malpractice (“divination”) or the simple show of arrogant distrust in the paths chosen by God in economic, social or political life for individuals and society – which were condemned as sins. Protestant theology did not abandon the faith in the Providence and actually developed quite serious beliefs on it, but its alternate view on the materiality of Catholic Sacraments created an individualistic approach to the exchanges between believers and God (and “reality” itself) that radically changed aspects of socioeconomic, political and civic life in the direction of Modern and Contemporary Capitalism, as exposed by Max Weber (2002 [1904-1905]). Continuing with Bernstein’s studies (2008), the Sacrament of Penitence from the Protestant perspective lost its mandatory need of an ordained priest participation in order to be fulfilled, being transformed into an individual psychological process of repentance and ask for God’s forgiveness of any sins. This religious practice change that took place in some portions of Europe (the German

¹ cf. Elliot, 1836, p. 538

countries, the Netherlands, post-Henry VIII England and its later American 13 Colonies) started to create an *ethos* that informed men and women that they were more alone in this contingent world than Catholics believed, meaning not the absence of God, but His Will that believers should take difficult decisions in a more isolated and creative way, without need of anymore ecclesiastical continuous guidance, but subjective inspirations from the Holy Ghost to the praying individual.

The abovementioned sociological phenomenon, alongside with other outcomes of the Reformation, profoundly changed the way Capitalist enterprises were interpreted, removing Catholic moral barriers from financial and legal practices, and, especially to our interests in this essay, from managerial inventiveness on risk control. It is hard to draw a direct causal relationship between this change of religious thinking and modern management tools (highly credited to the later Industrial Revolutions), but after the Reformation, the study and practice of Statistics flourished in order to address demographical, finance and other social issues, making Mathematics the background of tentative future prediction, and not magical divination. Actually, Catholic scientists themselves started to lead experiments on Mathematics, like the Frenchman known as one of the fathers of Probabilistic, Blaise Pascal (1623-1662). The study of Randomness was identified in the Catholic medium even before the Reformation in the figure of the monk Luca Pacioli (1447-1517), and alongside it, with the polymath Girolamo Cardano (1501-1576) and his interest in the odds of gambling. After that, important probabilistic concepts like the Central Limit Theorem and the Law of Large Numbers were developed by Jacob (1655-1705) and his relatives from the Bernoulli family, as well as the Normal Distribution by Johann Gauss (1777-1855), the concepts of Sample and Averages by Adolphe Quételet (1796-1874), arriving to the contemporarily important advent of Statistical Correlation and Regression to the Mean by Francis Galton (1822-1911). Even the very recent machinations of Artificial Intelligence and Machine Learning would not exist without the early studies of Thomas Bayes (1701-1761), being Bayesian models essential not only to predictive Computing and Informatics in their contemporary technological and market usage, but to academic and experimental Statistics as a whole, in all knowledge fields using it.

From the financial perspective, statistical prediction would prove essential to the insurance industry, securities and stock exchanges in London and Wall Street well before the turn of the 20th-century. This is what Bernstein called “the remarkable story of risk” (management) against Medieval Christian and Ancient Polytheistic Greek thought (“against the gods”). This secular understanding and engagement with scientific prospecting of future (probable) scenarios shaped Capitalism and our current lives on it in a way that venturing with complicated data and

risks, either from the public policy and the private business point-of-view, would be unthinkable.

Responding to the demand of North Atlantic financial market, dominated by the United States and the United Kingdom, publishing and press companies started offer detailed information on public companies and all kinds of securities to highly competing speculators. As national states also participated in the financial market issuing sovereign debt derivatives, some private companies started to research and publish metrics of those debts' soundness, calculating the perceived risk of sovereign default. This methodology created an entire field of knowledge, mashing economics and politics, in what is still known today as "country risk" and its "ratings". In the contemporary rating scheme, the market functions as some sort of transnational oligopoly nicknamed as the "Big Three": S&P's Global Ratings (founded in 1860), Moody's Investors Services (1909) and Fitch Ratings (1914). Although these companies have passed through different processes of merges and acquisitions, their corporate identity is almost the same for more than one century, and currently play an important role in the assessment of private and specially state-led businesses and cash flows. Their rating criteria and updates are critical to the attraction of foreign investment to developing countries (Ywata, 2012), which will be discussed further in the present dissertation.

We will now take a leap to the 1970s. Not only financial speculators wanted to assess risks for their investments and trades, but major companies themselves started to benchmark the professional management and prediction on risk regarding politics and geopolitics. The longstanding oil multinational Royal Dutch/ Shell could be considered one of the pioneers in this activity when it resourced on Peter Wack to perform "scenarios prospecting". Wack and his team, through a newly-created futurology framework, helped Shell to be only major oil multinational company to anticipate (and reorganize accordingly to) the global oil crises triggered by the Yom Kippur War (October, 1973) and Iran's Islamic Revolution (early 1979). Both events were complex in geopolitical, domestic political, ethnical and religious aspects of the Middle-East dynamics, not necessarily related to "purely" economic worries about that oil-rich region and its global market (Bremmer and Keat, 2010; Marcial and Grumbach, 2008). After that, the method developed by Wack was benchmarked and transformed to a wide array of uses by the private sector and state authorities in the developed and the developing world (Marcial and Grumbach, 2008).

This chapter will address what is now today known as the industrial practice of Political Risk Analysis, which is also an academic research field in the frontier between basically all Social Sciences, especially Economics, Political Science and (its subfield) International

Relations. We need to conceptualize what “Political Risk” is and what is the literature mainstream around it. Also, some justification of the overall societal importance of the field and the phenomenon it studies will be presented alongside with the specific scope of their application: stock exchange and finance, which will also be justified in its social and political importance in the 21st-century. This very preoccupation anticipates the fact that the contemporary “*rentier*” capitalism is affected and impacts back our politics and social needs in a way that could be harmful and needs to be criticized. Besides, the philosophical concept of risk in the post-industrial modernity world we live in will be summoned to enrich our understanding of financial markets and its worrisome consequences. Finally, we will resume the specific problematization of this dissertation and proceed to the research design created to explore and find answers to it.

1.1. Political Risk and its analysis: conceptualizing the field

What is Political Risk and what is its application to industries, authorities and Social Sciences? The question itself asks both for a concept and to “a use”, pointing to the fact that this field was created not only to explain a phenomenon, but to make this knowledge applicable in certain managerial areas. Basically, Political Risk regards the risk of “*unwanted consequences of political activities*” (Jarvis and Griffiths, 2007b, p. 11) virtually to any kind of stakeholder, and normally the first step to engagement on it is called “Political Risk Analysis”. We are not going to deal with the rich debate on the concept of politics, since the literature that will be reviewed further is prone to adopt a very simple delimitation (but not for that unproblematic): “non-financial and non-market [events and their subsequent] risks” (*ibid.*). This negative conceptualization leaves us with two problems instead of one (what is “finance” and what is “market”?), but we will count on the reader’s patience (and own knowledge) to address and even typify those as long as this chapter develops itself. The fact is that, as we will see below, the current literature on Political Risk Analysis (PRA) deals with every known kind of non-financial and non-market social phenomenon, ranging from official state authority to social media, going through political parties, terrorism, social media, the press, voter’s behavior and psychology, wars, geopolitics, corporate reputation facing the civil society, and more.²

² Jarvis and Griffiths (2007b) summarize some sort of subsequent phases in the PRA field development, which they name “schools”, although not in the sense of harsh theoretical divergence we find in Social Sciences. The most common understanding of political risk revolves around its negative impact on the cross-border investment activities of multinational

The teleology of this kind of analysis aimed, firstly, to meet the needs of (mostly Western) multinational corporations (MNEs) and international banks and investment funds. The major representants of the private sector, in their need to diversify investments around the world to expand capitalist opportunities and protect investments in one country hedging with another, started to study political regimes and their instability, mostly in the developing world, once called “the Third World”. PRA showed itself, since the beginning, as a very internationalized field, while international politics was not exactly its main preoccupation, but domestic and comparative politics. The academic field of International Relations (IR) also regarded the concepts of “risk” and “political risk” in a marginal way, mostly because IR mainstream focus on states as unitary and the (almost) only relevant actor in the modelling of international politics, leaving MNEs and the internationalization of private capital as social realities with no real political power in the international system. This feature is an offspring of an academic field that developed itself in a century understandably focused on “high politics”, the 20th. When MNEs gained more importance in IR during the 1960s and 1970s, their participation was viewed with ideological bias, regarding them as the continuation of the great powers diplomacy and geopolitical interests, with no independence and individual actorship (*ibid*).

Back to the worries about the developing world, some hard beliefs about them (from the North Atlantic point-of-view) started to shape PRA. Emerging markets offered higher profits in shorter timeframes to investors due their higher risk, which was based on the political risk. “*Higher valuations in countries with lower GDP per capita*” reflected a calcifying “*emerging-market bias*” (Mosley and Singer, 2008, p. 416), implying that those countries would always suffer from political instabilities ranging from dubious democratic processes to civil wars. The main fear of foreign investors while putting their money in emerging markets created the most old and common PRA’s typological focus: expropriation.³

Condoleezza Rice and Amy Zegart (2018), while teaching PRA to their MBA students in American Universities, typified at list ten forms of political risk in the 21st-century, which help

enterprises (MNEs). This perspective drives the work of what can be termed the “Catalogue School”, where analysts create lists detailing potential harmful government actions in host countries. These actions could negatively affect business operations, profitability, and overall value. In this view, political risk is seen as political interference in otherwise stable, efficient markets. A second generation, known as the “System–Event School”, explores the development of models that can connect the characteristics of political systems to the likely occurrence of specific political risk events. Then, the third generation has shifted toward a more cautious approach, focusing less on broad theoretical frameworks and more on methodologically-detailed microanalyses. These analyses emphasize the importance of context and concentrate on project-specific risks rather than sweeping generalizations. Finally, with the vast amount of data generated by advances in information technology, there has been a “fourth generation” surge in efforts to build risk databases. These databases aim to correlate or pinpoint specific trigger points, such as humanitarian crises, state collapse, or ethnic conflict, with particular risk events. All these schools came to light subsequently no earlier than the 1970s.

³ “*Expropriation, however, has been only the most obvious form of political risk*” (Jarvis and Griffiths, 2007b p. 8).

us to further conceptualize the definition, as follows⁴:

- i. Geopolitical: an overall (and not necessarily academic) term for risks arising from international politics as they are practiced by nation-states, with their official diplomacy and regular military forces. As an example, in 2003, Dow Corning (an American manufacturer of silicone products) anticipated the Iraq War and reorganized its export shipping logistics before the ports became congested due to military operations (Bremmer and Keat, 2010).
- ii. Domestic conflict: virtually anything “political” that happens inside national territory, regarding local politicians and authorities, from very mild verbal skirmishes between politically-relevant individuals to escalated group physical violence, and “civil wars”. Differently from the next type, it must generate some sort of governance instability. In a very bigoted and crude way, PRA consultants and insurance analysts use a demographic “formula” to predict the next country to face civil upheaval: “*man, young and poor*” (Bremmer and Keat, 2010). High demographic rates of males (more prone to physical violence), youngsters (adolescents or young adults not yet attached to marriage and children) and poor (desperate and unsatisfied with the political-economic *status quo*), usually anticipate the eruption of serious social unrest, sometimes resulting in the fall of established regimes, like the many and subsequent events during the “Arab Spring” (*ibid.*);
- iii. Laws, regulations and public policies: being controversial or not, those are the day-to-day main focus of PRA, dealing with the official actions of the state, especially domestic- and market/industry-oriented, even in an indirect way. Legislation is usually central here, but “regulatory risk” rises also from sub-legal decisions made by government officers and employees, especially those regarding technical issues regulated by the Executive Branch agencies. For example, in 2011, San Leon Energy (an Irish shale gas company) invested in Poland shortly before the government decided to increase industry taxes by 80% (Bremmer and Keat, 2010).
- iv. Contract breaches: when the nation-state itself breaches contract with a national or foreign private company (constitutionally or regarding international law), or allows the later to be harmed by other private agents under its jurisdiction without due legal protection. Expropriation is a risk when there is weak and ambiguous legislation on it, a serious risk in its absence, and is considered a “contract breach” when the

⁴ Those typological explanations merge Rice and Zegart's (2018) original organization and conceptualization with our own perceived ramifications.

national laws materially protect private owners but the authorities choose to overpass them.

- v. Corruption: it gathers all social, political and legal instability due a known track-record of corruption leniency in a given polity. By corruption, it encompasses the public-public (illegal activity among the political class and government officials and employees), the public-private (when private actors illegally influence public action and its mandataries), and the private-private (when private actors help each other to perpetrate illegalities) forms. This kind of risk regards not only the eventual chance of a private company being harmed by the consequences of corruption in the political class, but the overall social uses strange to the most-developed countries political and economic “rule of law-oriented” ones, which can distort the notion of free and fair commercial competition.
- vi. Extraterritorial reach: the concept mixes intentional and unintentional consequences of domestic law from the foreign investor’s home country when they are forcibly enforced in different national jurisdictions. By “forcibly”, it does not imply that the home country openly wants to disrespect the national hosts of investments in their sovereign and autonomy, but that the foreign companies themselves will perform that way fearing social, political, economic or even legal retaliation back home.
- vii. Manipulation of natural resources: it regards all the geopolitical and business consequences of the fact that some countries hold very high bargaining power due their uncommon territorial richness of (globally demanded) commodities like oil and specific minerals.
- viii. Social activism: this is one of the present century’s “new” political risks pointed by Rice and Zegart (2018) and Gould-Davies (2019). It collects all the complex interactions between civil society, the press, and individuals, with public issues and politicians, but also and very importantly, the participation of private companies in their developments. Civil society’s activism is not even close to novelty in current and past democratic and autocratic polities, but its voice being fueled by the internet and social media, is. When crowds go to the streets (or to social online platforms) to protest against the government or some big corporation malpractices that directly or indirectly affect public life, we are talking about social activism. When the consequences of such social uneasiness escalate to more traditional political realms, like elections and party activity, it is better to consider them a “domestic conflict”, but when it centrally regards private activity and brands, with their proper

“reputational risk”, threat of consumer’s boycott, and the need of corporate ESG (Environment, Social and Governance) responses, it deserves a separate ramification of its own as a risk type. In this case, political classes and the government could be the tormentor backed by the activists to punish and discipline private activity⁵. In 2013, SeaWorld faced significant backlash due to the release of the documentary *Blackfish*, which examined the ethical concerns surrounding the treatment of orcas in captivity, particularly focusing on the death of trainer Dawn Brancheau. The documentary sparked widespread public outrage, leading to a sharp decline in SeaWorld’s attendance, revenues and stock prices. The “Blackfish effect” also prompted changes in legislation, including the banning of orca breeding in California and growing public pressure on the company to alter its practices. As a result, SeaWorld shifted its business model, ending its orca breeding program and modifying live shows to focus more on education and conservation efforts (Rice and Zegart, 2018).

- ix. Terrorism: since the academic concept of “terrorism” is still debated, we could understand it as the physician and psychological extreme actions of politically-oriented small groups or individuals (“lone wolves”) against nation-states and governments they will never be able to militarily contend due the abyssal difference of capabilities. Those extreme actions, generally aimed against innocent civilians, are trying to force the authorities to abide to some demands made by the terrorist’s flags being publicly known and social pressure reacting to them (it does not mean that it usually works, as Steinsson, 2014, puts it). Terrorist action is not reserved to obscure sub-national and transnational illegal groups, but could be practiced by states itself (“state terrorism”) and any other kind of social actor. From the private PRA’s point-of-view, terrorism could not only harm companies’ physical assets⁶,

⁵ Here, Political Risk incarnates in something that does not derive only from public authorities, but from a mixed set of public and private (“civil society”) tackles on the corporate reputation. That is why it is usual to typify it as “reputational risk” (Gould-Davies, 2019). Callaghan (2007, p. 96) exposes it as a new decentralized social structure: “*we should not focus on traditional forms of state-regulatory capacity as the only medium able to discipline MNEs. Corporate reputation is beginning to function as a market mechanism constraining MNE activities and producing socially desirable outcomes*”. The mentioned literature does not intend to paint private companies as selfish villains and do recognize their importance to society and the economic system, nevertheless: “*when they spill toxic chemicals in our rivers, defraud investors, are linked to mercenary groups and wicked dictatorships and are implicated in the overthrow of democratically elected governments, critics are right to ask whether the costs outweigh the benefits*” (Callaghan, 2007, pp. 96-97).

⁶ “On the emblematic 9-11, the direct economic impact resulting from the destruction of buildings and infrastructure in New York and Washington, D.C., was estimated at around US\$27 billion. However, the economic losses across the United States, stemming from the subsequent recession, reached US\$500 billion, a figure that was certainly overshadowed by the global economic slowdown (Jarvis and Griffiths, 2007b)”.

personnel and business opportunities, but its social consequences would probably spill-over to domestic conflict and geopolitical risks. Even social activism could turn against private companies if financial or commercial ties with terrorists could be proved (or even suggested), which is the same with domestic or geopolitical relationships that could be interpreted by critics as unfair and inhumane.

- x. Cyber threats: another “new” political risk (Rice and Zegart, 2018; Gould-Davies, 2019), due its evident link to the intense technological rise over the later decades. Illegal online and overall computer activity could be considered a non-political risk if we only count the pecuniary motivation of criminal individuals, groups or even companies when damaging other’s assets and identities through “hacking”. In the financial and market realms, terms like “sabotage”, “industrial espionage” and “inside job”, among others, could be used in idiosyncratic contexts related to commercial competition and illicitly money-making with no political participation in their ends and beginnings. Nevertheless, hacking and other cyber weapons are also (and increasingly) used by and against politicians, state agencies and the military (well, the original creators of it!). Current and future warfare already have their “cyber-fronts” and nothing puts private companies and assets away from the cross-fire. Private individuals and companies could also be the victims of terrorist (or other politically-driven criminal) cyber blackmailing, extortion, theft, and so on.

It is hard to read the types above as separate and independent phenomena, as mostly social realities studies, and no author cited attempted to do that. Again, it is easier to understand political risk subtracting everything that is particular to the private functioning of companies’ microeconomics (like private-funded technological development, industrial management, market shares, etc.), their finance, “common” criminal activity (with only pecuniary and interpersonal passionate ends, like robbery, fraud and homicide), and dealing with the vast “rest”. This very “rest”, of course, needs to create situations in which private businesses will probably get damaged, and this “rest” is usually under political influence, or at least under social influence that could transform itself in politics quick and easily.

We will not try to draw solid barriers between the market/ financial risk and their non-market/non-financial political and social counterparts, but Chapter 2 will present a methodological approach that, for pragmatic needs, will try to differentiate events in their public *versus* private main compositions. The difference between what is “national and domestic” and what is “foreign and international” is also trick, and we will also try to

differentiate between them designing our research's continuation in the next chapter. For now, we need to proceed to the main contributions from PRA's literature to better understand the complex and wide reach of it.

1.2. Appraising the Political Risk Analysis' hybrid literature

Most of the literature reviewed here usually fits one of two main editorial forms and purposes, without the prejudice of their authors participating, at different times, in both types. Basically, PRA's shows itself in longer texts (books), which resemble text-books but are actually scientific divulgation works made by scholars⁷ and (academically trained) executives who want to capture the attention of private businesses' decision-makers (those books you find in airport bookshops along with *The Economist* and the *Financial Times*, no criticism intended in any way). Papic's *Geopolitical Alpha* (2020), Gould-Davies's *Tectonic Politics* (2019), Rice⁸ and Zegart's *Political Risk* (2019), and Bremmer and Keat's *The Fat Tail* (2010) are the best examples.

Most content in those books is quite similar, but they differ in the length given to different types of political risk and academic elaboration on them. Broadly, there is a common and undisputed ontological assumption that, the most the countries around the world replicate Western liberal-democratic institution, the lesser the political risk to investors. Since most investors are themselves from liberal-democratic developed countries, this ethnocentric and evolutionist theoretical take is predictable. It is important to note that those investors are not looking only for safe havens for their money around the globe: when they want to make larger and faster profits, they are eager to assume higher risks and so direct their investments to more unstable and non-liberal countries. "North" and "South" are, financially speaking, two levels of the same market dedicated to different financial needs and risk tolerance profiles.

The best example of ethnocentric reasoning on global finance found in the books listed above comes from Bremmer and Keat (2010). They boldly divide the nation-states in different "boxes" of Political and Legal Systems and rank the regime types more and less

⁷ The older academic reference found for Political Risk Analysis, in a modern sense, is a paper by Theodore E. Burton (1916) titled "*Probable Financial and Industrial Effects After the War*", published in the *Journal of Political Economy*, v. 24, n. 1. One of the generalizations Burton writes down to defend a link between war and economic recovery is that the earlier makes people driven back to patriotism, actually preoccupied with the lack in the hearts of post-war industrial workers and businesspeople.

⁸ Yes, Ms. Condoleezza Rice (1954-), 66th United States Secretary of State (2005-2009) under President George W. Bush.

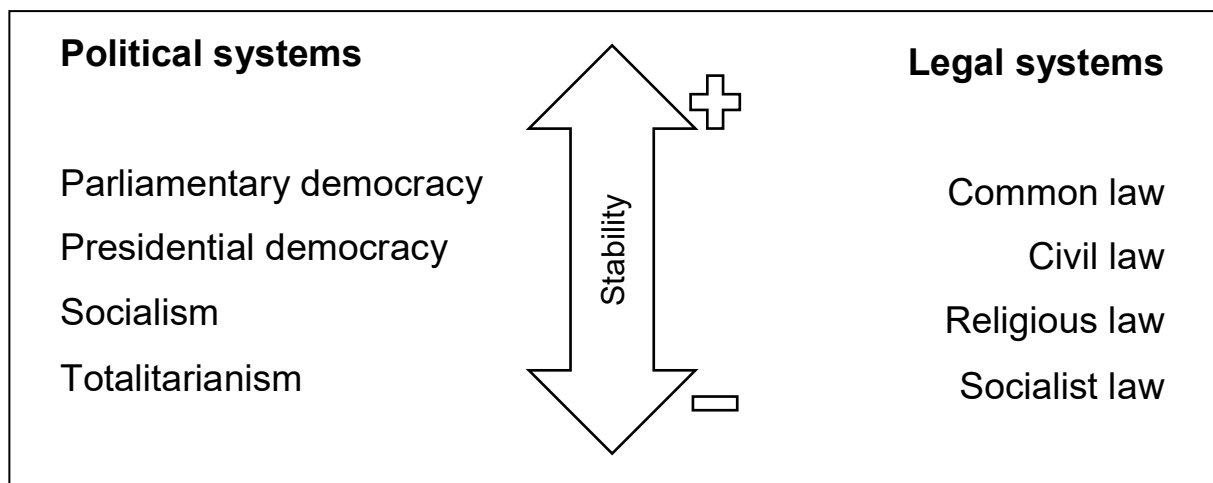
prone to political instability (regarding, mostly, foreign money safety). Basically (and in a very generalist way recognized by the authors), the contemporary Political Systems are: parliamentary democracy; presidential democracy; socialism; and totalitarianism. Parliamentary democracies are considered the most stable systems, because decision-making is more decentralized and it is thought that figures like the prime-minister find a harder time to act boldly on themes that could harm private property ownership and liberalization. One step below, is the more centralized but still democratic presidential systems (presidents share power with the Legislative and Judiciary Branches, but concentrates both roles of Head of State and Government). Falling far below the democracies are socialist systems. The simple fact that they do not have a constitutional priority of defending private property makes them riskier. Nevertheless, they are still more stable than totalitarian systems through the “power centralization lens” used on the democracies: Communist Parties govern autocratically, but they are usually a crowded and complex social system inside. Totalitarianism is on the bottom of the stability ladder because power is so much concentrated in one individual or in a very small elite around a dictator, that institutional changes could happen overnight without political counterweights, putting private companies in a state of constant anxiety. Not to say that “Rule of Law” is practically impossible in the most closed and autocratic regimes.

The same reasoning applies to Legal Systems. Replacing the “power centralization” criteria is the “predictability of judicial decisions and sentences”, and they distribute themselves around the world in this order (from more to less predictable system type): common law, civil law, religious law, and socialist law. Common law is considered by the authors to be more stable and predictable because judges have a higher chance of having had received a moral and culturally similar education, and take jurisprudence as a fundamental source for sentencing-making. Similar minds in a solid culture tend to produce more predictable legal and institutional reasoning, making easier to the private sector to prepare themselves for future possibilities, that is the math. Despite having their law exhaustively written on paper, civil law countries tend to produce “surprising” legal sentences more often, because it is believed that the moral culture in those countries is more diverse and judges tend to interpret legal texts differently, due their inconsonant backgrounds. Dropping high from the two steps above, religious law is quite unstable because religious leadership and interpretation of dogmas change, and most religions in the world are quite disunited and disagreeable even (or especially) with traditions from the same historical and geographical source. Socialists, at the bottom, cannot provide predictable

legal decisions regarding private investors because ultimate protection and guarantee to private property are simply not a constitutional baseline.

This framework is not, of course, deeply committed to Political Science's or Law's canons. Various types of investments interact differently with regulatory frameworks, political systems, coalitions, and elites, leading to the emergence of distinct forms of political risk (Jarvis and Griffiths, 2007b). Bremmer and Keat (2010) only wanted to write down the usual perspective from North Atlantic financial markets regarding investments that require safer havens. Figure 1 tries to summarize it:

Figure 1 – The “ethnocentric” division of the world’s regimes according to financial markets



Source: Based on Bremmer and Keat (2010).

Given our particular interest to the “international politics” variable in the discussions on Political Risk, an academic endeavor from the previous decade could not be ignored. The scientific journal *Global Society* published, in January 2007, a special issue (v. 21, n. 1) dedicated to the encounter between Theory of International Relations and Political Risk Analysis, headed by Professors Darryl S. L. Jarvis and Martin Griffiths. In their editorial (Jarvis and Griffiths, 2007a), IR is not being directed to “help out” PRA, but the contrary, in a way: how the very concept of “risk” found in PRA could enrich IR and create a new research agenda there, more suited to the specificities of the drastic changes presented by the 21st-century (less prone to *realpolitik* and worried about complex environmental, financial and other not so state-centric issues). The authors suggest that the work of the

German sociologist Ulrich Beck should be the main philosophical source for this approximation, given his concepts of “risk society” and “world risk society”, which are going to be addressed properly later in this chapter. The volume gives special attention, amongst its varied authors (O' Callaghan, 2007; Carment, Gazo and Prest, 2007; Germain, 2007; Handmer and James, 2007; Jarvis and Griffiths, 2007b; Jarvis, 2007), to the ontological upgrade of MNEs (multinational enterprises) to “international actors”, from a political point of view, something downplayed by most IR theoretical schools, but a possibility already defended by liberal theoreticians like Andrew Moravcsik (1997). Jarvis and Griffiths (2007b, p. 7) address the topic as follows:

Much of the literature in IR has thus been ill-disposed to view MNEs as anything other than either marginal or exploitive, predatory agents or subordinate to state actors. Little wonder that few scholars have chosen to view IR through the eyes of MNE actors, and still fewer to devote much time to exploring political risk as a mediating relationship between states and non-state economic actors.

Their remark insinuates that not only IR is losing in its holistic capabilities, but PRA is prejudicated by not counting with the knowledge could provide to it if MNEs were studied as part of international politics. They continue (*ibid.*, p. 8):

While the concept of risk through political action has been inherent in the international arena since the time of the ancient Greeks, its most recent intellectual pedigree emerged in the post-war period. In part, this has been a function of increasing capital flows from North America and Western Europe to developing economies. (...) High-profile incidents involving the nationalisation of foreign interests in the Suez Canal (1956), Cuba (1959) and in Chile (1972), as well as the expropriation of land holdings owned by the American United Fruit Company in Guatemala in 1951 and of petroleum extraction assets held by Texaco and Chevron in Nigeria in 1975, all provided demonstrable evidence of the perils faced by international investors. (...) The utility of private foreign investment capital to economic development and poverty reduction, as well as its centrality to successful modernisation and industrialisation, became the dominant mantra underscoring domestic political legitimacy and regime stability. Many ruling elites in emerging economies thus redirected their efforts to attracting FDI in order to accelerate development and secure regime legitimacy.

And conclude⁹, showing how this “blending” is a two-way compensation (*ibid.*, p. 10): While the vast bulk of political risk literature is concerned with risk as it affects multinational enterprise, a not insignificant proportion of the literature approaches political risk from the perspective of conflict avoidance and the aversion of state failure, and has been developed by theorists concerned with peace and conflict studies and IR.

Our decade is a very fertile – yet sad – terrain for the observation of the exchange between international high-politics, economic data and markets. The following are some considerations by scientific papers on the effects of the War in Ukraine, exemplifying the “academic side” of

⁹ Actually, Jarvis and Griffiths (2007b) rekindle their accusation vehemently throughout all the paper, like in (p. 20): “*this particular sub-field (Political Risk Analysis) has rarely been acknowledged by scholars of IR even though its evolution has in many respects mirrored broader changes in the academic study of global society*”.

PRA's hybrid literature. The Russia-Ukraine War impacted global stock markets, with the level of impact varying in intensity, accordingly to the integration of foreign markets with the warring countries and across time, following-up the escalation of the conflict. An example of low-integration and low-impact was the Nigerian market, while France, Germany, Canada and Austria showed high-impact and high-integration¹⁰, in a sample of 55 stock markets between August 6, 2021 and September 23, 2023 (Zaheer et al., 2024). When wars displace people and direct refugees to other countries, commodities' prices rise (especially those related to energy and food), as well as inflationary pressures. Business and investor confidence may drop. In 2022, Ukraine and Russia accounted for less than 2% of global trade (Dole, 2022), but their participation in crude oil, other energy resources and food, were much more internationally significant than that. The prices for crude oil reached their highest in eight years by 2022 (Adekoya et al., 2022).

Financial crises have been a consistent occurrence throughout history, as noted by Allen et al. (2009), and can arise from various factors at any time. However, Adekoya et al. (2022) have observed a worrying increase in the frequency of these crises in recent years. Internationally, commodity prices have risen, while the financial market has contracted significantly, as reported by Tank and Ospanova (2022), while the rising fear of inflation is exacerbating poverty and hindering global commodity production (Orhan, 2022). The ongoing conflict in Ukraine was projected to decrease global GDP by 0.5% to 1% in 2022 and 2023, respectively, resulting in a loss of about US\$1 trillion. Tank and Ospanova (2022) also indicate that this war is likely to contribute an additional 3% to global inflation in 2022 and around 2% in 2023.¹¹ These impacts are expected to be particularly severe in Europe due to the region's heavy dependence on gas and oil imports from Russia, with one-fifth of its foreign value-added coming from Russia, as noted by Kersan-Škabić (2023). Orhan (2022) points out that gas and oil prices in Europe have surged to more than ten and two times higher than the previous year, respectively. As a result, GDP growth in the Eurozone was predicted to decline by 0.9% in 2022 and 1.5% in 2023, with inflation expected to rise to 5.5% and 2.1% in the same years, according to forecasts by Tank and Ospanova (2022). The interconnected nature of global financial markets means that these developments are likely to have a substantial impact on equity markets, as highlighted by Egan (2022). The financial markets have already shown significant volatility,

¹⁰ For a deeper specification: *"the effects were most pronounced for nearby countries, in particular those that share a border with Russia and Ukraine, as well as for UN members that asked for an end to Russia's attack on Ukraine* (Boungou and Yatié, 2022 apud Zaheer et al., 2024, p. 6)".

¹¹ Right now, it is not our goal to validate past PRA's future predictions about events already suitable for confirmation. Those citations are being made in order to exemplify PRA's scientific papers issued in recent times.

with commodity volatility spillovers increasing from 35% to 85% during the conflict, surpassing even pandemic levels, according to Wang et al. (2022).

In terms of market indices, financial markets have seen substantial declines: S&P 500 dropped by 10%, IMOEX by 33.28%, WIG Poland Index by 10.53%, DAX by 3.96%, FTSE Italia by 4.04%, and SENSEX by 4.72%, as reported by Boungou and Yatié (2022) and Dole (2022). The link between political crises and global stock returns has been widely studied. Berkman, Jacobsen and Lee (2011) found a significant relationship between political crises and fluctuations in global stock returns. Other studies, such as those by Kapar and Buigut (2020), confirm that political risk negatively impacts both market returns and the risk profile of securities. Smales (2017), Lehkonen and Heimonen (2015), and Dimic, Orlov and Piljak (2016) have similarly found strong correlations between geopolitical risk and market uncertainty, with political uncertainty negatively affecting equity returns and currency carry trades. He, Nielsson and Wang (2017) demonstrated that even non-aggressive diplomatic disputes, such as those between Taiwan and mainland China, can lead to significant reductions in equity market returns. Kapar and Buigut (2020) further explored how diplomatic and economic embargoes, such as those on Qatar, significantly increased stock market volatility.

The impact of international events, including conflicts and political unrest, on stock investments has been studied by researchers like Niederhoffer (1971) and others. For example, Fernandez (2007) examined the effects of Middle Eastern conflicts on regional stock market indices, while Guyot (2011) looked at the impact of geopolitics on Islamic financial markets. Other studies, such as those by Alshwawra (2020), Estrada et al. (2020), and Zaremba et al. (2022), have documented the adverse effects of geopolitical risks on equity markets. However, research on wartime effects on stock markets is less common and often yields mixed results. For instance, Leigh, Wolfers and Zitzewitz (2003) found that equity markets weakened during the Iraq War, while the gold and energy sectors strengthened. Contradictory findings were observed regarding the 1990 invasion of Kuwait by Iraq, where the invasion had a negative commercial impact, but Operation Desert Storm led by the US had a positive one, according to Schneider and Troeger (2006). Finally, Bash and Alsaifi (2019) reported that the disappearance of Jamal Khashoggi had a notably negative impact on Saudi equity market returns. This literature review, broadly organized by Zaheer et al. (2024), is essential to provide confidence on the relevance of the problematization brought by the present dissertation and its following methodology proposed in Chapter 2.

Deeper examples on what the literature on political risk could provide to researchers and students, especially from academia and scientific journals, are mixed with more specific topics

on international law, foreign direct investment, and aspects of speculating behavior demonstrated by multitudes of investors. We could better show them amongst a broader reflection on what the global financial market is and what fundamental interests they bring when evaluating economic and non-economic events and risks.

1.3. Finance and stock exchanges: its nature and functioning facing political reality

IR constructivist scholar Nicholas Onuf provides a general concept for “market” in its microeconomic sense, but does not waste time by bringing his criticism in ontological and epistemological terms (2012, pos. 529):

A market is any large set of exchanges (paired choices) among autonomous entities, in which exchanges are expedited through a medium of exchange, allowing a rate of exchange, or price, to be calculated, but which are otherwise uncoordinated. By specifying its range of application, microeconomic theory constitutes Microeconomics as a distinctive disciplinary endeavor. That market exchanges are not coordinated, on the presumption that no single one of them is important enough to warrant intervention, demarcates the discipline from its neighbors like Sociology, Anthropology, and Social Psychology, which do not preclude the presence of politics, and even more, Political Science and International Relations, in which politics in one form or another prevails.

The same kind of downplaying of non-economic factors could apply when we add the adjective “financial” to “market”. The literary variation between “market” (singular) and “markets” (plural) is usually meaningless to journalists and commentators, and gives us the impression that they could be both with no consequences, enhancing the microeconomic aura of a decentralized and “pure” institution. We do disagree with that: we are dealing with multiple financial markets over the world, that, despite and importantly being highly interconnected, are different clusters ruled by different national jurisdictions. Nevertheless, it is still a challenge to

Financial markets¹², in a wider sense, are older than modernity and capitalism, because banks are. Anyway, these historical explanations do not seem to be necessary here, so we will move further. As mentioned above, this market was already very complex and sophisticated as

¹² It is some sort of vice of expression when one refers to the multitude included in the “financial markets” or in the “market” as if they were sole unitary individuals, especially those with a clear political agenda. As the sociologist Antônio Engelke (2016, p. 1, freely translated) commented, when analyzing a headline (“*Country risk indicates that the market is still betting on impeachment*”) when former Brazilian president Dilma Rousseff was about to be impeached: “*In practice, ‘market’ is just another name for the asymmetrical game of articulating economic interests that takes place at local, national and global level. In the same way, ‘bet’ also means a move in a game of chance, and not just an expectation. If we understand ‘market’ and ‘bet’ in this way, then ‘country risk’ can be seen as an instrument through which this articulation of transnational interests (the market) acts at its convenience. This means that the market doesn’t just watch and wait for an outcome to our political crisis, as in the first interpretation. On the contrary, the market intervenes: the headline refers to a concrete move by economically interested actors within the scenario of Dilma’s possible impeachment*”.

far as two centuries ago, and we can exemplify by restating that the professional preoccupation with political risk and complicated insurance models were already present in the work of companies like S&P, Moody's and Fitch by the turn of the 19th to the 20th-century. Even literature did not wait for the 20th-century to marvel at the established microcosmos of financial workers in New York, like Melville's short story *Bartleby, the Scrivener: A Story of Wall-Street* (2012), first published in 1853. There, the economic idiosyncrasies of finance are not the author's focus, but he does make clear that the "office life" being inaugurated by *haute finance* (and presumably spreading to all modern life) would tragically shape a new form of lonely and troubled individual. "Ah Bartleby! Ah humanity!" (*ibid.*, pos. 558) is how Melville cryingly ends his tale.

To our purposes, we need to go back not so far, when the dollar-gold standard was abandoned by Richard Nixon in 1971. There, started what Susan Strange (2015 [1986]) alarmingly called the "casino capitalism". When the monetary and exchange system set on Bretton Woods officially ended in 1973, financial assets were now a way looser from governmental control through fixed (yet adjustable) exchange rates throughout developed economies and most of the developing ones. Since the American Dollar was no more backed by gold and world currencies were already gravitating around the Dollar, the interest rate set by the Federal Reserve in a swifter pace made the global currency balances more volatile, and most of them dropped. The floating exchange rates were now the norm and capital started to change places faster, not only informing multinational companies where to relocate their assets (and their subsequent risks) in a frantic way, but, according to Strange (2015 [1986]), making them

The microeconomics of the stock markets started to resemble something devoid of political chains due its light-speed and voluminous daily exchanges, like fireworks incessantly cracking over the sky while the social and the political national realities developed themselves in a slower rhythm. In the 21st-century, Bauman (and Rovirosa-Madrado, 2012) called this peculiar transactional reality as "hyperspace". Speculators could now make fortunes and destroy them only by surfing into that microeconomics, like in a casino game. But Strange (2015 [1986]), even not yet already aware of this phenomenon's intensification provided by the internet-linked markets, was already skeptical about the fairness of this very arrangement, because in casinos, at least a common player could face equal odds of winning or losing, while in the real financial world after 1973, speculation could be manipulated by huge players (sometimes representatives of the state, but most of them private actors with private interests), creating a casino where "the house" wins much more than it loses, making individual investors and the working classes poorer day by day.

As well as investors, huge and small, today, stock markets could also be passive or dominant (Zaheer et al., 2024). As well as most national currencies revolves around the dollar interest rate, smaller stock exchanges orbit the centers of contemporary financial capitalism. Not that developing and least developed countries' financial markets once thrived in a world devoid of the gravitational field propagated by London and New York, on the contrary, the new financial "hyperspace", despite its apparent decentralization, was not able to (and probably never meant to) break the Wallersteinian World-System division of centers and peripheries (Wallerstein, 2003). It strengthened it.

Being so, financial market speculators can be categorized into two main groups: one set of investors has access to private information about a company's fundamentals, which includes both published and unpublished data related to its financial health and future prospects, alongside technical information, which is publicly available data on stock performance. The other set of investors only has access to the technical information (Gong and Diao, 2022). This theoretical separation quite reflexes some sort of hierarchization between those prone to win more (the first group which combines exclusive fundamental intel with technical treatment of public data) and those to lose more, because they are ill-equipped (the second group relying only on technical processing of public data). Nevertheless, if such groups and their fates were so rigid and predictable, financial markets would not exist. It is still possible for smaller and less equipped speculators to make money, and the reality of the odds in the 21st-century and a way more complex and devoid of an economic "grand theory" predicting them.

According to research findings, equilibrium prices often reflect the information from the group that exhibits lower levels of rationality but higher risk tolerance. There are three notable features of financial markets that have gained increasing attention: bounded rationality, asymmetric information, and heterogeneous agents. Models assuming perfect rationality are seen as psychologically unrealistic (Kahneman, 2003). Asymmetric information significantly affects financial markets (Sciubba, 2005; Kelly and Ljungqvist, 2012; Vayanos and Wang, 2012; Bianchi, Dana and Jouini., 2021). Kirchner (2009) points out that the assumption of symmetric information is not very realistic. In real markets, fundamental information often moves from uninformed traders to insiders, and it is typically difficult to directly observe the true fundamental value. Investors base their estimates of this value on the private information available to them. Grossman and Stiglitz (1980) argue that the informativeness of the market depends on the number of informed agents participating.

Numerous empirical studies have demonstrated that financial market participants display heuristic biases such as overconfidence, representativeness, conservatism, availability bias, and

the anchoring effect (Ackert and Deaves, 2010; Barberis and Thaler, 2003). These biases influence investors' preferences, beliefs, and strategies. Research based on heuristics and investor sentiment has been successful in explaining market anomalies (Daniel et al., 1998; Barberis, Schleifer and Vishny, 1998, Barberi et. al., 2018; Hong and Stein, 1999; Kirchler, 2009; Stambaugh, Yu and Yu, 2012). Additionally, Amir et al. (2020) suggest that the fundamental objectives of investors in financial markets are evolutionary, focusing on goals like survival, domination, and rapid growth. In financial markets, when excess demand for a stock is positive, prices rise, and when it is negative, prices fall. Moreover, it is nearly impossible to determine the true fundamental value in real-world financial markets. It is fair to say that speculating financial markets are changing tides of narratives, speeches, symbols and perceptions, in their most linguistic senses, and the search for "true asset prices" is futile.

Recent research has examined how political factors influence bond markets and foreign direct investment (FDI), but there has been less focus on stock markets. Given the specific concerns of equity investors, the hypothesis suggests that stock-market valuations are positively related to democracy levels, shareholder rights, legal traditions, and capital-account liberalization. Conversely, they are negatively linked to real interest rates, with no significant correlation to fiscal deficits or surpluses (Mosley and Singer, 2008). To test these hypotheses, Mosley and Singer (2008) conducted an analysis on the political and institutional determinants of price-to-earnings (P/E) ratios for up to 37 countries from 1985 to 2004, using both cross-sectional and time-series cross-sectional methods. Most of the hypotheses were supported, indicating that the effects of economic globalization on government policies vary across asset markets.

In 2004, the total global stock-market capitalization was US\$ 37.2 trillion, just below the US\$ 41.3 trillion global GDP but surpassing the US\$23.1 trillion of public debt securities (*ibid.*). Some emerging markets, such as those in Malaysia, Singapore, and South Africa, have stock-market capitalizations exceeding their GDPs (*ibid.*). Equity markets promote corporate efficiency, drive innovation, and are crucial for long-term economic development, providing a mechanism for capital generation, especially as pension systems become more privatized (Lavelle 2004; Sobel 1994). Additionally, equity markets offer governments a means to raise capital through the sale of state-owned enterprises, further emphasizing the increasing importance of stock markets globally (Mosley and Singer, 2008).

Countries have varying degrees of integration into the global economy, with some like Malaysia and Singapore exhibiting high trade openness but lower capital market liberalization (Garrett 2000). Financial globalization, according to some scholars, may impose constraints on

governments, diminishing their ability to spend and tax freely. These constraints are driven by the influence of global investors, who may exit markets if they disapprove of a government's policy choices, pressuring governments to align policies with investor preferences (Friedman, 1999; Armijo, 1999). Consequently, financial openness has been suggested to reduce a government's policy-making freedom.

Different types of investors have varying reactions to policy outcomes. For example, equity investors may have different responses to government decisions than bondholders, who might prioritize political stability (Maxfield, 1997). While equity markets are often more liquid than FDI, they are still influenced by national capital controls and market liquidity. Stock-market performance, particularly P/E ratios, has become an essential indicator of financial actors' preferences concerning government policies and institutions (Bernhard and Leblang, 2006; McGillivray, 2003). These investors, unlike bondholders, are less concerned about default risk but are highly responsive to short-term economic conditions and interest rate changes.

Political events, like elections, also play a role in shaping stock market behavior, with changes in partisan control affecting market outcomes (Leblang and Mukherjee, 2005; McGillivray, 2003). While right-leaning governments are often perceived as business-friendly, recent literature suggests the relationship between partisanship and market outcomes is more complex. In some cases, left-leaning governments might enact market-friendly policies to counter negative investor expectations (Garrett, 1998; Broz and Frieden, 2001). Stock market reactions to policy changes are thus not always straightforward and can vary significantly based on political and economic context.

A study found that equity investors favor democratic countries due to their transparency and reliable information (Rosendorff and Vreeland, 2006). Democratic regimes are seen as more trustworthy by investors, who rely on open political environments to make informed decisions. P/E ratios tend to be higher in democratic nations, as investors view these environments as less risky. Even in authoritarian regimes like Singapore and Malaysia, which offer shareholder protections, democracy remains positively correlated with market valuations (*ibid.*).

Despite the importance of political factors, Mosley and Singer's study (2018) also revealed that some traditionally significant economic factors, such as inflation and fiscal policy, are not statistically linked to stock-market valuations. Additionally, real interest rates have a negative impact on market valuations, consistent with the arbitrage pricing model, while dividend yields are also negatively correlated with P/E ratios, which may indicate unfavorable market conditions (Lee and Ng, 2006).

This analysis highlights the growing importance of stock-market performance in understanding the relationship between political institutions and financial markets. Investors are increasingly sensitive to political decisions, and equity markets provide valuable insights into how globalization and government policies interact. While stock markets are influenced by various factors, including democracy, shareholder rights, and capital market openness, they react less to some economic variables that are traditionally important in other financial markets. These findings underscore the need to disaggregate the effects of different asset markets when analyzing the impact of economic globalization on government policies, and that is what makes this dissertation focus only on stock indexes.

1.4. The word “risk” in a globalized late modernity: sociological, institutionalist and internationalist approaches

During these times of “*rentier*” and “casino” capitalism, it is obvious that 21st-century problems and risks are not only a question of climate change, terrorism and other social dilemmas. If most of the world’s wealth creation and transference does not leave the financial hyperspace, countries and their peoples are subject to a growing lack of investment in productive capital and job generation, like warned by Strange (2018 [1986]). Following Ulrich Beck’s philosophical and sociological approach in *Risk Society: Towards a New Modernity* (1992), we can grasp a social and political sphere that tries to control damages created by free and volatile financial markets as they do with landslides, hurricanes and unhealthy food.

In *Risk Society*, Beck explores how modernity has transformed from an industrial society focused on wealth distribution to a “risk society” characterized by the management and distribution of risks. The author argues that industrialization has created new kinds of risks that transcend national borders, political structures, and even conventional ways of thinking about social and economic inequality. These risks are both a product of and a response to the technological advancements that have enabled unprecedented economic growth, but which now threaten to undermine global stability through environmental degradation, technological hazards, and systemic threats.

Beck’s theory of the risk society revolves around the idea that the traditional pillars of industrial society, which centered on economic growth and the distribution of wealth, have given way to a new phase in which risk management becomes the dominant organizing principle. Unlike earlier societies, where risks were often seen as natural events or external

shocks, in the risk society, they are largely human-made. These risks include nuclear accidents, environmental catastrophes, financial crises, and global pandemics, all of which are exacerbated by technological developments that often promise progress while simultaneously producing dangers.

One of the most crucial aspects of the risk society is its global nature. Beck contends that risks are no longer confined within national borders. Instead, risks such as climate change, nuclear proliferation, and economic crises are global in scope and demand international cooperation for mitigation. This global dimension of risk poses challenges to traditional forms of governance, which are typically nation-state-based and ill-equipped to handle the cross-border nature of contemporary risks. The very idea of a risk society, according to Beck, implies that society has entered a new phase in which both the causes and effects of risks are dispersed across the world, making it impossible for any single state to manage them effectively.

Beck argues that this shift toward global risks has profound implications for politics and democracy. The traditional political structures of industrial society, based on the distribution of wealth and resources, are insufficient to manage the complexities of risk society. Decision-making in the context of global risks requires more than just political power; it demands scientific expertise and transnational cooperation. Yet, this new reliance on scientific knowledge introduces a form of technocracy that can undermine democratic principles. Decisions about risk often become technocratic in nature, made by experts rather than through democratic processes. Moreover, Beck argues that scientific knowledge itself is not immune to risk. Science and technology, which were once seen as solutions to the problems of industrial society, are now part of the problem in risk society. The very technologies that have advanced human development—nuclear energy, genetic engineering, industrial farming—are also the sources of new risks.

The concept of “manufactured uncertainty” is central to Beck's argument. Unlike traditional risks, which stemmed from nature or external forces, the risks of modernity are the result of human activities, often unintended consequences of technological advancement. This manufactured uncertainty complicates efforts to address risks because it is difficult to predict or calculate the long-term effects of technologies. The complex interdependencies between various social, political, and economic systems mean that one small change in one system can have cascading effects across the globe. This interconnectedness amplifies the unpredictability and potential severity of risks, making it harder for societies to develop effective risk management strategies.

Beck also addresses the social implications of the risk society. He points out that risks are

unevenly distributed, much like wealth and resources were in industrial society. However, while wealth in industrial society could be accumulated and inherited by the privileged, risks tend to affect those with fewer resources more acutely. Environmental disasters, for instance, disproportionately impact poorer communities that lack the resources to mitigate or escape from hazardous conditions. Beck calls this phenomenon “the boomerang effect”, where risks initially created by wealthy, industrialized nations come back to haunt them, but only after first affecting vulnerable populations in less developed regions.

The concept of “reflexive modernity” is another key aspect of Beck’s theory. Reflexive modernity refers to a stage in societal development where society begins to reflect critically on the consequences of modernity itself. In other words, society becomes increasingly aware that the very processes of modernization – industrialization, technological progress, economic growth – produce risks that threaten its continued survival. This self-reflexivity challenges the previously unquestioned faith in progress and modernity. As societies become more aware of the risks inherent in modernization, they begin to question the systems and institutions that underpin modern life. This, Beck argues, opens up new opportunities for social change but also introduces a sense of uncertainty and instability, as old certainties about progress, science, and politics are called into question.

Beck also introduces the concept of “subpolitics” to describe how risk society alters the traditional forms of political participation. In industrial society, politics was largely confined to formal institutions such as parliaments and political parties. However, in risk society, political action increasingly takes place outside of these traditional structures, in informal movements, non-governmental organizations (NGOs), and transnational advocacy networks. These forms of subpolitics emerge as people seek new ways to address the global risks that formal political institutions seem unable or unwilling to manage. Subpolitics represents both a challenge to the authority of nation-states and a new form of democratic engagement, as citizens attempt to influence policy through grassroots activism and global networks.

Another important aspect of Beck’s theory is his critique of modern capitalism. He argues that the risk society fundamentally changes the nature of economic activity. In industrial society, capitalism was driven by the pursuit of economic growth and the accumulation of wealth. However, in risk society, economic actors must also contend with the risks that their activities create. Corporations, for example, are increasingly held accountable for the environmental and social risks they produce, leading to new forms of regulation and corporate governance. At the same time, the insurance industry has become a central player in risk society, as businesses and individuals seek to protect themselves from the uncertainties of modern life.

Beck suggests that this shift in focus from wealth creation to risk management represents a fundamental transformation in the nature of capitalism itself.

In sum, Beck's *Risk Society* offers a profound critique of the ways in which modernity has generated new kinds of risks that transcend national borders and challenge traditional political and economic structures. He contends that the very technologies and institutions that were once seen as the engines of progress now pose existential threats to humanity, and that addressing these risks requires new forms of global cooperation, scientific knowledge, and democratic engagement. Since financial hazards could now be considered "manufactured risks", and their functioning, as seen above, rely heavily on contemporary institutional realities (both saviors and threats to humanity), there seem to be an approximation between the preoccupations of the New Institutional Economics (NIE) on economic development and the research design we are starting to build here.

One of the seminal scholars in the field, Douglass North, conceptualize institutions in the following way (North, 1990, p. 3):

Institutions are the rule of the game in a society, or, more formally, are the humanly devised constraints that shape human interaction. In consequence they structure incentives in human exchanges, whether political, social, or economic. (...) Institutional change shapes the way societies evolve through time and hence is the key to understanding historical change. (...) Institutions reduce uncertainty by providing a structure to everyday life.

North (1990) then proposes that "good institutions" create "good" economic national environments and development, and "bad institutions" hijack them to patrimonialism and other types of underdevelopment sources. Again, an ethnocentric approach identified above when Bremmer and Keat (2010) were exposing how financial markets (most from the developed world) reads political and legal systems around the world, shows itself as some sort of C-level paradigm when we research on political risk management.

This also reveals the deep "internationalist" vocation of PRA. Actually, the field is more of an offspring of Comparative Politics which tries to inventory the world with a common language to offer an encyclopedia of low-risk-low-yields-stable-institutions and high-risk-high-yields-unstable-institutions countries, and the gradations between them, to make the globe understandable to financial operators. Ethnocentricity is some sort of technical necessity to summarize the world in only one geographical language, but it shows how internationalized capital is only focused on its selfish aggrandizement and not with "world development" – and that could be not different, because they are still private property that could only exist and rest in a national environment, and not as a global decentralized entity. The "global" is a transfer

medium and only national territories are ends – especially when they travel back “home” fatter.

In the fields of Political Science, Political Theory, International Relations, Foreign Policy Analysis, Law, among other social sciences, the geographical and social reality outside the borders of a given nation-state is sometimes treated in a vague and even dispensable way. Import, export and investment flows agreed with foreign actors are simplified to one or two accounts in the varied universe of public finance and national macroeconomics. Like everything outside the theoretical economic model applied to an analysis, wars, environmental disasters, crises, and political upheavals that can wreak havoc on a local market are labeled

The theoretical construction of Politics, which goes back to long traditions of classical, modern and contemporary studies, even suggests that what we call “politics” is a social and historical advent flourishing *within* autonomous political communities, a process that did not extend *between* them. Hence, we have a gap not only legal and economic separating each nation-state from its neighbors, but philosophical, political and ethical. Public goods that could historically develop in the direction of civil life, political rights, freedom, and the rule of law, but were not extended to relations between states, generating an obvious explanation for all the sadness and savagery of wars, racist nationalisms, international instability, in short. Thus, when an individual, a commodity, or capital crosses a border, it is as if they are going through a brief moment of insecurity and lack of guarantee, until their feet are planted again on the ground as subjects or assets recognized as worthy of political and legal protection in the host spaces. In aeronautics, one of the most dangerous moments of a flight is the landing, as the impact of the landing gear on the asphalt of the landing strip, if poorly executed in its objective of establishing rapid grip, can cause a serious accident. We can see the same “security-danger-security” transfer in the transnational social movement, for there is a hiatus in which politics and law either do not exist, or are terribly distinct from the phenomena that protect national citizens.

The purpose of the next paragraphs is to explore the rich theoretical discussion about such a dichotomy: internal and external; national and international; domestic and foreign. More specifically, there is an interest in the application of these conceptual, political and legal separations, in studies on Political Risk Analysis and International Economics (especially in the phenomenon of transnationalization of securities and direct investment). However, such elements will be mentioned only in order to exemplify certain concepts and relationships, and not as purposes of the analysis themselves. We will observe that there is, rather, an international political development full of ethical concerns with values such as freedom, self-determination, human dignity, and different theses of non-state human fraternity. However, as has already been suggested, such development took place (and takes place) in spaces, times and motives quite

distinct from the history of modern political values, as conceived to operate within nation-states.

To this end, ideas from two important works on the subject will be discussed: *Inside/outside: International Relations as Political Theory*, by R. B. J. Walker (1992) and *International Theory: The Three Traditions*, by Martin Wight (1992). Although Walker's publication is more recent (the 1992 edition of Wight's book is actually a collection of lectures in previous decades), the author's problematization will be reviewed earlier, as it organizes it in terms that can be discussed by Wight's thesis later.

1.4.1. Inside and outside: the state houses the historical process while the border differentiates it spatially

In *Inside/outside*, Walker (1992) speculates on questions of a metatheoretical nature around the Theories of International Relations. For him, Political Theory does not see a continuous line of intellectual development in international relations, in the same way that it can do with the historical evolution of Western political institutions that have taken part in the domestic paths of the various modern nation-states. Elements such as “democracy” and “rule of law”, with all their ethical content, function in a mature and robust way within the borders governed by autonomous political communities, while presenting themselves in a very incipient way in the relations between states, if they even do so. Judging international relations as a historical process that should evolve temporally in a similar direction would be an analytical error, since it is not time that governs international relations, but the division of space, a division that carries the brutal logic of separating the equal from the different, suppressing guarantees for the latter, generating a problem of always unstable alterity that, hypothetically, would have already been solved within state territories, remaining insoluble at the global level. Thus, national “time” allows the ethical development of politics, while the cross-border “space” excludes it from business between nations.

Walker attributes such a space-time division to the volition of the very thinkers and practitioners of Political Theory, who wished the nation-state to be the ultimate social institution that monopolized ethical-historical development. Thus, the achievements of politics would be an internal privilege of national jurisdiction, which, in order to exist, would necessarily need to exclude the rest of the world in a spatial logic with other rules less pleasing to the global sharing of ethical and government values. The limit imposed by the State on the rest of the world – its self-determined sovereignty – would serve, at the same time, to guarantee internal political

ethics and to protect it from external interference (a threat), making the room for maneuver of sovereignties an apolitical or even amoral environment. In other words, to guarantee the freedom of one nation, the freedom possibilities of others should be limited.

The two logics would have their roots in long-standing philosophical and political traditions, and had already been constructed not only at the beginning of modernity and the advent of modern state as we know it, but since medieval Christendom, which operated under a distinct transnational institutional logic. In fact, concerns about space at the expense of time mark one of the changes in the abandonment of the Middle Ages. Walker links political time to Machiavelli and St. Augustine, and the new urgency of political space to Hobbes (1992, p. 62):

Machiavelli and Hobbes have come to represent the two key moments in this transition. Machiavelli is associated with an assertion of the primacy of temporal *virtù* within the polis/city-state against the universalistic claims of Christianity. Reversing the Augustinian valorisation of time and eternity, the possibility of establishing a community of virtue in time is read onto the spatial form of the principality and republic. Machiavelli's classical conception of *virtù* still emphasizes the necessarily contingent and potentially corrupt character of all political communities, no matter how successful a prince or republic may be responding to the dangerous charms of *fortune*. Hobbes, by contrast, has come to symbolise the attempt to fix the configurations of power within the state by an appeal to the universal and eternal claims of reason. Where Machiavelli is concerned with the very possibility of establishing particularistic political communities at all, Hobbes is able to pursue questions about how authority and obligation within particular communities can be reconciled with the universalistic claims of Galilean Science and/or Christian theology (Walker, 1992, p. 62).

Although Machiavelli challenged Christianity and Hobbes reaffirmed it, the latter transported political morality to the dictates of space and the territorial limits of the nation-state, breaking with the more fluid scheme of the Catholic Middle Ages.

The space-time dichotomy does not mean that there are no temporal developments in the world governed by territorial division, only that the primacy of space forces time to behave differently. Martin Wight (*apud* Walker, 1992), who will be discussed at length later, points to this “temporal dualism” as the distinguishing mark between domestic politics and international politics, or rather, between Political Theory and “International Theory”. While time *inside* is continuous and leads to an ever-changing ethical development (or evolution), time *outside*, that of international relations, is a kind of repetition of structural patterns, which, although walking in cycles, can be considered ahistorical.

The very term “relations” (in international relations) is elucidative. To talk about social relations in which some kind of politics develops, we need a self-centered community in which historical time has allowed the emergence of ethical principles that would base local politics on its various meanings, but always outside the mere competitive clash and lack of rules between human beings. If relations between states, crystallized by the needs of the occupied space, do

not develop in a continuous time in which ethical values eventually emerge, it is difficult to even say that international relations are a form of politics, as they fall short of their civilizational requirements. Such a statement is radical, but Walker refers more to international politics that would echo the ethical principles gestated within states, than to a vacuum of intellectual development provided by diplomatic and military traditions in foreign affairs. The author even suggests that there is an ethics of international relations, but it serves its own habitat, as an originality incompatible with domestic national ethics and its standards – such as democracy. Thus, state sovereignty creates for itself a “political space” in which the time of ethical development elapses, and which condemns international relations to another spatio-temporal experience, much more rarefied in ethical and community terms, since, in principle, there is no community *between* nations (in a legal and political sense), just as there is no supranational authority or global state. Although this is not the objective of the present dissertation to delve on it, it is worth noting here that Walker's exposition is normative and carries a critique against the theories of international relations themselves: being always state-centric, these theories legitimize, as the impartial science they are, the existence and persistence of the nation-state, removing its historicity and political intention. And it is precisely the presence of the nation-state as an organizing principle of political spaces that forces international relations to be a phenomenon of injustice, persecution and barbarism among the peoples of the world. While Political Theory shows us the laurels of humanity's search for a better coexistence through democracy, rights and community cooperation, the discipline of International Relations, to paraphrase Bertrand Badie (2017, n.p.), would be “the science of human suffering”. This is not to say that social tragedies do not take place inside the nation-state (even the most developed and stable ones), but that the international medium hosts the most horrendous of human tragedies (like wars and genocides) in a volume and intensity unmatched by domestic “common” crimes and political violence.

The difference between domestic and external would therefore be the split between community and anarchy, temporal progress and geopolitical contingency, between politics and any other less elaborate types of social relations. In practice, the domestic is what a particular nation-state guarantees to its constituents based on the legal system and its police power (territorially limited), and the external is any kind of disorder and threat that may come from the social upheavals of the territory of others, a reality against which the domestic could only defend itself in a considerably less powerful way than what it can control internally as a legitimate government. Modern state theory carries the warning that a good life, one guided by fair and promising ethical and political principles, can only be achieved in particular political

communities, even if such principles are universal or something close to so, and not just national or strictly local inventions. Outside the umbrella of a nation-state, any social actor, from the individual to the megacorporation, is handed over to a destructive vortex and indifferent to any notion of human dignity or justice.

Of course, we are being dragged back into radical assertions that may not reflect reality. Is there that much fear of international relations? Obviously, there is not. At first, such a fatalistic interpretation would be linked to the realism of Carr, Morgenthau, Waltz, and Mearsheimer, among others. However, other theoretical schools emerged in the IR field throughout the 20th-century and shed light on other elements of the international environment that demonstrated the existence of cooperation and some order. From the atomized liberalism of Moravcsik to the neoliberal institutionalism of Keohane, to the international regimes of Krasner; from the English school represented by Wight and Bull¹³ to the constructivism of Onuf and Wendt, the world seems to spend most of its time enjoying peace, cooperation and coordination among nation-states, than suffering from wars and their preparatory movements. Still, all this academic production could be labeled as state-centric by Walker, since none of them dispenses with the nation-state as the necessary and most important actor of international relations in an ontological way. Thus, geopolitical contingency of a structural nature, as initially explained by Waltz (2010 [1979]), remains as something that forces the *insidel/ outside* dichotomy.

Classical political theory already treated the consequences of this division in this way, centuries before the modern state. The Greeks, even in their philosophy, made an intense distinction between themselves and the “non-Greeks”. Such a distinction created a policy for dealing with citizens, and another for dealing with foreigners (and slaves). Concerns about *eudaemonia* were limited to the prosperity, protection, and well-being of the citizens of a limited community rather than all human beings. Thucydides, in his account of the Peloponnesian War, exposes the external environment to the *polis* as one of insoluble anarchy (Walker, 1992). Hence, we have another pair of central concepts in the work: *Same* and *Other*. Within national boundaries, we have our politics with equals, outside, we have mere relations with others, who are not like us, and therefore present a threat. Everything we praise, cherish and build forms our national identity, and another identity is only possible out there if others do not praise, cherish and seek the same as we do. Thus, its mere existence is already deleterious

¹³ Walker criticizes the main concept of Hedley Bull's work without mentioning his name or citing his work: “To speak of, say, an ‘anarchical society’ or a society of states is to refuse to take the exclusionist ethics of state sovereignty at face value” (1992, p. 67).

to ours. Such cleavages were organized territorially by nation-states, generating on geographical physics, “*a spatial metaphysics of the same and other*” (Walker, 1992, p. 66).

It is not the purpose of this dissertation to counteract Walker. However, there are thinkers, such as Martin Wight, who present a more multiform and complex account of the formation of the “metaphysics” of international politics. Through a historical analysis that runs through thinkers and statesmen at the same time, Wight shows us the positions of nations on internal and external issues are distinct and can be grouped into at least three major international traditions.

1.4.2. Realism, Rationalism, and Revolutionism: The Three Traditions of Theory and Practice in International Relations Throughout History

Throughout the 1950s, Professor Martin Wight gave a series of lectures at the London School of Economics around what became known as his “international theory”. Although famous and very influential on colleagues and students – such as his pupil Hedley Bull – such lectures only gained a revised book edition in 1992, posthumously, by the hands of Gabrielle Wight and Brian Porter. *International Theory: The Three Traditions*, is both a reference work for beginners in International Relations, and a review and deepening work for more experienced researchers.

The three proposed traditions concern amalgams of theories, doctrines and records of practices regarding the relationship between the state and the outside world, which have alternately shaped the international politics of regions or the entire globe throughout history, at least that of the West. Although the professor finds their roots in the classical (Hellenic) period, most of his analysis starts from the European Enlightenment at the beginning of modernity and finds a climax in imperialism at the turn of the 19th- and 20th-centuries. Like Walker (1992), Wight addresses the core of the issue of our interest: what is the difference between something or someone who is *inside* and *outside* a given nation-state? Why are they two different political developments?

The three traditions are called Realism (or Machiavellianism), Rationalism (or Grotianism), and Revolutionism (or Kantianism). Wight gives nicknames to the representatives of the three, the realists being the “*blood and iron and immorality men*”, the rationalists the “*law and order and keep your word men*”, and the revolutionists the “*the subversion and*

liberation and missionary men".¹⁴

Machiavellians, such as Hobbes, Hegel, Frederick the Great, Clemenceau, and the 20th-century realists Carr and Morgenthau, conceived international politics as something correlated with anarchy among men, replacing them with states. Like men without government, the only expected outcome should be that of conflict. On the other hand, the Grotians, including international jurists, constitutionalist classical authors and statesmen such as Locke, Edmund Burke, the Viscount of Castlereagh, William E. Gladstone, Roosevelt, and Churchill, viewed international politics not as anarchy but as an international coexistence, or rather an interstate exchange permeated by conflict but largely open to cooperation. The Grotians asserted that although states were not subject to a common higher authority, they formed an observable society in institutions such as diplomacy, international law, balance of power, and concerts among great powers. In relations between states, there were moral and legal restrictions, according to the Grotian view, which stated that states were bound by the rules of this international society of which they were part and in which they had an interest in its continuity. The Kantians, in turn, rejected both the Machiavellian perspective and the Grotian view. For the Kantians, international politics superficially involved relations between states, but at a deeper level it was about relations between the human beings that made up states. The ultimate reality, according to the Kantians, was the community of humanity, a potential entity destined to suppress the system of states. Both groups, Grotians and Kantians, appealed to international morality, but while the former referred to the rules that required states to behave as responsible members of state society, the latter understood international morality as revolutionary imperatives that instigated all human beings to work for universal fraternity, or *civitas maxima* (Bull, 1992 [1976]).

Since the Kantians (or revolutionists) work for the very end of a world divided into states, their ideas would be useful to us in a study of the future transformation of international politics, and not of its current condition and its domestic/ external division. On the other hand, the realists present us with a view already widely debated in International Relations and fatalistic as Walker's contributions (although by very different means, the latter being critical of the state-centrism and the former its promoters). The tradition that can offer a more nuanced interpretation on the subject is the rationalist (or Grotian) one, as it manages to explain the continuity of the international system as an institutional mix not reducible to the fatalism of

¹⁴ From the originals in English, as highlighted by Bull (1992 [1976], p. xi).

For Wight, one of the central elements of an institutionalized international environment, more complex than realistic fatalism, would be international law. As a consultant to the British colonial affairs of his time, Wight found in the history of modern and contemporary European colonial expansion, and in the study of the expansionist vision of older civilizations, the turning point for the emergence of international law and of the modern system of states itself touched by rules: how to deal with the “barbarians”? According to himself (Wight, 1992, pp. 69-70): *“It was not the development of the diplomatic system in Europe, nor war in Europe, nor the disintegration of Christendom and the need for its reunion that provided the occasion for international law; it was this problem of the barbarians”*.

Wight extends the concept of “barbarian”, making it broader: any foreigners who, in addition to not being citizens of a given autonomous political community, have a different and incompatible language, culture, religion and ethical values, in relation to a given center. This means that foreigners from communities with common origins do not deserve such a label, generating different types of international relations to deal with foreigners who are also different. The barbarian, for the ancient Romans, was initially only the one who did not speak Latin. For the Greek, all non-Greeks, even though the Hellenic world was divided into separate and independent city-states. The Athenian did not see the Cretan as a barbarian. The modern Western world has made all cultures and ethnicities distant and subject to its colonization as barbarians. The ancient Chinese and Indian civilizations also elected the barbarians around them, and they were not treated that way by the approaching European powers while demonstrating that they were capable of acting diplomatically according to rules and customs that fit the needs of the West, and were respected that way.

The East also exercised its “in/ out” division. In the same way that European Christendom used the term “the Turks” to refer to the entire Muslim world (and perhaps even other non-Muslim Eastern and African peoples), the latter also used “the Franks” to address the whole of Europe, and not just the French (Wight, 1992). Thus, it is as if each civilization established a cultural boundary over geographical boundaries, and the distance from the epicenter would unfold into different sets of diplomatic rules as it lengthened. This point is crucial: from the point of view of a State, there would be a domestic world and *several external worlds*, which could not be reduced to a single type of treatment.

Hugo Grotius, who gives his name to the rationalist tradition, worked precisely with the concept of *jus gentium* in the doctrine of international law that he helped to found. The “right of peoples” would be the right of foreign nations before the center, trying to prevent the native peoples encountered by European global expansion from being treated as sub-human, opposed to what

Aristotle argued for in Antiquity. The Greek philosopher, in reflecting on the institute of human slavery, understood that all non-Greeks were liable to be enslaved by the Greeks, for they lacked so many praiseworthy elements found in the Hellenic, that it would be unthinkable for them to have political rights. Beyond the graces of the *jus gentium* extended by Europeans to many distant peoples, there would be a world given over to barbarism itself, and the rules in force in these places would be sustained only by what the contractualists imagined to exist: the state of human nature.

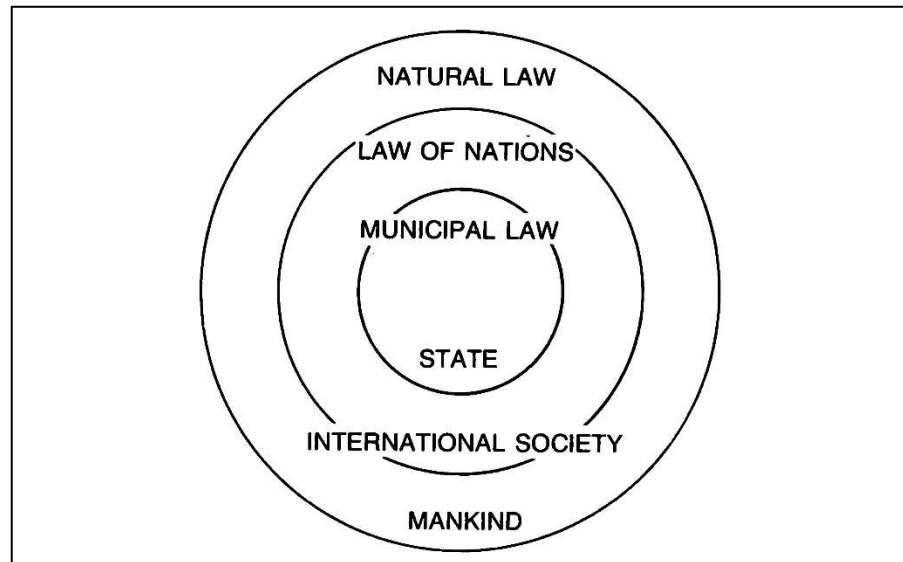
In the world of the state of human nature prior to the social contract that would form the state, the rules of the game are different, or rather, few or none. This state of nature had in its characteristics a reason for dispute between contractualist authors such as Hobbes, Locke and Rousseau, ranging from an environment of complete distrust and conflict, to that of cordiality and good intentions inspired by God. In any case, in international terms, the natural state would always be anarchic and much inferior to national rights after social contract in terms of its capacity to generate political and ethical progress. For the European colonizer, the legal and ethical precautions observed within the polis or in diplomacy with states brothered by family, linguistic and religious ties should not be respected there, in terms of reasons for aggression. We should not confuse the state of nature with natural law, which was a strong belief in the Christian legal world (and also adopted by contractualists such as Locke), and saw the human being (of any origin) as capable of, by the use of reason, behaving piously before God (even unknowingly) and creating national laws according to such a code, which also means a series of restrictions on attacking and enslaving another human being.

Jus gentium certainly rested on a Christian ideal of natural law, for this would be the very source of the respectability of non-European peoples by Europeans. The Spanish Neo-Scholastic theologian Francisco de Vitoria, also considered a co-founder of international law alongside Grotius, wrote about the rights of the Amerindian populations in the wake of the Spanish incursions, and saw in the humanity of the natives enough reason not to be treated as dispensable and maltreatable animals. However, as the Enlightenment advanced, the notion of natural law was discarded and replaced by the advent of positive law. In this, laws are created by men, for men, through a complex historical process and social conventions, and not pre-established by divinity. Thus, *jus gentium* should also seek a positive process to establish itself, which made it more intricate and dependent on diplomatic conventions, and not supported by an irremovable timeless Christian morality. It is as if international law and the law of peoples had started from scratch.

With this background, we can visualize what Wight proposes in a pictorial way. In

Figure 2, we have concentric circles, each delimiting a social space of politics and law, starting from the internal/ domestic, and expanding to different levels of the external world.

Figure 2 – Three stages of society and law



Source: Wight, 1992, p. 73.

Let the author himself explain his intriguing drawing (Wight, 1992, p. 73):

A picture began to emerge of three concentric circles; the inner circle was the state, with its municipal law, or '*jus civile*'; the second circle was international society, subject to a volitional, positive law of nations; and the third, outer circle, surrounding the other two, was mankind, subject to natural law (...). This natural law was confused with the '*jus gentium*' of the second circle by [Francisco de] Vitoria; but became more distinct as international society turned to positive law, until, with the growth of positivist realism, it became the sphere of no law or morality.

Wight wrote at a time when decolonization was not yet ripe, and, at the hands of the UN, the institute of trusteeship was still used for the administration of certain territories. The world of the 1950s still had many inhabited portions of land around the globe that could be considered as occupants of the outermost circle. In any case, his exposition shows us that there may be different visions of diplomacy and international law, according to certain territories and their inhabitants (and why not, established powers), are far from what we mean by “society” or “international community”.

From the point of view of assessing the risk of “being out there”, we can draw the lesson that “it depends on where out there”. Nation states, with their companies and banks, can label territories around the world, and their respective governments, as more or less dangerous/ free/ democratic/ stable, among other indicators, when defining their relations with them. And that

is exactly what they do, as we will see later in the last section of this essay.

1.4.3. *A certain arrogance, a shrug...*

We can suspect that politics is underestimated by business and economic decision-makers and their advisors based on the feeble participation of international politics in some fields of professional analysis. This is important because, as demonstrated above, the “international” is sometimes interpreted as a scenario of pure force, of pure politics (in extreme cases, of a “pre-political nature”) or at least lesser institutional and juridical safety.

Take as a select example the market of country risk rating agencies, or sovereign debt risk.¹⁵ We will map the country risk rating criteria present in the “Big Three” methodology of the segment: Standard&Poors, Fitch Ratings and Moody's (Ywata, 2012). In this, the geopolitical/international policy criteria for calculating country risk are minimal when compared with external commercial and financial criteria and, even more, with domestic political-economic criteria.

Table 1 – Thematic distribution of the methodology of the main rating agencies

Agency	Number of criteria	Distribution by nature of criterion
S&P	45 criteria	1 geopolitical 10 external commercial/ financial 34 domestic
Fitch	131 criteria	4 geopolitical 50 external commercial/ financial 77 domestic
Moody's	21 criteria (est.)	0 geopolitical 8 domestic commercial/ financial 13 domestic

Source: Ywata, 2012, pp. 122–125, 128–138, 142.

¹⁵ According to Investopedia (2020, n.p.): “Country risk refers to the uncertainty associated with investing in a particular country, and more specifically the degree to which that uncertainty could lead to losses for investors. This uncertainty can come from any number of factors including political, economic, exchange-rate, or technological influences. In particular, country risk denotes the risk that a foreign government will default on its bonds or other financial commitments increasing transfer risk. In a broader sense, country risk is the degree to which political and economic unrest affects the securities of issuers doing business in a particular country”.

Table 1 shows us how concerns about the outside world are a minority when assessing a country's political and financial health. Certainly, political, social and economic life always takes place within the borders of the state, and there is no ground or population living outside any of the more than 200 currently existing (failed states and stateless migrants are usually temporary exceptions, not the rule). Still, states, when they clash, can generate such absurd damage to populations and markets that it would be fair to expect greater concern for the international dimension of the world from the Big Three.

How would what was exposed in the previous two sections help us create hypotheses about this phenomenon? Walker's outside/ other and the boundaries between Wight's concentric circles point to the external or international as a *non-world*. Just as there is no topography to tread on, there is also no concrete enough social life to be monitored frequently in risk calculations. Concrete military and diplomatic interactions end up taking place in national territories, generating effects on domestic affairs in one or more nations, making the international phenomenon *per se* just a shared abstraction.

Also, the dangers of anarchy that this abstraction carries have already been mapped and organized over the centuries, and do not shake as often as the movements of domestic politics and commercial and financial transactions. The danger of a major war is not null and is truly fatal, but its probability of occurrence is minimal, owing to nation-states' efforts to absorb world politics into their local institutions (with balances of military power, intelligence agencies, and financial interdependence). In the end, the geopolitical prize¹⁶ has already been discounted and international anarchy does not generate so much expectation, fear or anxiety in the usual business of a good part of the human population. For most of the globe, the territories have already been defined and anarchy has already been organized, leaving those who speculate in the financial market to seek really significant volatilities in parts of the globe where these issues have not yet found peace – what is named by specialists as “frontier capitalism” (Bremmer and Keat, 2010).

This apparent depreciation of the importance of the international phenomenon may also be due to the profound changes that the modern system of states has undergone, especially after 1989. Time and space separated by national boundaries face new phenomena and social actors, with new behaviors, and transnationalism challenges a fixed notion of national space. Still, this

¹⁶ In the financial jargon, it would be “premium”. According to Investopedia (2023, n.p.): “Broadly speaking, a premium is a price paid for above and beyond some basic or intrinsic value. Relatedly, it is the price paid for protection from a loss, hazard, or harm (e.g., insurance or options contracts). The word “premium” is derived from the Latin *praemium*, where it meant ‘reward’ or ‘prize’”.

change is underway and shows no signs of approaching a new paradigm, a postmodernity (Ruggie, 1993). The important sociologist Zygmunt Bauman (and Rovirosa-Madrado, 2012) agreed with this – the fact that we are in an interregnum between modernity/ late industrial society and something new yet confusing – even commenting on the digital, transnational and even non-national “hyperspace” created in recent decades by financial markets. Such contributions, however, will not be explored here and are not sufficient arguments for dismissing the admission that we are still in a modern system of nation-states.

To conclude this section, we present a summary table that seeks to organize the answers found to the question about the differences between domestic and external, as shown in Table 1:

Table 2 – Domestic x external: a summary table

Environment	Territory	Population	Political, ethical and legal progress	Guarantees	Identity distribution
Domestic	Concrete/ Physical	Stable	Historical, temporal, accumulated, <i>state-of-the-art</i>	Constitutional, Rule of Law, Freedom guaranteed by institutions	<i>Inside/ Same/ “We, the equals”</i>
External	Abstract/ Imaginary	Unstable/ In Transit	Cyclical, incipient, constrained to a minimum by the structure of the nation-state system	Few and incipient, coming from international regimes, Freedom (of the State) guaranteed by power to claim sovereignty and autonomy	<i>Outside/ Other/ “The different, our antithesis and threat”</i>

Source: elaborated by the author.

Each nation-state would be the holder of the central point of view with the domestic/ external lens, in which its national reality exclusively holds the domestic environment. Although, for example, for Brazil, Argentina and Colombia are nation states like him, holders of territory and concrete populations, the simple fact that “they are not Brazil” makes them a source of uncertainty out of control. Foreign countries are, therefore, part of the “external” imaginary. Likewise, Brazil will be seen as such by Argentina and Colombia. The analytical richness of Wight's concentric circles should not be discarded, but inserted in Table 1 in

situations requiring specific case analyses. Hence, the external environment would be divided into at least two – one for the international society committed to international law around Western regimes and the other for more complex relations, little institutionalized, or involving the so-called rogue states.

Thus, we would have the adjustment of the lenses to understand what is at stake, in fact, between domestic and external, according to the actors and the agendas involved. For example, one thing would be the relationship between the U.S. and Canada in a WTO trade dispute, another would be the territorial tension between Venezuela and Guyana, and a third could be between the United Kingdom and South Sudan. In the three situations there is a notion of domestic/ external for each state involved, but they will bring a distribution of identities, guarantees and even different ethical and moral duties.

1.4.4. Airplane and car crashes

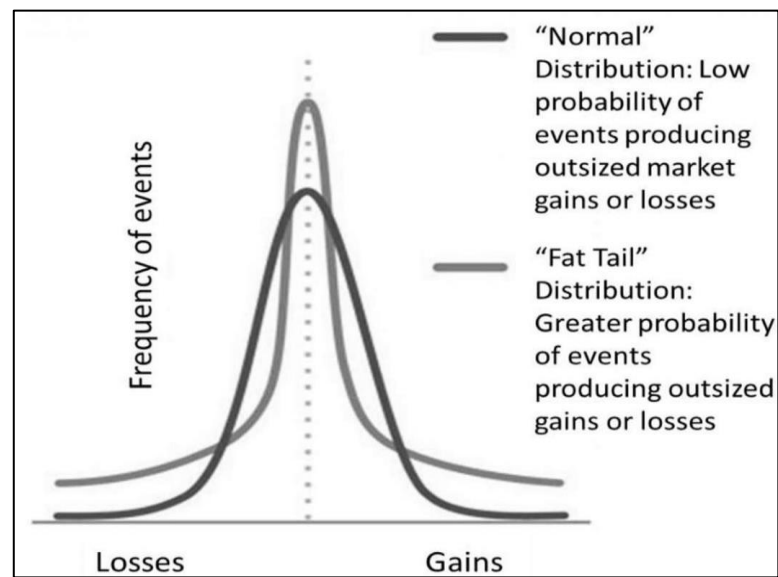
In PRA, understanding the distribution of risks is crucial for forecasting potential impacts on markets, businesses, and societies. Two main types of risk distribution and their graphic forms are often contrasted: risks resembling a “normal distribution curve” and those resembling a “fat-tailed curve”. This distinction helps analysts grasp not only the likelihood of certain events but also the severity of their potential impacts. The difference between these two distributions is fundamental for risk management, particularly when assessing political risks that may lead to market disruptions.

Normal distributions usually resemble mild market-to-market impacts. A normal distribution curve, or Gaussian distribution, is characterized by outcomes caused by a usual event clustering around a mean or average value (being: most investors were not significantly affected). In this model, extreme outcomes, or outliers, are rarer and their occurrence diminishes significantly the further one moves from the mean, representing investors getting destroyed or much richer after market events considered ordinary. These fluctuations are analogous to “noise” in the system, representing small, frequent, and relatively insignificant disturbances that do not deviate drastically from normal expectations.

In contrast, risks that follow a fat-tailed curve, often referred to as “Black Swan” risks in the terminology popularized by Nassim Nicholas Taleb (2010), are those where the probability of extreme outcomes is significantly higher than in a normal distribution. In a fat-tailed distribution, rare but catastrophic events – such as political revolutions, wars, or major

geopolitical crises – leaves very few people unaffected in the middle of the curve, but growingly (as the sample moves to the left) injured. A second minority profits high with tragedies, clustering the right-side of the curve.¹⁷ These events are less frequent but carry massive, disproportionate consequences when they do happen, as illustrated by Graph 1. Political risks often belong to this fat-tailed category because political systems and international relations are complex, unpredictable, and susceptible to tipping points that can trigger systemic crises.

Graph 1 – Normal and Fat Tail Distributions



Source: Wilsons (2019).

Bremmer and Keat (2010) highlight that, political risks, particularly those on the international stage, do not conform neatly to the assumptions of a normal distribution. They argue that geopolitical risks – such as the collapse of a government, sanctions, or military conflicts¹⁸ – are inherently more volatile and can have cascading effects that are impossible to anticipate using models based on historical data alone. In other words, while market volatility might fluctuate in relatively predictable patterns under normal conditions, political disruptions can lead to sudden, unprecedented shifts that upend entire systems, reflecting a fat-tailed distribution where extreme outcomes occur more frequently than expected.

Taleb’s critique of traditional risk models aligns with this, particularly in his discussion of the limitations of conventional statistical tools that rely on normal distributions. In his work,

¹⁷ For a more technical concept: “Tail risk is a form of portfolio risk that arises when the possibility that an investment will move more than three standard deviations from the mean is greater than what is shown by a normal distribution. Tail risks include events that have a small probability of occurring and occur at both ends of a normal distribution curve” (Hayes, 2023, n/p).

¹⁸ As Bertrand Badie (2017, n/p) puts it: “(International Relations) is the science of human suffering”.

Taleb (2010) contends that traditional financial and risk models often underestimate the likelihood of extreme events because they assume that events follow a normal distribution, ignoring the possibility of fat tails. This misjudgment can lead to significant vulnerabilities, as it fails to account for the disproportionate impact of rare but severe events, from 9-11 to Covid-19, cutting through the Arab Spring.

Political risk, by its nature, tends to produce fat-tailed distributions because of the interconnectedness of global systems and the cascading effects that political events can have on multiple sectors. A coup in a small country might seem like a contained risk, but in a globalized world, its ripple effects can be far-reaching, affecting trade routes, energy markets, and regional stability. Similarly, a diplomatic spat between two major powers can escalate into sanctions, trade wars, or even military conflicts, all of which have unpredictable, systemic consequences. The interdependence of political, economic, and social systems means that small perturbations can sometimes trigger large-scale disruptions, a hallmark of fat-tailed risks.

One of the key differences between normal distribution risks and fat-tailed risks is their predictability. Risks that follow a normal distribution are more manageable because they fall within predictable boundaries. For example, political risks like routine elections in stable democracies or minor regulatory changes typically result in short-term market volatility, but the impacts are contained and revert to the mean. Businesses and investors can hedge against these risks by diversifying portfolios, creating contingency plans, or purchasing insurance products that account for small deviations from normal market behavior.

Fat-tailed risks, on the other hand, are inherently less predictable because they often result from complex systems reaching critical thresholds. In a fat-tailed world, traditional methods of risk mitigation, such as diversification, may fail because extreme events can cause correlated losses across what would normally be unconnected markets or sectors. In political risk analysis, this is especially important when considering events like wars, terrorist attacks, or sudden regime changes, where the aftermath can disrupt global supply chains, financial markets, and political alliances. Such events do not just cause volatility – they can fundamentally alter the operating environment for businesses and governments.

To illustrate the difference between market-born and (critical) political-born impacts in terms of risk, consider the metaphor of negative idiosyncratic market impacts on stock exchanges as “car crashes” and huge political or geopolitical impacts as “airplane crashes”. Market-driven risks, much like car accidents, tend to be frequent but mild in terms of their overall effect for most of the occurrences (although there are very serious and deadly outcomes, of course, but they are the exception, not the rule). A bad earnings report or a small policy

change might lead to a temporary dip in stock prices, but markets are generally resilient to these small shocks, and recovery is swift. Investors are used to dealing with such risks because they are part of the normal fluctuation of the market, much like the routine risk of driving a car.

On the other hand, political-born impacts more disruptive than just regulatory adjustments (*coups*, riots, etc.), especially those of a geopolitical nature (especially wars), resemble airplane crashes: they are rare but catastrophic when they do occur. These events can cause systemic disruptions, not only to financial markets but to entire political and economic systems. A geopolitical conflict or a major international crisis can wipe out years of economic growth, destabilize governments, and lead to long-lasting consequences that are difficult to predict or contain. The rarity of such events makes them harder to anticipate, but when they do happen, their impacts are often much more severe and widespread than the frequent, smaller disruptions that characterize market risk.

In sum, academia, insurance companies, consultants and other knowledge providers for the financial markets try to act as destruction preventers with theoretical models of growing sophistication, one that would make early Protestant usurers offended and dizzy. The problem is: different from airplane crashes that are relatively stable phenomena waiting for improvements in mechanics and meteorology (please, forget about all the human and corporate complexities involved in aeronautics, for the sake of analogy), political and geopolitical “black swans”, by definition, are of a reflexive nature with society that makes old tragedies old, and new ones always uncertain and of no possible prediction or of preemptive safeguard against.

“Could someone please just tell me what happened? I mean, first we paid for fast-food that will make us all fat and tired. So then we pay for elevators, so we won't have to climb the 3 stairs up to our apartments. Then we buy freaking stairmaster machines so we can burn away while watching someone make real food on TV. Now if that doesn't make us winners, I don't know what will. I bet we would hang ourselves if the world would just cut us a slack. And now you think maybe you should see a shrink, help (me) feel alive again, yeah, that's a plan! Just tell us who to pay”.

(“Kingdom of Loss”, Pain of Salvation¹⁹)

CHAPTER 2: MAKING IT ALMOST IMPOSSIBLE (DIVERGENCES WHILE THEORIZING FINANCIAL CRISES)

What *is* happening is capitalism, at least its post-industrial and financialized form. But what are the complexities of capitalism, especially when it comes to its financial crises, that are so hard to intellectually organize and make the output useful to a risk framework?

The question at the heart of this dissertation – whether stock exchange movements are more sensitive to factors of private-economic nature or to political, geopolitical, and social forces – has not been answered definitively by the existing literature. This is not simply a gap in the empirical record: it is, as the pages that follow will argue, a consequence of deep theoretical disagreements about the architecture of modern capitalism itself. Financial markets are amongst the most analytically contested objects in the social sciences, and any honest investigation of their sensitivity to non-economic events must begin by confronting that contest head-on.

The most penetrating point of entry into this problem belongs to Keynes, who argued that market volatility emerges not merely from quantifiable variables but from the interaction of psychological expectation and geopolitical pressure (Keynes, 2017a [1936]). The knowledge available to estimate the yield of a factory or a railway ten years hence is often “very slight and often negligible” (*op. cit.*). This epistemic limitation is constitutive of how financial markets function, not incidental to it.²⁰

¹⁹ Gildenlöw, 2007.

²⁰ The fragility of long-term expectations explains why non-economic events trigger stock exchange panics. Once ownership separated from management and organized investment markets developed, daily revaluations became

Yet the key analytical concept for operationalizing this research question is not Keynes's uncertainty, indispensable as that is, but *power* – as theorized by Strange in *The Retreat of the State* (1996). Strange's framework identifies four structural dimensions of power – security, production, finance, and knowledge – and insists that authority over each of these dimensions determines who thrives in particular situations regarding the global economy (Strange, 1996). Crucially, this authority is not reducible to economic logic: it is political in origin, variable in distribution, and consequential for every market signal that investors observe and act upon. To ask whether stock exchanges react more sharply to economic or to political forces is, from this standpoint, to ask a prior question about where power actually resides.

2.1 The Fault Lines of the Debate

Any rigorous investigation of how non-economic events produce impacts on financial markets must begin with an honest acknowledgement of a foundational theoretical difficulty: financial markets and their periodic crises are amongst the most analytically intractable objects of social-scientific inquiry. This is not a technical limitation that further modelling will eventually resolve. It is, as the literature surveyed here argues from competing ideological standpoints, a structural feature of modern capitalist economies. Before identifying exogenous, non-economic triggers of market panic, one must first confront the deep disagreement about what financial markets are – about what makes them stable or unstable, rational or irrational, self-correcting or self-destructive.

hostage to shifting second-order expectations rather than to underlying productive performance. Keynes's "beauty contest" analogy captures the mechanism: the professional investor does not select what he genuinely believes to be the soundest asset but what he expects the average investor to regard as most attractive. When an external shock disrupts the conventional basis on which these expectations rest, irrational waves of optimism or pessimism overwhelm the market, making monocausal explanations of crisis virtually impossible (Keynes, 2017a). Positive economic activity also depends on what Keynes calls "animal spirits" – a spontaneous urge to act rather than to wait – and not on a calculus of expected returns alone. A hostile political or social environment dims these spirits and depresses the will to invest, regardless of whether underlying economic fundamentals have deteriorated. *The Economic Consequences of the Peace* extends this argument to the macro-historical register, demonstrating how a single political miscalculation – the Treaty of Versailles – can devastate a complex economic system. Keynes describes the pre-1914 economic organization of Western Europe as "unstable, complicated and temporary", even though contemporaries experienced it as natural and permanent (Keynes, 2017b [1919]). That stability rested on a tacit social contract: working classes accepted a disproportionately small share of output, while the capitalist class retained the bulk on the implicit condition that it would be reinvested rather than consumed. The war shattered both the psychological conventions and the material foundations of this arrangement.

Three major schools of thought have addressed the research question. The first – the neoclassical, liberal, and monetarist tradition – holds that markets are efficient processors of all available information, including political information, and that what appears as a market disruption caused by politics is, in fact, either a rational repricing in response to genuinely new data or the consequence of prior state interference that distorted price signals. The second – the heterodox and post-Keynesian tradition, to which this dissertation principally aligns – holds that financial instability is endogenous to capitalism, that political and social forces constitute rather than merely disturb markets, and that the power asymmetries described by Strange (1996) systematically reproduce conditions for crisis. The third – a conceptual-historical tradition represented here by Koselleck – reframes the entire problem: market crises are not simply responses to events but manifestations of deep temporal structures that accumulate across historical time, rendering the search for proximate political or economic causes always partially misleading.²¹

The literature, taken as a whole, has produced three partial answers to the research question. First, non-economic events do measurably affect stock markets, and this effect is documented across contexts, sectors, and geographies.²² Second, the magnitude and

²¹ Ferguson approaches financial history through a macro-historical narrative structured by an evolutionary metaphor: the financial system is a Darwinian ecosystem in which institutions compete for survival, financial innovation plays the role of genetic mutation, and market crises function as episodes of mass extinction (Ferguson, 2008). Attempts to prevent all market failures ultimately produce a more fragile and less adaptive system. His critique of the “Great Degeneration” of Western institutions identifies excessive regulation, accumulated public debt, and the substitution of rule-by-lawyers for rule of law as primary causes of the institutional decay that leaves economies vulnerable to catastrophic disruption. His observation that globalization has disproportionately benefited holders of intellectual property, financial assets, and rare skills leads him to warn of a deepening crisis of legitimacy for the liberal international order (Ferguson, Zakaria and Griffiths, 2017). Dalio’s theory of the “Big Debt Cycle” offers a systematic account of the long-run dynamics of credit creation (Dalio, 2017). Credit creation is inherently cyclical: it generates spending and growth in the short term but accumulates debt burdens that eventually require painful deleveraging. The “Overall Big Cycle” is driven by five interacting forces – debt dynamics, internal political order, external geopolitical order, acts of nature, and human inventiveness – a comprehensive list that explicitly incorporates non-economic factors as co-determinants of economic outcomes. When high indebtedness coincides with domestic political polarization and rising geopolitical tensions, societies enter a late-cycle phase that frequently culminates in depression, social crisis, and, in extreme cases, war.

²² The institutionalist tradition, most recently represented by Acemoglu and Robinson, distinguishes between “inclusive” and “extractive” institutions as the long-run explanation for divergent national trajectories: inclusive institutions sustain growth by enabling the creative destruction that Schumpeter identified as the engine of capitalist dynamism, whilst extractive institutions concentrate power and wealth in ways that suppress innovation and entrench privilege (Acemoglu and Robinson, 2012). This resonates with the earlier institutionalist work of North (1990). Acemoglu and Robinson’s insistence on path dependence constitutes a systematic empirical challenge to Fukuyama’s “End of History” thesis (Fukuyama, 2006): many nations are not converging towards Western liberal democracy but remain trapped in extractive or despotic cycles that reproduce themselves across generations (Acemoglu and Robinson, 2019). Fukuyama himself later acknowledged the possibility of “political decay” and the necessity of state-building even within broadly liberal frameworks – a concession that recognizes liberal institutions as more fragile than the optimistic post-Cold War consensus had assumed, and that financial markets in a world of imperfectly consolidated liberalism are correspondingly more exposed to political disruption. Sustained growth requires not only the economic

directionality of this effect depend critically on the structural condition of the financial system at the moment of the shock – on whether leverage, risk appetite, and institutional fragility have already accumulated to dangerous levels. Third, the channels through which non-economic events transmit to markets are primarily cognitive and institutional – operating through narrative, expectation, and the exercise of structural power – rather than through direct alteration of productive fundamentals.²³ Each of these partial answers points towards the dissertation’s central hypothesis: political forces hit harder than purely economic ones, not because they are more frequent, but because they strike the system at the level of confidence, authority, and structural power where capitalism is most vulnerable.

2.2 The Orthodoxy and Its Unified Defense: Pricing Politics into Equilibrium

The dominant theoretical framework of modern financial economics is the Efficient Market Hypothesis (EMH), whose primary architect is Fama. In its canonical formulation, security prices fully reflect all available information – a consequence of competitive arbitrage that eliminates persistently exploitable profit opportunities (Fama, 1991). The market is, in this account, a supremely efficient information-processing machine: whatever is knowable is already priced in. Fama concedes that market efficiency cannot be tested independently of an asset-pricing model – the “joint hypothesis” problem – so that any apparent anomaly may indicate either market inefficiency or an ill-specified model of expected returns (Fama, 1991). This methodological entanglement has served

conditions for innovation but the political capacity to manage its distributional consequences – what Acemoglu and Robinson conceptualize as maintaining a “narrow corridor” between the “Despot Leviathan” and the “Absent Leviathan” of political anarchy.

²³ Milanovic provides a rigorous empirical account of the long-term trajectory of global inequality (Milanovic, 2010). His finding that approximately eighty percent of global inequality is currently determined by country of birth rather than by individual talent or effort is amongst the most striking facts in contemporary political economy. His analysis of contemporary capitalism identifies two competing models: liberal meritocratic capitalism, exemplified by the United States, and political or authoritarian capitalism, led by China (Milanovic, 2019). What he identifies as capitalism’s signal achievement – the transformation of human beings into calculating machines that internalize profit-maximization even in their private lives – is simultaneously its most profound social danger. This progressive commercialization of social life echoes Polanyi’s analysis of the costs of disembedding the economy. His concept of “Kuznets Waves” offers a complementary long-run account of inequality’s relationship to political stability. The first industrial revolution generated rising inequality that was eventually corrected through education, redistribution, and the malign forces of war and epidemic. The second technological revolution of the 1980s launched a new upward wave driven by skill-biased technological change and globalization, hollowing out the middle classes in developed economies and fueling the populist backlash now threatening liberal democratic institutions (Milanovic, 2016). Financial instability and political instability thus reinforce each other in ways that standard economic models are unable to capture.

as a productive shield for EMH defenders. Phenomena such as the size effect or the value premium can be reinterpreted as rational risk premiums rather than as evidence of irrationality. Even sharp price volatility need not constitute proof of inefficiency, since price movements in a competitive market should by definition be unpredictable (Fama, 2017). Asness and Liew (2017), practitioners broadly sympathetic to Fama, acknowledge that markets can remain in irrational states far longer than individual investors can sustain their positions – a concession that opens a significant gap between the model’s prescriptions and the behavior of markets under stress.

The second pillar of neoclassical macroeconomic orthodoxy is the Rational Expectations hypothesis associated with Lucas, who generalized the principle of agent rationality to the entire economy: agents are assumed to face no essential information gaps, and their actions are perfectly coordinated through intertemporal general equilibrium (Day, 1992). Business cycles are attributed to external stochastic shocks rather than to any endogenous instability of the market system. Government intervention, far from stabilizing the economy, is conceived as an arbitrary random disturbance that alters the fundamental “law of motion” of the economic system (*op. cit.*).

The monetarist variant, most forcefully represented by Friedman, extends this logic directly to financial crises. Economic freedom is, in his account, constitutive of political freedom itself – the free market, by separating economic from political power, functions as an indispensable safeguard of individual autonomy (Friedman, 2002). Financial panics are historically caused or dramatically worsened by government mismanagement rather than by inherent market instability. His most celebrated historical argument holds that the Great Depression was not a failure of capitalism but a failure of monetary policy – specifically, the Federal Reserve’s contraction of the money supply by approximately one-third between 1930 and 1933 (Friedman and Friedman, 1980). The “invisible hand” of the market remains far more potent as an engine of progress than the “visible hand” of government, which systematically serves special interests rather than the general welfare (Friedman, 1993).

What unifies the EMH, Rational Expectations, and monetarism – and what this dissertation must engage with directly rather than dismiss – is a coherent and internally consistent hypothesis about how political events enter economic reality. For all three frameworks, any exogenous political effect is, in itself, a shift in intertemporal equilibrium: markets price in political risks before state actions materialize; therefore, in a non-economic crisis, it is not the crisis itself but the state’s response to it that generates

the greatest disruption. The volatility that follows a political shock is, on this view, a consequence of the uncertainty introduced by government intervention – not a market failure but a market response to policy failure. This hypothesis deserves to be answered empirically and theoretically, not caricatured.

Day subjects this neoclassical framework to systematic critique from the perspective of complexity economics and disequilibrium dynamics. Markets, in his account, are networks of cognitively limited agents who cannot possibly possess the information or computational capacity that the Lucasian model presupposes (Day, 1992). The economy does not move from equilibrium to equilibrium; it evolves in perpetual disequilibrium, driven by institutional innovation and creative thinking that are endogenous to the system rather than externally imposed. The treatment of government as a random shock is not merely theoretically inadequate but politically dangerous, since it obscures the indispensable role of democratic institutions in managing the instabilities that markets themselves generate (*op. cit.*). If instability is endogenous – generated by the internal dynamics of capitalism – then the non-economic event functions less as a first cause and more as a trigger for tensions already latent in the system's structure. Both hypotheses are consistent with the empirical observation that political and social events precipitate market panics; they differ profoundly in their causal logic and their policy implications. This distinction is precisely what the dissertation's hypothesis turns on.

2.3 The Heterodox Challenge: Power, Structural Fragility, and the Irrationality of Finance

The most systematic heterodox challenge to the neoclassical consensus begins, for the purposes of this dissertation, not with any particular model of market irrationality but with an ontological claim about what markets are. Strange's *Casino Capitalism* and *The Retreat of the State* offer a robust framework that treats financial instability not as an exogenous shock but as the predictable consequence of deliberate political choices and structural shifts in authority (Strange, 2015; Strange, 1996). Strange's central claim is that markets exist only by permission of the state and under its authority, and that the "Panglossian" assumption that market outcomes are naturally benign obscures the political decisions that constituted those markets in the first place (Strange, 2015).

The concept of *power* (Strange, 1996) is essential here and must be understood as

more than mere political influence over market regulations. Strange identifies four structural dimensions – security, production, finance, and knowledge – through which authority over the terms of global economic life is distributed and contested. Transnational corporations have become “central organizers” of the global economy (Strange, 1996, but this corporate power itself rests on a political foundation that can be withdrawn or redirected by states or by the collapse of the arrangements sustaining it. The financial structure is particularly exposed to this dynamic: no effective international lender of last resort exists, and the power asymmetry between states that function as “masters of markets” – such as the United States, Germany, and Japan when Strange wrote – and those that are merely “subject to their dictates” is not an economic phenomenon but a political one (Strange, 2015). The US Treasury and the Federal Reserve act as “toll-keeper” to the global financial system, yet calibrate their decisions against domestic considerations rather than systemic global stability (Strange, 2015; 1996).

The “casino” metaphor captures a world in which financial markets have escaped democratic accountability. In this global casino, participation is involuntary: shifts in interest or exchange rates can destroy livelihoods irrespective of individual conduct (Strange, 2015). Watson (2015) argues that this metaphor even understates the asymmetry: while a casino offers fixed odds, high-frequency traders use algorithms and speed advantages to eliminate downside risk for themselves, effectively appropriating the positions of other market participants. The “house” – major banks and brokers – no longer merely sets the odds; it can dictate the outcome. Strange identifies a growing “democratic deficit” as authority disperses beyond the reach of electoral accountability, while states increasingly regulate marginal aspects of daily life whilst abdicating their core functions of providing security, stable money, and clear law (Strange, 1996). Financial markets are governed by “opinions rather than objective changes in supply and demand” and operate on a reflexive principle whereby perception itself alters outcomes (Strange, 1996). The result is a disjointed structure of authorities pulling in different directions (Strange, 1996) in which market signals and individual conscience fill the vacuum left by the state’s retreat. Strange’s framework thereby supplies a mechanism that purely economic models lack: a systematic account of how changes in the political and geopolitical environment alter the structural conditions within which financial markets operate, producing the disruptions that empirical observation repeatedly documents.

Polanyi reinforces this point from a different direction. His central argument is

that the self-regulating market is a “stark utopia” – a construction that cannot function without systematically destroying the human and natural substance of the society within which it operates (Polanyi, 2001). The fundamental error of nineteenth-century economic liberalism was the attempt to disembed the economy from its social relations: to treat markets as autonomous entities rather than as historically specific institutions embedded in webs of social obligation, cultural meaning, and political authority. The mechanism of disembedding was the transformation of labor, land, and money into “fictitious commodities” – goods traded on the market even though they had not been produced for sale. Society’s response takes the form of what Polanyi calls the “double movement”: a protective countermovement that seeks to limit the market’s reach through social legislation, labor organization, and state intervention. This countermovement, whilst necessary for social survival, necessarily impairs the market’s self-regulating function and generates new cycles of instability. Financial panics are thus not aberrations within an otherwise self-correcting system but recurrent expressions of the fundamental tension between market logic and social sustainability. The non-economic events that trigger panics are not external intrusions into an autonomous economic sphere but manifestations of the social forces that have always conditioned and constrained market behavior. Polanyi’s treatment of the Gold Standard is particularly instructive: its collapse in the interwar period is understood not primarily as an economic failure but as the breakdown of a political arrangement that had subordinated domestic social needs to international monetary stability (Polanyi, 2001; Kindleberger and Aliber, 2005).

The structural architecture through which political events are transmitted to financial markets is further illuminated by the literature on financialization and global financial hierarchy. The contemporary global financial system operates through what Germain (2007) terms “decentralized globalization”, in which multiple centers function as nodal points without any one of them exercising unambiguous structural leadership. From Marxist and Minskyan perspectives, the contemporary period is characterized by “fictitious accumulation” – in which the proliferation of financial instruments creates a self-referential logic of valuation that increasingly detaches asset prices from the underlying productive activities they purport to represent (Carneiro, 2020). Derivatives markets alone reached approximately US\$ 500 trillion in 2004, dwarfing world GDP by a significant margin (Germain, 2007, pp. 78-79). In this context, prices are determined less by fundamental values than by mimetic behavior, shifting conventions, and collective risk appetite, making financial cycles themselves the primary drivers of real economic

cycles rather than the reverse (Carneiro, 2020; Uluyol, 2017). This disproportionality constitutes the structural background against which all market panics must be interpreted.²⁴

States that exercise jurisdictional control over central network nodes – SWIFT, internet exchange points, dominant clearing systems – hold a privileged position from which to deploy what Farrell and Newman (2019) term “weaponized interdependence”: the capacity either to surveil financial flows through a “panopticon effect” or to sever adversaries from essential infrastructure through a “chokepoint effect”. The expansion of SWIFT from roughly 500 member firms in the 1970s to over 11,000 financial institutions by 2016 illustrates precisely how transaction-reducing hubs accumulate coercive political power over time (Farrell and Newman, 2019). The weaponization of financial infrastructure thus constitutes a structurally embedded mechanism through which geopolitical conflict directly materializes as market disruption – not through a rational repricing of fundamentals but through the exercise of power over the very architecture of trade and payment.²⁵

²⁴ An illustrative example from South Africa shows how, within the same national economy, mining companies access capital through equity markets on relatively favorable terms while workers are channeled into extractive micro-credit schemes – a dynamic that reflects deeper patterns of Trotsky’s “uneven and combined development” inscribed into the architecture of global finance (Kvangraven and Styve, 2023, p. 12). These hierarchies carry a pronounced political dimension that requires what Kvangraven and Styve call an “anti-disciplinary” research agenda, attentive to the historical and political determinants that mainstream finance theory tends to naturalize (Kvangraven and Styve, 2023). Stiglitz (2001), in his foreword to the contemporary edition of Polanyi’s work, bridges academic theory and policy debate by arguing that the Washington Consensus – the package of capital market liberalization, deregulation, and fiscal austerity promoted by international financial institutions in the 1990s – represented a modern recapitulation of the liberal utopia that Polanyi had diagnosed. The rapid liberalization of capital markets imposed risks disproportionately borne by the poor, as demonstrated by the East Asian crisis of the late 1990s, when billions of dollars of short-term capital flows shifted abruptly in response to rapid changes in market sentiment.

²⁵ The international legal architecture designed to protect private investment from political risk has come under corresponding stress. International Investment Agreements (IIAs) and Investor-State Dispute Settlement (ISDS) mechanisms were developed largely on the assumption that they would promote foreign direct investment by providing credible legal protection against arbitrary state action. A growing body of scholarship challenges this rationale, finding that IIAs frequently expose states to costly litigation initiated by private investors without generating commensurate gains in actual investment flows (Moehlecke and Wellhausen, 2022). For firms operating in high-risk environments, effective strategies documented in the literature include cultivating working relationships with host governments, purchasing political insurance instruments, and carefully selecting capable local contractors and intermediaries (Jiang and Martek, 2023). In what might be called “zones of fracture” – environments where state authority has effectively collapsed – institutional disruption simultaneously creates profit opportunities for violent entrepreneurs and private military companies, illustrating how political risk is distributed profoundly unevenly across different types of economic actor (Felício Jr. and Figueira, 2022).

2.3.1 Minsky and Shiller: *Instability from Within, Panic from Without*

The most structurally comprehensive account of endogenous financial fragility within the post-Keynesian tradition belongs to Minsky, and it must be read in tandem with Shiller's account of irrational market behavior if its full implications for the research question are to be extracted. Together, these two authors explain not only why capitalism periodically collapses but why political and social events serve as the occasion – rather than the cause – of that collapse.

Minsky's Financial Instability Hypothesis rests on a paradox: stability is destabilizing. Capitalism does not naturally gravitate towards equilibrium but generates the conditions for its own periodic collapse precisely during periods of prosperity (Minsky, 2011). As expansions lengthen, the memory of previous crises fades, risk tolerance rises, and financial actors progressively shift from conservative hedge finance – in which cash flows cover both principal and interest – to speculative finance, in which cash flows cover only interest, and ultimately to “Ponzi finance”, in which even interest payments require further borrowing. Leverage accumulates until a relatively minor disturbance suffices to trigger a cascade of forced asset sales and collapsing prices: the Minsky moment (Minsky, 2011). Minsky's framework also contains one of the most penetrating critiques of the neoclassical synthesis: the standard approach treats the economy as if it were a simple barter system – a “village fair” – ignoring the “financing veil” of money and the pervasive uncertainty that define real capitalist economies. Uncertainty is not a parameter to be minimized in formal models; it is the constitutive condition of economic life under capitalism, and any theory that cannot accommodate it is not merely incomplete but fundamentally misleading.²⁶

Shiller's contribution to this joint framework operates at the level of cognition and social contagion. In *Narrative Economics* (2019), he argues that popular economic stories function as “thought viruses” that spread through populations by social contagion and

²⁶ Sharma offers a contrarian perspective that resonates with Friedman's warnings about government overreach whilst drawing on heterodox evidence (Sharma, 2024). He argues that capitalism has been fundamentally distorted by the “bailout culture” that has developed since the 1980s: successive government rescues of financial institutions and corporations have eliminated the cleansing effect of recessions, producing a proliferation of “zombie companies” – unprofitable enterprises that survive only by refinancing their debts on terms made possible by central bank suppression of interest rates. The explosion in billionaire wealth since 2000 – from a negligible number globally to more than 2,600 – is, in Sharma's analysis, less a consequence of genuine entrepreneurial value creation than a symptom of markets distorted by government stimulus. The paradox is that the very interventions intended to stabilize capitalism have, in his reading, created new and deeper instabilities by suppressing the market's natural error-correction mechanisms.

thereby shape mass economic behavior. A narrative linking a geopolitical crisis to an impending recession can self-fulfil its own predictions by inducing the very contraction of investment and consumption that it forecasts. His account of speculative bubbles is consistent with this logic: a bubble is a psychological epidemic in which rising prices generate enthusiasm, enthusiasm generates justificatory narratives, and those narratives draw successive waves of investors through envy and speculative excitement (Shiller, 2015). Collapse follows when the sustaining narrative – such as a belief in enduring political stability – can no longer be maintained. At the empirical level, Shiller’s most powerful challenge to the EMH is his evidence of “excess volatility”: stock prices fluctuate far more than the discounted present value of future dividends would rationally justify, suggesting that market movements are driven by factors beyond any rational updating of expectations about fundamentals. This excess volatility is sustained by herd behavior and information cascades, in which investors progressively abandon their own private signals in favor of following the crowd, amplifying both bubbles and their eventual corrections.

The crucial joint contribution of Minsky and Shiller to the research question is as follows: the financial system accumulates fragility endogenously, through mechanisms that are invisible or actively pleasant to its participants. Simultaneously, the narrative environment within which those participants operate is structurally susceptible to the contagion of fear and euphoria, making it acutely sensitive to political signals. When a political event disrupts the sustaining narrative of stability – when a war, a populist election, or a pandemic shatters the “horizon of expectation” that has been sustaining Ponzi finance – the Minsky moment and the Shiller panic reinforce each other in a mutually amplifying dynamic. The political event does not create the fragility; it exposes it. The neoclassical assertion that state response is the real culprit is thereby inverted: it is the structure of finance itself, built during the preceding period of apparent calm, that is the primary vulnerability. The political shock is the precipitant, not the cause.

Akerlof and Shiller extend the behavioral framework further by demonstrating that free markets systematically exploit human psychological weaknesses rather than functioning as neutral processors of information (Akerlof and Shiller, 2015). Competitive dynamics create powerful incentives for manipulation: firms that do not exploit the cognitive biases of customers, employees, and investors risk being outcompeted by those that do. Manipulation is therefore not a deviation from normal market behavior but a structural feature of it. The 2008 crash exemplifies this pattern: credit rating agencies

engaged in “reputation mining” by assigning the highest ratings to complex and opaque financial derivatives, enabling investment banks to borrow sums exceeding ninety-five percent of their total assets. Both “psychological phools” – those whose cognitive biases.

2.4 The Empirical Record: Transmission Mechanisms and the Scale of Political Disruption

Whether political, geopolitical, or social events can be identified as systematic causes of financial market instability is ultimately a question about the architecture of modern capitalism. The scholarly record is consistent on one point: crises rarely emerge from a single isolable shock. They develop through an interactive *continuum* in which political distortions and structural market vulnerabilities compound each other, rendering straightforward causal attribution elusive. This difficulty is not merely methodological – it reflects the genuine organization of contemporary global finance, characterized by overlapping hierarchies, pronounced informational asymmetries, and a persistent divergence between the valuation logic of financial assets and the productive realities they nominally represent.

Despite its prominence in journalistic and policy discourse, geopolitical risk (GPR) remains analytically imprecise – used inconsistently across scholarly and public contexts – which makes rigorous empirical work both necessary and challenging (Caldara and Iacoviello, 2017). News-based indices designed to measure GPR reveal that a typical risk spike is associated with a depression of industrial production in advanced economies of approximately 1 percent alongside a measurable tightening of financial conditions (Caldara and Iacoviello, 2017, p. 3). More significant, however, is the asymmetry between threat and act: “geopolitical threats” – the uncertainty surrounding a potential conflict – tend to produce considerably more severe recessionary effects and more negative stock market impacts than actual “geopolitical acts”, meaning the realized event itself (Caldara and Iacoviello, 2017). It is the anticipation of violence, rather than violence as such, that inflicts the greatest damage on economic activity. This finding is entirely

Event-study evidence from the Russia-Ukraine conflict, which began in 2022, confirms this at the level of national markets. For the Russian market, the shock was immediate and severe: the Russian stock exchange fell by approximately 33% on the day of the invasion announcement, reflecting a sudden massive discounting of future

profitability in response to the prospect of international sanctions (Najaf, Joshipura and Alshater, 2022, p. 2). European markets – particularly Germany and France, given their significant trade and energy exposure – recorded meaningful negative abnormal returns and elevated volatility. US and Japanese markets demonstrated relative resilience, reflecting both their greater structural distance from the conflict zone and the different composition of their external economic relationships (Sobhy, 2024; Bossman and Gubareva, 2023). The asymmetry of these impacts reveals not the neutral pricing of new economic information but the differential exercise of geopolitical power – Strange’s (1996) structural hierarchy made visible in market data.

The literature proposes a conceptual framework – the “uncertainty trinity” – that integrates the several dimensions of non-economic risk into a coherent analytical structure. This trinity consists of three distinct but interrelated forces: economic policy uncertainty (EPU), market volatility as measured by the VIX index, and geopolitical risk proper (Mitsas, Golitsis and Khudoykulov, 2022). Each leg of this triad can independently disrupt financial markets, but it is their interaction that generates the most severe and persistent distortions. In commodity markets, geopolitical acts and threats alike are associated with negative returns across multiple asset classes, reflecting the dual role of these commodities as both economically essential inputs and safe-haven assets. During the Russia-Ukraine conflict, elevated VIX exerted upward pressure on gold prices, consistent with the flight-to-safety narrative. Yet, this same elevated VIX was associated with negative effects on military-industrial stocks, indicating that even sectors presumed to benefit commercially from armed conflict are not insulated from general market panic (He, 2022). This counterintuitive result challenges simple sectoral analyses of war’s economic beneficiaries and reinforces the argument that political crises disrupt markets through their structural effects on confidence and expectation rather than through predictable sectoral redistribution.

2.4.1 Political Institutions, Electoral Cycles, and Structural Fragility

At the institutional and firm level, the literature establishes that domestic political dynamics distort economic priorities and contribute to financial fragility in ways that the neoclassical framework systematically cannot account for. In the banking sector, political

interference is identified as a primary source of systemic risk: government intervention and politically motivated lending – particularly in emerging markets and during electoral periods – systematically generate poorer bank performance and heightened systemic risk (Janbaz et al., 2022). Research on China distinguishes carefully between state-owned enterprises (SOEs) and privately held firms. In SOEs, political connections exacerbate stock price crash risk: board members may prioritize state social objectives over financial transparency, leading to the systematic withholding of negative information – what the literature terms “bad-news hoarding” – until the accumulated pressure triggers a sudden and severe price correction. In private firms, however, political connections can function as a stabilizing “helping hand”, providing institutional protection that reduces crash risk and supports investor expectations (Lee and Wang, 2017). The same structural feature generates opposite effects depending on the ownership context – a finding that no simple equilibrium model can capture.

For the Brazilian case, empirical research demonstrates that the national stock market reacts with measurable immediacy to electoral events, with state-controlled companies exhibiting substantially higher sensitivity and volatility relative to the broader market during election periods (Araújo Júnior et al., 2016). Market participants actively price political risk into asset valuations well in advance of formal policy changes. This transmission mechanism – through which politics colonizes finance via investor expectations – is not exceptional but systemic.

Cross-continental comparative research further establishes that the impact of political stability on market performance is neither uniform nor direct. In Europe and Africa, political stability alone exerts minimal influence on market prices; its effects become significant only in interaction with macroeconomic fundamentals such as GDP per capita and foreign direct investment flows. In Asia and the Americas, by contrast, political stability demonstrates a more direct and measurable correlation with index performance (Alber, Abdelrhim and Farouh, 2024). Event-study evidence corroborates this: while European markets are primarily sensitive to economic crises, political risks dominate as the explanatory variable for volatility and sharp price discontinuities in African and Asian markets (Vortelinos and Saha, 2016). The political-financial nexus thus operates through distinct transmission mechanisms depending on the institutional and developmental context – a finding that aligns with Strange’s (1996) insistence on power asymmetry across the global hierarchy.

2.4.2 Behavioral Finance and the Limits of Rational Prediction

The structural and institutional factors examined above operate through the behavior of actual market participants whose decision-making is systematically shaped by cognitive limitations and social dynamics that deviate markedly from the idealized agents of neoclassical theory. Behavioral finance has documented that investor behavior is governed by heuristics and biased judgement rather than consistent utility maximization (Gong and Diao, 2022). One of the most consequential behavioral phenomena is investor herding – the tendency of individuals to mimic the crowd as a way of managing the reputational risk of being “wrong alone” (Dierks, 2019). For institutional portfolio managers evaluated against their peers, herding can be individually rational in a strictly reputational sense. The aggregate consequence is collectively irrational: herding amplifies shocks, contributes to asset price bubbles, and renders the market mechanism a poor aggregator of dispersed private information.

Formal models suggest that market prices tend to reflect the information and expectations of the group with the lowest degree of rationality and the highest risk appetite, rather than converging on the best available collective judgement (Gong and Diao, 2022). At the individual level, the “disposition effect” – the well-documented tendency of investors to sell winning assets too early and hold losing ones too long – constitutes a further systematic bias with direct implications for price dynamics (Mukherjee, 2018). Access to richer information sets can, under some conditions, push investor behavior in a more rational direction, but the human cognitive apparatus remains fundamentally overstrained by the volume and speed of information generated by modern financial markets (Mukherjee, 2018). The recurrent result is reliance on “System I” – the subconscious, automatic cognitive processes that operate quickly but are prone to systematic error (Dierks, 2019).

These behavioral vulnerabilities are significantly amplified by the contemporary information environment, in which the speed and scale of information diffusion through social media platforms create new vectors for the transmission of non-economic shocks. Institutional and retail investors alike are increasingly susceptible to social-media-driven information flows, which can trigger rapid asset price fluctuations before the veracity of any given piece of information can be established (Pace et al., 2021). Fake news and deliberate misinformation thus constitute a genuinely new category of non-economic shock capable of producing measurable market disruption. At a deeper level, narratives

circulating among investors and the broader public function as cognitive maps – frameworks that weave disparate facts into normative interpretations of what the state of the world is and ought to be (Patterson and Monroe, 1998). Markets respond not merely to events but to socially constructed interpretations of events, which are inherently contestable and subject to revision.

This narrative dimension helps explain one of the most striking episodes of politically induced financial panic in recent Latin American history: the surge of Brazilian sovereign spreads to over 20 percent in the summer of 2002, driven not by any deterioration in fiscal fundamentals but by market panic surrounding an “untried Left-wing candidate” (Miller et al., 2003, p. 3). The contagion partly reflected an unreflective transposition of the Argentine default narrative onto the Brazilian context – a narrative analogical error that nonetheless produced very real financial consequences. Spreads recovered only as the market underwent what the literature describes as “Bayesian updating”, gradually learning that the incoming administration intended to honor its debt commitments (Miller et al., 2003). The episode illustrates how narratives and reputational signals, rather than underlying economic variables, can be the proximate drivers of asset price dynamics – and how institutional credibility mechanisms can function as “credible commitment devices” to arrest narrative-driven panics.

Greenspan’s post-2008 concession illuminates the stakes of these debates from within the neoclassical tradition itself. As Federal Reserve Chairman for nearly two decades and a committed defender of market self-regulation, he was forced by the 2008 crisis to acknowledge publicly that his theoretical framework had failed (Greenspan, 2008). The models he had relied upon had ignored the “animal spirits” that Keynes and later Akerlof and Shiller had theorized. His revised framework acknowledges that markets behave rationally most of the time but are periodically subject to fat-tail events and fear-induced stampedes that overwhelm self-correcting mechanisms (Greenspan, 2013). This concession from one of the most prominent defenders of market efficiency constitutes a powerful argument – conceded from within the orthodoxy – for the proposition that financial markets are structurally vulnerable to non-economic shocks.

Tooze’s historical analyses of the 2008 crisis and the COVID-19 shock provide the most institutionally granular accounts of how non-economic events interact with the deep structure of global finance to produce systemic disruption (Tooze, 2018). His fundamental critique of conventional macroeconomics is its tendency to model national economies as “island models” that interact only at their borders, rendering it incapable of

grasping the “inextricable matrix” of interconnected corporate balance sheets that constitutes the actual global financial system. The 2008 crisis was not primarily a collapse of public finances but a transatlantic dollar shortage: a funding crisis generated by the private financial sector’s internal fragility. The COVID-19 shock of 2020 represented a different but equally instructive case: the pandemic produced a simultaneous contraction in per capita GDP across 99 percent of the world’s economies (Tooze, 2021). As health fears spread to financial markets, even the US Treasury market – the foundational collateral for the entire global financial system – experienced acute stress, forcing the Fed to intervene as lender of last resort through unprecedented liquidity swap lines with foreign central banks. The mechanism is decisive for the research question: the COVID shock was transmitted not primarily through conventional economic channels but through the sudden reappraisal of risk it provoked, collapsing the fragile structures of confidence on which the system depended. The non-economic event did not alter productive fundamentals overnight; it shattered the narrative.²⁷

The literature surveyed here converges on one robust conclusion: non-economic events – political, geopolitical, social – do produce measurable and often severe disruptions to financial markets. What it has not yet adequately explained is the causal architecture of this relationship. Three gaps stand out. First, the neoclassical literature’s core defense – that markets efficiently price political risk before it materializes, and that post-shock volatility reflects state mismanagement rather than market failure – has not been answered with sufficient theoretical precision in the heterodox literature. The sections above have attempted to supply that answer: the neoclassical defense rests on the premise that political risk is exogenous information that agents can price in advance. But Strange’s (1996) framework shows that political risk is not exogenous – it is structurally embedded in the architecture of global finance, produced and reproduced by the very power relations that constitute markets. One cannot “price in” a change in the structural conditions that determine what price means.

Second, while the Minsky-Shiller framework provides a powerful account of

²⁷ Rogoff’s contribution concerns the monetary foundations of financial stability and the institutional constraints on crisis management (Rogoff, 2016). His argument that large volumes of physical cash facilitate tax evasion and crime whilst constraining central banks’ ability to manage deep recessions through interest rate policy is technically precise and institutionally consequential. At the end of 2015, approximately US\$ 1,340 billion was held outside the banking system. The “zero lower bound” – the inability of central banks to cut nominal interest rates below zero when cash provides a costless alternative – means that the physical infrastructure of money limits the policy toolkit available for managing financial instability. This structural constraint on crisis response complements the instability theories of Minsky and Shiller: whatever the origins of a financial panic, the capacity to contain it is shaped by institutional and monetary features of the system that reflect prior political choices.

endogenous fragility and narrative-driven panic, it has not been consistently integrated with the political economy tradition of Strange and Polanyi to explain why political events specifically – rather than any kind of bad news – tend to be disproportionately destabilizing. The argument developed here is that political shocks strike at the level of structural power: they alter the authority relations that sustain market confidence, disrupt the credibility of the institutional arrangements on which financial contracts depend, and expose the fragility that has been accumulating beneath the surface of apparent stability. Economic bad news does not, by itself, do this. It merely adjusts expectations about fundamentals within a stable framework. Political bad news can destroy the framework itself.²⁸

Third, the existing literature lacks a sufficiently deep account of the temporal structure of financial crises – of why events that appear sudden in the flow of market news are, in a longer historical perspective, the surface manifestation of processes that have been accumulating for decades or generations. The identification of simple causal links between non-economic events and market panics is further complicated by the fundamental disproportionality between the financial and real economies: in a system where, speculative assets vastly outweigh real productive output, the logic of financial valuation acquires significant autonomy from the material world it ostensibly reflects (Uluyol, 2017). Non-economic events do not merely influence markets from the outside; they are integral to how markets are constituted and reproduced. It is precisely this gap that Koselleck's conceptual history is positioned to fill.

2.5 Reinhart Koselleck and the Temporal Structure of Crisis

Koselleck stands apart from all the authors discussed above by virtue of his methodological orientation. Where economists and political economists analyses the

²⁸ Acemoglu and Johnson add a further dimension through their examination of the political economy of technological change (Acemoglu and Johnson, 2023). Their argument that the direction of technological development is not determined by technology itself but is socially chosen, reflecting the priorities of those with economic and political power, has direct implications for the distribution of economic risk. The current elite-driven orientation towards automation and surveillance serves narrow interests whilst undermining the shared prosperity and institutional resilience on which stable market economies depend. The reflexivity that Soros identified in market dynamics – the mutual reinforcement between investor expectations and the outcomes those expectations shape – operates at this structural level as well: concentration of power over technological choices reinforces concentration of economic power, which in turn reinforces the political conditions that produced the original choices (Ferguson, 2008).

behavior of markets and institutions, he analyses the language through which human beings have understood, categorized, and acted upon their historical experience. His methodology of *Begriffsgeschichte* – Conceptual History – investigates how the semantic content of key political and social concepts has changed over time, and how those changes have conditioned what actions and orientations have been possible in different historical periods (Koselleck, 2002).

Koselleck's historical argument concerns the *Sattelzeit* – roughly 1750 to 1850 – during which the entire vocabulary of European politics and economics underwent a fundamental transformation. Concepts that had previously described cyclical, recurrent phenomena – “progress”, “revolution”, “crisis” – were temporalized: they shifted from designating predictable, repeatable patterns drawn from accumulated historical experience to indicating a singular, open-ended, and fundamentally unknowable future (Koselleck, 2004). After the *Sattelzeit*, political and economic actors could no longer ground their expectations in accumulated experience as their predecessors had done. The future became genuinely open – a domain of possibility and catastrophe that historical precedent could illuminate only partially. The very concept of “crisis”, as applied to stock exchange panics or currency crashes, carries the imprint of this semantic shift: it no longer designates a decisive moment that will be resolved in a determinable direction, but an open-ended disruption whose consequences cannot be anticipated from within the conceptual frameworks available at the moment of its onset. The language through which financial journalists, policymakers, and investors describe crises is itself part of the phenomenon, not merely a neutral description of it.

Koselleck presents a conceptual pair that distinguishes between the “Space of Experience” and the “Horizon of Expectation”. The former encompasses all that past generations have learned and transmitted to the present – habits, institutions, memories, and the tacit knowledge that shapes everyday behavior. The latter refers to the set of possibilities and prospects that agents project onto the future from their present vantage point (*op. cit.*). Modernity is defined precisely by the rupture between these two dimensions: the acceleration of historical change means that accumulated experience is no longer an adequate guide to what will happen, and expectations must be formed on the basis of projections with no secure grounding in historical precedent. This structural condition of temporal anxiety constitutes the deep background against which all modern crises must be understood. It illuminates a fundamental characteristic of financial panics: investors and speculators make decisions based not on what has happened but on

projections of what will happen, and when those projections are suddenly invalidated – by a geopolitical shock, a pandemic, or a political crisis – the collapse of the horizon of expectation is itself a cause of the panic, independently of any change in underlying economic fundamentals.

Koselleck further challenges the assumption of rational forecasting that underlies both the EMH and Rational Expectations. Drawing on the classical proposition that future contingent events have no determinate truth – *De futuris contingentibus non est determinata veritas* (Koselleck, 2004) – he argues that the complexity of modern interdependence makes exact short-term prognosis structurally impossible. What appears in retrospect as a discrete event is, in his framework, the surface manifestation of multiple overlapping temporal structures moving at different speeds: what he calls “Sediments of Time” (Koselleck, 2018). Long-run structural conditions (institutional arrangements, technological paradigms, demographic trends), medium-run conjunctural dynamics (business and political cycles), and short-run singular events interact in ways that no individual actor can fully anticipate, and that become intelligible only in retrospect. A stock market crash may appear to be caused by a single political event, but it is pre-conditioned by sedimentary structures of fragility accumulating across multiple timescales, invisible to the actors caught up in them (*op. cit.*). The joint hypothesis problem that Fama identified as a technical methodological limitation is, in Koselleck’s framework, a deeper philosophical problem about the relationship between knowledge and historical time: information is never simply “available;” it is always constituted within a conceptual framework that determines what can be perceived as relevant, what can be measured, and what lies beyond the horizon of what a given historical moment makes thinkable.

The dialogue between Koselleck and Minsky is the most theoretically productive in the entire chapter. The Financial Instability Hypothesis identifies the internal dynamics by which capitalism generates fragility during periods of stability; Koselleck’s concepts explain why the actors within this process cannot perceive the fragility being generated. As the space of experience fills with memories of uninterrupted stability, the horizon of expectation extends progressively towards a future of continued calm – until the rupture occurs that exposes the inadequacy of this projection. A Minsky moment is, in Koselleck’s terms, a moment of temporal collapse: the sudden revelation that the horizon of expectation has been built on a misreading of experience. The non-economic event that triggers the panic is the occasion that renders this structural mismatch visible. It does not,

in itself, create the fragility; it exposes it. Koselleck's critique of what might be called the ideology of "make-ability" – the belief that political will can bring history to a predetermined conclusion – speaks directly to the neoclassical assumption that sound policy can prevent financial catastrophe. Whether it is Friedman's confidence that sound monetarist policy can prevent financial collapse, Minsky's confidence that Big Government and Big Bank can stabilize capitalism, or the institutionalists' confidence that inclusive institutions will generate convergent growth, all these frameworks share the assumption that the course of economic history is, at some level, manageable. Koselleck's work is a sustained argument that this assumption is historically unfounded – not because human agency is powerless, but because the complexity of the sediments of time within which it operates means that interventions always produce unforeseen consequences.

The dialogue with Polanyi and Strange centers on the relationship between structural power and conceptual vocabulary. Both Polanyi and Koselleck are concerned with the same historical transformation – the embedding of market logic within, and its disruption of, pre-existing social structures – but from different analytical angles. Polanyi traces the social and institutional consequences; Koselleck traces the consequences for the structure of historical time and the categories through which human beings understand their situation. Taken together, they suggest that financial panics are moments at which the protective countermovement against market disembedding reaches a critical threshold, producing disruptions that appear sudden but have been building across multiple temporal scales simultaneously. Strange's (1996) concept of structural power – the authority to determine the terms within which markets operate – maps directly onto Koselleck's "sediments of time:" it is precisely the slow accumulation and gradual redistribution of structural power that constitutes the deepest layer of the sediment, the stratum that political events of the moment merely disturb at the surface.

Inspired by what was reviewed here on Koselleck, stock market panics triggered by political events are, in fact, more of an adjustment by markets to long-standing historical processes and to the economic and institutional fragilities of nations than they are a reaction to breaking news itself. Short-term political shocks merely act as catalysts for price adjustments that had already been building for quite some time. They serve as a kind of "pretext" for adjustments that respond to a much deeper, slower, and older temporal fabric. This also aligns with the hypothesis of capitalism's inherent instability as described by Minsky. The "horizons of expectation" of speculators may shift very abruptly, but the fundamental conditions that justify a lack of confidence stem from a

congenital instability of capital and of all the institutions surrounding it, both nationally and globally. The literature reviewed in this chapter has arrived, across competing traditions and methodological orientations, at a convergent insight: markets are not disturbed by politics from the outside, they are constituted and periodically laid bare by it from within.

“(...) when it comes to the stock market, no one produces a complete piece”.

(Décio Bazin²⁹)

CHAPTER 3: DESIGN FOR AN EMPIRICAL TEST ON THE EFFECTS OF NON-PRIVATE BUSINESS ECONOMY OVER STOCK EXCHANGES

The theoretical dilemmas regarding “the division between public and private” and “the division between domestic and international space” represent foundational challenges to understanding financial instability. The theoretical divergences in the previous chapter, and the compelling thesis that crises have a “narrative” nature, could have convinced one that it is not possible to treat the subject scientifically – at least in a positivist and hypothetical-deductive way. Nevertheless, we cannot forget that stocks and narrative create “material evidence”, being them economic or textual. Financial news is recorded, as well as the historical investor behavior when trading the stocks in moments of panic. Being so, we will try to test our hypothesis in the empirical and statistical way.

To navigate these dilemmas (public *versus* private, domestic *versus* international or global), it is possible to create proxy variables by identifying the ontological origin of the events that trigger market panic – specifically focusing on the actorship of who triggered the shock. By isolating whether an event stems from public sector decisions, such as Central Bank interest rate adjustments, or private business activities, we can categorize these material facts into a structured dataset that bridges the gap between political theory and economic reality. It does not mean that the Chapter 2 was a waste of time: in the present chapter, we will make reference to many theoretical authors exposed above, in order to justify methodological choices.

²⁹ Bazin, 2017 [1994], p. 9, freely translated from the original: “(...) quando o assunto é Bolsa, ninguém produz uma matéria completa”.

Our specific statistical choice to utilize a 2x2 matrix providing four dummy variables – Types A (domestic politics), B (domestic private), C (international politics), and D (transnational private) – provides a robust way to scientifically adjudicate these dilemmas. This framework can be further refined into aggregated categorical dummies, such as “Type AB” (domestic origins) and “Type CD” (foreign/ international origins), which allow for an objective comparison of which realm exerts a more significant “hit” on stock valuations. This econometric design, specifically the use of dummy variables in a difference-in-means test, enables us to determine if non-private impacts provide a statistically significant additional penalty to stock losses compared to purely private business shocks. By doing so, the research transposes abstract debates about the “market and the forum” into a measurable regression model.

Testing this hypothesis in an econometric way is assertive because it focuses on the “Fat Tail” or “Black Swan” events – the rare but catastrophic “airplane crashes” of the financial world – rather than routine market noise. By sampling the more than 600 most acute depreciations between 1989 and 2024, the study targets the specific moments when Keynes’s “Animal Spirits” are most affected and Koselleck’s “Horizon of Expectation” collapses. Furthermore, the use of Structural Equation Modeling (SEM) allows the research to move beyond social atomization, recognizing that these variables function within an interconnected social structure where latent constructs can be identified. This structural approach enables the identification of causal mechanisms without requiring an *ex-ante* definitive theory, providing a rigorous scientific path to adjudicate whether non-private business-related impacts are indeed the predominant drivers of global stock losses.

We do not aim to assess all the complexity of financial markets, stock exchanges and the whole international political economy tied to them. Instead, and having in mind the phenomena of Political Risk Analysis posed in the previous chapters, our goal is singular and delimited: to test the measurable extent in which non-private business events affect speculative panics in the major stock exchanges, generating losses in the “fictitious” prices in the financial investment world and disturbing the sentiments regarding their performances.

By “non-private business events”, we mean all political, geopolitical, diplomatic, military and social events that show potential to disrupt perceptions of portfolio prices common to the private business activities, or overall public-owned enterprises traded in contemporaneous global capitalism. The ways in which how such events, both private

and non-private-related (public or political) could be separated, typified, and econometrically analyzed are described below in this methodological chapter. The role of the state in those businesses is taken seriously, and, for example, bureaucratic decisions made by Central Banks regarding interest rates are considered of “non-private” nature, since they are made by the state machine and not by businessmen decision-making. The main criteria for separating the ontological origin of events are, thus, the actorship of who triggered it.

By the end of this methodological chapter and the following result analysis, the reader must keep in mind that we are trying to access the overall importance of politics and other non-private “fields” of human activity in the financial world, by the turn and dawn of the Twenty-First Century, in an environment of late capitalism, after beliefs shared by epistemic communities and decision-makers that the “economy” could be or had been a realm separated from the other social realities – such the ones instigated by the neoclassical school of economic theory. To keep it parsimonious, we reduce the issue to a main hypothesis test (Gujarati and Porter, 2009) in the hypothetic-deductive form:

H_I = Stock losses are predominantly driven by non-private business-related impacts, such as political, geopolitical, social and other public crises.³⁰

We do not, also, interpret securities known as “stocks” and their indexes as direct representatives of the overall macroeconomy, neither in a national or in a global scope. We understand that a myriad of indicators such as domestic product, international trade volumes and balances, unemployment rates, inflation rates and other, also compose the overall complexity of the whole economic reality. Nevertheless, we presuppose that stock markets are a satisfiable proxy of an important part of the phenomenon, which are the perceptions of private investors in capitalism and their changing sentiments of “growth”, “success” and “safeness”. Being so, this study is about the role of non-private actors in the private business world and its participation in the latter’ strategies of risk management and its difficulties.

³⁰ We present the specification for the null hypothesis for H_I :

H_0 = Stock losses are predominantly driven by private business-related impacts, being them domestic or transnational.

3.1 Building a Dataset of the Fluctuations of the Largest Stock Exchange Indices (1989-2024)

The data that will compose our dataset to represent y in the structural equation described below will be taken from the Investing.com platform. In our model, in principle, y represents several percentages of daily closing of the score of different stock exchange indices. Such scores follow different parameters and compositions, and therefore need to be statistically normalized.³¹

The indexes that compose the study listed are those listed in Table 1. The first criterion of choice is to follow the list of the 50 indexes that make up the “*Major indices*” page of the Investing.com website. Such indices are capable of providing global geographic coverage, representing at least two countries per continent, with the exception of Africa. Thus, three of the largest African exchanges were added to the end of the table.

Table 3 – Stock exchange indexes used in the study

Name	Ticker	Main stock exchanges	Market	Currency	No. of companies (2023)
Dow Jones Industrial Average	DJI	New York Stock Exchange (NYSE)	USA	USD	30
S&P 500	SPX	NYSE, NASDAQ	USA	USD	503
NASDAQ Composite	IXIC	NASDAQ Stock Market	USA	USD	3,438
US Small Cap 2000/ Russell 2000	RUT	NYSE Arca, NASDAQ	USA	USD	~2,000

³¹ The exchanges to which the indices represent are of different financial magnitudes across the global market (represented capitalization), but they will not be normalized with different weights in terms of currency exchange and purchasing power parity (PPP – Purchase Power Parity). We argue that our choice for doing so is enough, because the main variable of our research question and design is not the absolute or relative amount of financial loss, but the effect that risk triggering events has over collective speculator psychology and subjective interpretation given the insulated context of local stock indexes. In other words, we are measuring the speculators’ “flock panic” when faced by adverse economic and non-economic (i. e. political and others) news, and not the actual financial representation of the crashes. Being so, stock index daily results represented by percentages are enough to show how panics can harm themselves.

CBOE Volatility Index	VIX	Chicago Board Options Exchange (CBOE)	USA	USD	500
S&P/ TSX Composite	GSPTSE	Toronto Stock Exchange (TSX)	Canada	CAD	227
Bovespa	BVSP	B3 Bolsa de Valores (formerly BM&FBovespa)	Brazil	BRL	86
S&P/BMV IPC	ME000000000	Bolsa Mexicana de Valores (BMV)	Mexico	MXN	35
DAX	DAX	Frankfurter Wertpapierbörse (FWB)	Germany	EUR	40
FTSE 100	UKX	London Stock Exchange (LSE)	United Kingdom	GBP	93
CAC 40	PX1	Euronext Paris	France	EUR	40
Euro Stoxx 50	SX5E	NYSE Euronext	Germany	EUR	49
AEX	AEX	Euronext Amsterdam	Netherlands	EUR	25
IBEX 35	IBEX	Bolsas y Mercados Españoles (BME)	Spain	EUR	35
FTSE MIB	FTSEMIB	Borsa Italiana	Italy	EUR	40
SMI	SSMI	SIX Swiss Exchange	Switzerland	CHF	20
PSI	PSI20	Euronext Lisbon	Portugal	EUR	16
BEL 20	BFX	Euronext Brussels	Belgium	EUR	20

ATX	ATX	Vienna Stock Exchange	Austria	EUR	20
OMX Stockholm 30	OMXS30	Nasdaq Stockholm	Sweden	SEK	30
OMX Copenhagen 25 CAP INDEX	OMXC25	Nasdaq Copenhagen	Denmark	DKK	25
MOEX Russia	IMOEX	Московская Биржа (Moscow Exchange)	Russia	RUB	39
RTSI	IRTS	Московская Биржа (Moscow Exchange)	Russia	USD	45
WIG20	WIG20	Giełda Papierów Wartościowych w Warszawie (Warsaw Stock Exchange)	Poland	PLN	20
WIG Ukraine	WIGUA	Giełda Papierów Wartościowych w Warszawie (Warsaw Stock Exchange)	Poland	PLN	5
Budapest SE	BUX	Budapesti Értéktőzsde (Budapest Stock Exchange)	Hungary	HUF	16
BIST 100	XU100	Borsa İstanbul	Turkey	TRY	100
TA 35	TA35	Tel Aviv Stock Exchange	Israel	ILS	35
Tadawul All Share	TASI	Saudi Stock Exchange (Tadawul)	Saudi Arabia	SAR	231
Nikkei 225	N225	Tokyo Stock Exchange	Japan	JPY	219

S&P/ASX 200	AXJO	Australian Securities Exchange (ASX)	Australia	AUD	183
Dow Jones New Zealand	NZDOW	NZX	New Zealand	NZD	.. ³²
Shanghai Composite	SSEC	Shanghai Stock Exchange (SSE)	China	CNY	1,475
SZSE Component	SZI	Shenzhen Stock Exchange (SZSE)	China	CNY	500
FTSE China A50	FTXIN9	FTSE Russell	China	CNY	50
Dow Jones Shanghai	DJSH	FTSE Russell	China	CNY	.. ²
Hang Seng	HSI	Hong Kong Stock Exchange (HKEX)	Hong Kong (China)	HKD	82
Taiwan Weighted	TWII	Taiwan Stock Exchange (TWSE)	Taiwan	TWD	807
SET Index	SETI	Stock Exchange of Thailand (SET)	Thailand	THB	607
KOSPI	KS11	Korea Exchange (KRX)	South Korea	KRW	831
Jakarta Stock Exchange Composite Index	JKSE	Indonesia Stock Exchange (IDX)	Indonesia	IDR	901
Nifty 50	NSEI	National Stock Exchange of India (NSE)	India	INR	50
BSE Sensex 30	BSESN	Bombay Stock Exchange (BSE)	India	INR	30

³² No publicly available reliable source lists the number of companies in the Dow Jones New Zealand Index (NZDOW) and in the Dow Jones Shanghai Index (DJSH) for 2023.

PSEi Composite	PSI	Philippine Stock Exchange (PSE)	Philippines	PHP	30
Karachi 100	KSE	Pakistan Stock Exchange (PSX)	Pakistan	PKR	100
VN 30	VNI30	Ho Chi Minh Stock Exchange (HOSE)	Vietnam	VND	30
CSE All- Share	CSE	Colombo Stock Exchange (CSE)	Sri Lanka	LKR	295
EGX 30	EGX30	Egyptian Exchange (EGX)	Egypt	EGP	39
MSCI Morocco	MIMA00000PMA	Casablanca Stock Exchange (Casablanca Bourse)	Morocco	MAD	30
FTSE South Africa	FTWIZAFL	Johannesburg Stock Exchange	South Africa	ZAR	40

Source: 1Stock1.com (2026), MSCI (2026), Investing.com (2023); MSN (2023), author's assembling.

It may be that many of these exchanges were not active in 1989, and became part of the dataset only from a later year. Such embezzlement does not seem to offer apparent distortion to the results of the following methods, as only the most acute depreciations that occurred will be cut to participate in the structural equation described below.

As just explained above, there will be an excerpt and not all the observations of the dataset will be statistically analyzed. The clipping, with the objective of paying greater attention to the depreciations of more acute index quotations, also seeks to make the model more parsimonious and workable from the point of view of non-automated qualitative analysis routines on the part of the author. The original dataset will feature about 310,587 panel observations (trading days from 1989-Jan.-02 to 2024-May-08 from the indexes in Table 1) (Gujarati and Porter, 2009).³³ We can say that the amount is equivalent to our “population”, in statistical terms. By choosing a 95% confidence level, with the margin of error set at 4%, we arrived at the need for a sample of 600

³³ For an Excel spreadsheet with the whole “population” from which the dataset was derived, access: < <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/97AYMN> >. File: “complete_indices_1989-2024.xlsx”.

observations.³⁴ Our dataset succeeded in being composed of 638 observations encompassing only the major negative trading day results. We made a less bold choice (4%-margin error) to allow a workable qualitative input from the researchers, which details and challenges can be read below.

The 638 observations were selected among all variations in the population with daily depreciations starting from -6%.³⁵ Such a percentage was chosen arbitrarily to allow the dataset to have the minimum required sample, but it is common that, contemporaneously (and less an arbitrary choice), the rules of circuit breaker activation³⁶ among the exchanges are set a little lower than -6%. For example, in the Brazilian B3, the depreciation that triggers the first level of the *circuit breaker* is -10% (in relation to the previous closing, as all daily closings are shown) (B3, 2020). The negative variation rate found in these 638 observations will be our dependent variable (y) for our hypothesis test and other exploratory models. Additionally, these observations will also inform the values for multiple independent variables (x), which will be described in the following section. This choice is grounded in the “Fat Tail” and “Black Swan” theories of Taleb (2010) and Bremmer and Keat (2010). Political risk is not a “normal distribution” (car crash); it is an “airplane crash” – rare but catastrophic. By sampling only the most acute depreciations, we are empirically analyzing the specific moments where Keynes’s (2017 [1936]) Animal Spirits act most decisively, and Koselleck’s (2004) Horizon of Expectation collapses.

³⁴ Calculation performed by the SurveyMonkey.com platform Sample Calculator. The formula used was: Sample size = $\{[z^2 \times p(1-p)] / e^2\} / \{1 + [(z^2 \times p(1-p)] / e^2 N\}$, where N = population size; e = margin of error (percentage in decimal format); and z = z-score (1.96 for 95% confidence).

³⁵ Some cuttings were needed: VIX, the “fear index” from the CBOE (Chicago Board Options Exchange), behaves in a very specific way, mainly contrary to the other indexes, and thus could not be placed among them. According to Current Market Valuation (2025, n.p.): “The VIX is a mathematical measure of expected stock market volatility. When the VIX is high, it means that investors expect significant price changes (either up or down) in the S&P 500 over the next month. On the other hand, when the VIX is low, it indicates that investors anticipate price stability”. Most observations from the Turkish main index BIST 100 (xu100) were also removed, since research on the facts and news surrounding them showed that data were probably flawed, product of miscalculations and storage errors, and, thus, could not have been relied on. Unfortunately, no replacement was found for them.

³⁶ According to the CFI (2023): “A *circuit breaker* is a regulatory instrument that halts the trading of a security or an index for a certain period. Circuit breakers are triggered when a security experiences a large percentage swing in either direction or a market index experiences a catastrophic decline. Circuit breakers are used to prevent excessive speculative gains or losses on a security or devastating losses in the markets”.

3.2 Adding market facts and other variables around the largest stock market depreciations

While y , in our model to be detailed, are the percentages of 638 among the worst depreciations gathered in the dataset, x are *dummy* variables that indicate the category(ies) of contemporaneous events for each of the 638 dates, derived from research from newspapers, technical and academic papers. Variables that carry binary categorical information (0 or 1) are called dummy, and not continuous measures (as in the case of y) (Bailey, 2014). In our model, four variables (Event Type A, B, C and D) will be organized in a binary way, with the result “0” indicating “not part of the category”, and “1”, “is part of the category”. x organized in 2x2 matrix, as suggested by Collier, Lapporte and Seawright (2012), as follows:

Framework 1 – 2x2 matrix used to determine “Event Type”

	(1) Is the event political in nature (at least predominantly) or does it stem from public sector actors?	(1) Is the event private in nature (at least predominantly)?
--	--	--

(2) Does the event have (at least predominantly) domestic origins?	x_1 1 = public, 2 = domestic. Type A: Domestic politics or internal action of the national state (including social movements and paramilitary conflicts).	x_2 1 = private, 2 = domestic. Type B: National private businesses (industry, trade, finance, etc.) stressful actions like frauds, executive scandals, heavy price oscillations in the sector, etc. It does not count the obvious private speculative panic in the stock exchanges, on each observation, as a cause of type attribution, since all the observations take for granted this phenomenon.
(2) Does the event have (at least predominantly) foreign origins? Both in the international sense and in terms of foreign policy.	x_3 1 = public, 2 = foreign/international. Type C: International politics and foreign policy (diplomacy, wars, etc.).	x_4 1 = private, 2 = foreign/international. Type D: Multinational and transnational private businesses (trade, investments, and others) operating in the same stressful ways as Type B, but causing effects in more than one national economy. It does not count the obvious private speculative panic in the stock exchanges, on each observation, as a cause of type attribution, since all the observations take for granted this phenomenon.

Source: elaborated by the authors.

The “events” mentioned are episodic interpretations, collected in the specialized

media³⁷, about the nature of what caused³⁸ the depreciation in each index on that date.³⁹ Each observation in y , in the sample, will receive a value of 0 or 1 for each of the four variables, which will complete our dataset and make it ready for the application of the structural model. Each event can be categorized into more than one variable, taking into account the complexity of modern economies.⁴⁰ Therefore, x_{it} and y_{it} , organized as panel data, will be worked out by the equations discussed below.⁴¹

This typology is justified by Walker's (1992) "Inside/Outside" dichotomy. The "Domestic/International" axis tests whether the state still houses the historical process (Inside) or if we have entered an abstract foreign realm of repetition (Outside). Furthermore, the "Public/Private" axis addresses Weber's (1994) concept of the market as a community (*gemeinschaft*) that attempts to protect impersonal exchange from political intrusions.

It was possible to add other information to the observations, to make the typology above possible, and to test other exploratory models later. Therefore, our dataset is composed of the following columns:

- *date*: The date of the stock index daily closing (YYYY-MM-DD);
- *weekday*: The weekday, ranging from Monday to Friday, although 10 observations are registered as Saturday or Sunday, which is unusual to the Western pattern. In Israel, Egypt, and Saudi Arabia, the trading week typically runs Sunday-Thursday, because the weekend is Friday-Saturday. Other deviances,

³⁷ The author gathered news, magazine and newspaper articles and reports, specialized consulting and international organization publications, and other studies for each event, until the centrality of an happening of importance for speculators in that given stock market showed itself to be satisfiable material.

³⁸ "Causality" in the study of the behavior of speculators on stock exchanges is an important theme in this doctoral dissertation, but its complications are not throughout considered in this methodological chapter. Nevertheless, step (iv) of Footnote #9 sets a practical standard for the issue.

³⁹ A media research protocol was established before completing the dataset:

- (i) It started by looking for news on the exact date of the event; if we are not successful, we will move on to news from the previous week. Retrospective analysis, even years ahead, were accepted when they addressed the specific date and/or stock exchange variation;
- (ii) Stock exchanges typically operate from Monday to Friday (except on national holidays). Therefore, an important event happening over the weekend will likely only be reflected in an index starting on Monday.
- (iii) Similarly, trading sessions usually take place from 10 AM to 6 PM. So, if an important event occurs on Friday after 6 PM, it will only be reflected in the market on the following Monday;
- (iv) The reasoning process for the event follows this path, meeting the criterion of temporal precedence for causal inference: event x happened, and as a result, speculators in that market panicked and sold large amounts of stocks, leading to the index's depreciation.

⁴⁰ Collinearity is practically certain, and this is a huge pitfall in the model. Nevertheless, how could such intricate processes could be labeled in completely separated types? An alternative could be to treat each element of the 2x2 matrix as a separate variable, as shown above, without the creation of compound variables.

⁴¹ For an Excel spreadsheet with the complete dataset access: < <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/97AYMN> >. File: "dataframe_complete 2026 02 10_done.xlsx".

like India, follow the Western pattern, but could be the product of differences related to time-zones or plain digital errors carried by the information providers. There is a curiosity regarding weekdays, that will be explored statistically later, since numerous facts relevant to markets happen on weekends, and, thus, most panics need to wait until Monday to blow up in the financial world.

- *ticker*: The short code that identify each stock, index or other security traded on exchanges.
- *index*: The official name of the stock index that characterizes the observation;
- *stock_exchange*: The official name of the stock exchange that manages the index. Usually, the companies listed by the index all pertain to the same stock exchange. In some cases, an index is composed by stocks in more than one exchange, and they are described accordingly in the dataset.
- *country*: The nation-state that has jurisdiction over the given stock exchange depicted in the observation. The only cases in which the “country” is not the name of a sovereign state are related to those of Euro Stoxx 50 index, which is labeled as “EU”.
- *un_reg_group*: An aggregate for “country”, separating the countries among the United Nations’ Regional Groups of Member States. Those regions are: African States Group, Asia-Pacific States Group, Eastern European States Group, Latin American and Caribbean States Group, Western European and other States Group (WEOG) (United Nations, 2025). This classification was chosen because it has some geographical flexibility, placing the “Global North” into WEOG. The USA, Canada, Israel, Australia and New Zealand alongside Western European countries, which is more accurate in economic development, institutional and cultural terms.⁴²
- *polyarchy_year*: The score (0.000 to 1.000) the given country obtained by V-DEM’s Electoral Democracy Index in the year of the observation. The index yearly evaluates countries in a spectrum that grows from “closed autocracies” (closer to 0.000) to “liberal democracies” (closer to 1.000) (Papada et. al., 2023). Since the present study is occupied with political risk, this variable showed itself relevant. This choice tests the transparency and credible commitment theories of

⁴² Actually, the USA is not a member of any group, but attends WEOG meetings as an observer and for electoral purposes. Israel joined WEOG only in 2000. Türkiye is both member of WEOG and the Asia-Pacific Group, but for electoral purposes, participates as WEOG (United Nations, 2025).

Rosendorff and Vreeland (2006) and North (1990). It attempts to quantify whether the inclusive institutions of Acemoglu and Robinson (2012) act as a buffer against the bad-news hoarding typical of autocracies.

- *polyarchy_level*: Just the categorical-ordinal normalization of the scores in “polyarchy_year” from 0 to 1 (no decimal places).
- *event_tag*: An alternative way to categorize the events registered in “event_summary”, depicting modern economic and political concepts in the form of generic contextual episodes. It is more limited than the typology shown in Framework 1, and is not methodologically related to Types A, B, C and D. It is made of single simple and composed terms and limits itself to the main observed context, not allowing for typological overlapping that Types A-D provide. See Framework 2 for a list of the tags present in the dataset.
- *event_summary*: A short-written summary composed of one or various sentences describing the news found on “related_news_headline”. It tries to specify the facts that triggered market panic in that given observation, resulting in the stock index bust. It is the input that allows for the judgement on the Types A-D;
- *related_news_headline*: The literal headline or text title of the source, or sources, that provide context for “event_summary”.
- *url*: The webpage address for the source(s) shown in “related_news_headline”.
- *pub_date*: The identifiable publication date for the source’s webpage shown in “url”. Some dates are well ahead of the financial event, but are actually journalistic, academic or technical explanations on the given period.
- *type_a*: As shown in Framework 1, it is a dummy variable that characterizes the event, that probably triggered the stock bust in the observation shown by “event_summary”, as participant in “Type A”, being events of public (political or social)/ domestic origin, when researching for the status of the main actors involved.
- *type_b*: Dummy variable that places the observation cause as participant in “Type B”, being events of private (business)/ domestic origin.
- *type_c*: Dummy variable that places the observation cause as participant in “Type C”, being events of public (political or social)/ international origin, when researching for the status of the main actors involved.
- *type_d*: Dummy variable that places the observation cause as participant in “Type

D”, being events of private (business)/ international or global origin, when researching for the status of the main actors involved.

- *n_priv*: An additional dummy variable that highlights if the combination of the previous columns Type A-D composes a “non-private business event”, being an event negative for Type B and/ or D result. It could be made of: (i) type_a = 1; type_b = 0; type_c = 1; type_d = 0; (ii) type_a = 1; type_b = 0; type_c = 0; type_d = 0; (iii) type_a = 0; type_b = 0; type_c = 1; type_d = 0. It was created to easily identify purely public, political, social and non-economic events without private actors as protagonists. This isolates the impact of “pure politics”, addressing Susan Strange’s (2015) critique of neoclassical economics. It tests if the market acts as an autonomous hyperspace (Bauman, 2012) or if it remains at the “permission of the state”. It serves as the direct test for our *H₁*: that power ultimately supersedes money.

As anticipated above, the alternate typology in Framework 2, present in the dataset, helps the reader to understand the varieties of facts and events that could trigger financial panics.

Framework 2 – Event Tags: alternate simplified typology

Broad subject	Event Tags
Politics or State-related	Central Bank/ interest rates
	Civil War/ Separatism
	<i>Coup d'état</i> (attempted or completed)
	Diplomatic crisis
	Elections
	Financial regulation
	General regulation
	Government economic intervention (bailout)
	Government economic intervention (other)
	International organization intervention
	International trade (Oil)
	International trade (Other)
	Judicial decision
	Lesser Paramilitary action (non-terrorism)
	Parliamentary decision
	Plebiscite or referendum
	Political/ institutional crisis
	Private-public corruption
	Public debt
	Social unrest/ outrage
	Sovereign credit rating
	Terrorism
	War
Private Business	Bankruptcy
	Currency/ foreign exchange oscillation
	Financial bubble
	Fraud
	Mergers & Acquisitions
	Private-private corruption (inside job)
	Weak company results

Broad subject	Event Tags
General/ Unspecified	Agriculture
	Environmental crisis
	Global/ regional financial shock (systemic)
	Health crisis
	Weak macroeconomy
	“None”
	“Other (undefined)”

Source: elaborated by the authors.

3.3 Main Hypothesis Test: structural equation on the Four Event Types and the fluctuations of stock market indices

The dataset described in the two previous sections (which will provide us with y and x) will serve as input for the research design described below. This methodology makes up the core of the doctoral dissertation that is being developed here. Rekindling the main hypothesis of this piece, we have:

H_I = Stock losses are predominantly driven by non-private business-related impacts, such as political, geopolitical, social and other public crises.

With the dataset assembled in the description above, we should be attempted to simplify the econometrics needed to test H_I and run something like:

$$Y_i = \beta_0 + \beta_1 D_i + \varepsilon_i \quad (1)$$

Where:

- Y_i = variation for observation i ;
- D_i = binary indicator (0 or 1) for “n_priv”;
- β_0 = expected value of Y when $D = 0$;
- β_1 = difference in expected values between $D = 1$ and $D = 0$;
- ε_i = stochastic disturbance term.

Substantively, this specification is mathematically equivalent to a *difference-in-*

means test expressed in regression form. The coefficient β_1 estimates the average effect of belonging to category 1 relative to category 0. Why not? Our variable that classifies all our market observations that were not caused by private actors, but by public, political or social ones (“n_priv”) is being tested alongside the stock busts directly here. We will call this attempt “ H_{1a} ” and will not ignore its results, but it not enough.

Controlling for “n_priv” is not enough, because the whole dataset typological planning and execution assumed that Types A-D are irremediably interconnected. To test H_I with a higher level of conceptual and statistical complexity, a statistical instrument of increasing application in the Social Sciences will be central to our hypothesis test: Structural Equation Modeling (SEM). Such method seems ideal for working with highly complex social universes, both in their decomposition into surely non-collinear variables and in the lack of established general theories about their sociological functioning. In other words, such a choice will help us to have better creative perceptions of a theoretical character after its application, not requiring us to have an *ex-ante* “ready and definitive theory”, as is expected from one of the methodological canons of Political Science (King, Keohane and Verba, 1994). We will call this second and final attempt to test our main hypothesis “ H_{1b} ”. This aligns Strange’s (1996) framework, because the four structures of power (finance, security, production, and knowledge) are inseparable, a simple regression would fall into the trap of social atomization. Factor analysis allows us to observe how domestic politics and private interests intertwine to depress markets, reflecting the extractive dynamics described by Acemoglu and Robinson (2012).

Structural analysis consists of the creation of equations, with the chosen variables, which will describe models that consider in advance that they are unlikely to generate effects in isolation on the result-variable. We are ontologically recognizing a social system in which variables are moved by relationship structures, processes and even values that exert pressure on the behavior of actors and phenomena. None of this means falling to the extreme of considering the social structure superior to the agent, but only of recognizing its existence.⁴³ The method innovated the scientific approach of both Sociology and Economics from the 1980s, bringing the two fields together in what

⁴³ In Wight (2006), we have a detailed metatheoretical review on the agent-structure debate in the Theories of International Relations. On the systemic structure relationship with domestic politics, contemporary quantitative treatments in the IR field were proposed by Chaudoin, Milner and Pang (2014). Due to the globalized character of financial markets, IR theories are quite predominant in this study, but its main goal is different from the traditional IR field, which is to theorize about the behavior of nation-states regarding themselves in the international system. Here, we aim to inquire on the dispute between “economy” and “non-economy” both in a domestic and global scale.

became known as the New Institutional Economics, or “NIE” (North, 1990). From structural analysis, it is possible to navigate between social structures experimentally, without being captured by the two extremes of social atomization (dear to neoclassical economics) and structural overvaluation (easily identified to sociological traditions) (Granovetter, 2007).

When we look at the global financial market, it may be commonplace to recognize its fluidity and decentralization. We find national complexes of high regulatory hierarchy, but the objective of these complexes is precisely to guarantee free and fair competition, at least from a legal point of view. Buyers and sellers of shares in the large computerized exchanges enter contracts with each other anonymously, following a supposed rationality that cannot be described and proven (and perhaps never will be) by contemporary and past academic debate. Perhaps such private negotiators behave cyclically (Marks, 2018), perhaps they have several other unusual incentives. What we do know is that the financial market is, at the same time, regulated in its processes and free in its intentions, from a socio-political point of view. To increase their complexity, they are transnationally connected, making it impossible to consider that they can be studied in a nationally isolated way, which is a feature known for a long time of what we understand as globalization, even more fundamental in international trade and which drags with it the political world (Keohane and Nye, 2011). Therefore, it is expected that our variables (Types A-D) have interchange with each other in a social structure, hence the choice of method.

Structural equation models combine multivariate regressions with Factor Analysis (Neves, 2018). This means that we will have as the final product a series of linear regression coefficients that showed us the covariance between y and Types A-D, but more than that. Through factor analysis, we will be able to create “constructs” of variables (also called *clusters*) (Gujarati and Porter, 2009; Mardia, Kent and Bibby, 1979). Constructs are latent variables that would also covariate with y , that is, indirectly observed by the same model that works with explicit variables (in our case, Types A-D), and that would hardly be brought to light in a previous and theoretical way without statistical help (Neves, 2018). The constructs themselves are constructed exclusively by the explicit variables, being clusters of joint behavior between combinations of two or more variables found in Types A-D. This will allow us, for example, not only to analyze the regression coefficient between y and Type A (“domestic politics”), but between y and a cluster composed of something that in the real social world was statistically expressed by a

combination (albeit incomplete) between Type A (“domestic politics”) and Type D (“transnational private sector”).

Also, the structural equations allow us to draw trajectories between the independent variables before reaching the dependent one (Neves, 2018). Thus, we can work not only with dependent and independent (or explanatory and causal) variables, but with intervening variables, among other types. Thus, we can identify and isolate spurious variables. And finally, we can think of a social structure in which a group of four variables, initially isolated, can appear affecting y together, in different arrangements that would show us distinct affinities between pairs and trios of this group of hypothesized and artificially separated causal factors.

In principle, we have the multiple linear regression equation with panel data that incorporates our initial problematization (Gujarati and Porter, 2009):

$$y_{it} = \beta_1 x_{1,it} + \beta_2 x_{2,it} + \beta_3 x_{3,it} + \beta_4 x_{4,it} + v_{it} + \alpha \quad (2)$$

Where:

- y = percentage of change in a given stock market index;
- x_1 = Type A (domestic politics);
- x_2 = Type B (domestic private sector);
- x_3 = Type C (international politics);
- x_4 = Type D (transnational private sector);
- i = stock exchange index;
- t = trading session date;
- β = correlation coefficient;
- ε = composition of random errors (ε) and idiosyncratic errors (α);
- α = no correlation.

To employ the technique of factor analysis, it is necessary for our data to satisfy certain criteria. The distinct values must be variable, which means that they must exhibit some degree of positive or negative evolution between i and along t . In addition, these variables need to be interdependent with each other, not just causing dependence on other data in relation to them (Hair Jr. *et al.*, 2009). Our observations for y and x in this thesis meet both criteria. Each of the four variables x will apply a binary value (dummy) to the y_{it} observation indicating greater or lesser identification of certain index depreciation

quantities with political or non-political (business/ private), and domestic or foreign/ international events. These values vary as we observe different indexes over different trading dates over the years. We also understand that, although we are not (yet) using references that show the causality between the various indicators, they cover several dimensions of the same phenomenon, and it is unlikely that the null hypothesis of interdependence between all pairs is true. If we find an index that maintains over the years a negligible correlation between “domestic politics event” and “international politics event”, for example, we will be faced with exceptions, not the norm – that the variables intertwine at various times in events of a mixed nature.

In simple terms, factor analysis calculates the correlation between all possible combinations of variables, resulting in a list of factors that represent the degree of variation between the original variables. Each factor has an *eigenvalue*, which is the sum of the roots of the variances grouped by it. The higher the eigenvalue, the greater the factor's ability to explain the relative importance of the original variables. Therefore, it is essential to observe how each original variable contributes to a factor with a high eigenvalue, evaluating the so-called *factor loadings* (also known as *communalities*). These indicate the percentage in which each variable is explained by the respective factor (Hair Jr. *et al.*, 2009).

Mulaik (1972) point out that a researcher should generally not perform a factor analysis with a sample of less than 50 observations, preferably greater than 100. This requirement is met by the clipped dataset of this thesis, which contains 638 observations. The ideal but improbable result would be a single factor with high explanatory power on the relevance and agreement of the four dummy variables. This would generate one or more “surrogate variables”, identifying which original variables have the largest *factor loadings* in relation to this factor. These variables would be chosen for the Equation (1) linear regression with the dependent variable (stock exchange index' volatility). Even if factor analysis does not achieve this ideal outcome, it will effectively solve a probable problem of excess of independent variables, preparing the data for the desired linear regression.

To improve the accuracy of factor analysis, it is recommended to apply principal component analysis, or rotation. The rotation transforms the proportions of the factors generated into positive values, allowing a vector visualization of the explanatory power of each one. Although factors with lower explanatory power may assume negative values, this does not statistically invalidate the results, both with and without rotation (Venables

and Ripley, 2002).

Finally, the factors obtained can be used in a linear regression, directly substituting the four original variables in Equation (1). It would also be necessary to normalize the values of each factor between 0 and 1 (Mulaik, 1972), but as we are already dealing with dummy variables, this may be redundant. In any case, each factor will represent the incidence of a cluster of dummies, and, if they are outside the binary value, they will need to be normalized to reflect the weight of their explanatory power on the variable or set of variables that compose it. This application of the weight to the score is performed through the following operation:

$$QI(F_{ki}) = \sum_{n=1}^j (|p_n| \cdot x_n) \div \sum_{n=1}^j p_n \times 100\% \quad (3)$$

In the equation provided, $QI(F_{ki})$ refers to the presence of a given event category in the depreciation of the stock market index i , in the factor k . j is the number of variables in the factor k , $|p_n|$ is the modulus of the factor load of the variable n in the factor k , and x_n is the positive result of the variable n in the factor k . This allows us to create, for example, a factor composed of the events of Type A and Type C. The factor loading of this factor precisely represents the distribution of the explanatory power of these two variables in relation to the other four. Thus, we achieved the objective of performing regressions only with the most relevant indicators that truly reflect their explanatory power in relation to stock indexes (*op. cit.*).

An additional approach to identify indicators with low explanatory power compared to the others is through the analysis of the Variance Inflation Factor (VIF). Depending on the results obtained, some variables can be eliminated from the study because they are redundant, since their presence can distort the standard error of the others (Hair Jr. *et al.*, 2009). To perform this analysis, it is sufficient to conduct a multiple linear regression without estimating the idiosyncrasies of the stock indices (i.e., using pooled data) and recording the coefficient of determination (R^2) for each of the four variables. By establishing a tolerance value at 10, the following operation can be performed:

$$VIF_v = 1 / TOL_v \quad (4)$$

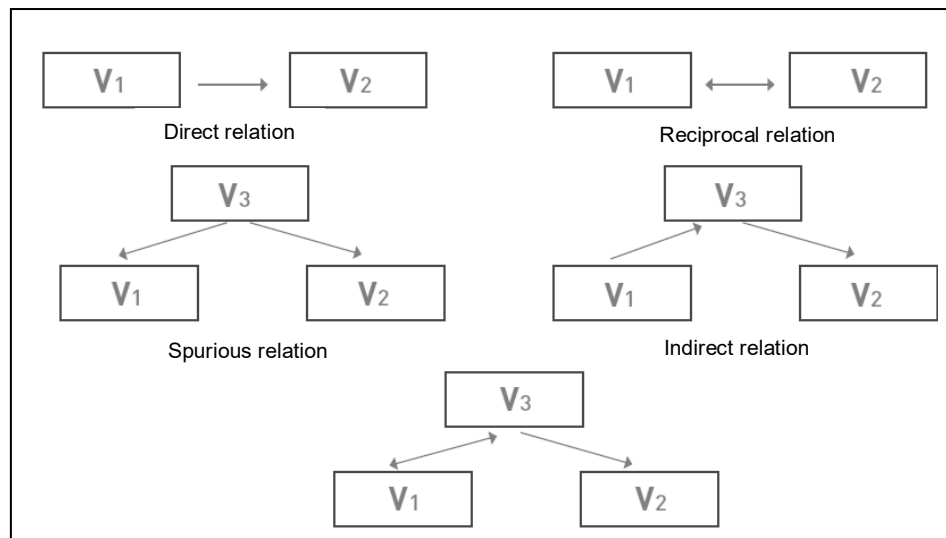
In this formula, “ v ” represents the variable, and “ Tol ” is calculated by subtracting

10 from the R^2 value of “ v ”. Any VIF result that exceeds 10 is considered high, indicating that the variable in question can be discarded in a new regression analysis. It is worth noting that high VIF values are associated with significant collinearity or multicollinearity among the independent variables (*op. cit.*).

Trajectory Diagram

By converting the above reasoning to a structural equation, the variables will not be worked out in isolation, but grouped into constructs. To identify these, R programming language will be used.⁴⁴ The tool will create a diagram that will combine the regression coefficients of the independent variables with the dependent variable, with the regression coefficient of the independent variables with each other, explaining the constructs. The identified constructs themselves will bring their coefficients with the outcome variable. As we can see in Figure 1, this diagram will allow us to draw relationships between variables in a format that can be interpreted as a causal mechanism (Neves, 2018), suggesting roles for variables within the constructs.

Figure 3 – Types of relationships between variables



Source: Medrano and Muñoz-Navarro (2017), adapted from Batista-Foguet and Coenders (2000, p. 26), freely translated.

Figure 1 shows types of relationships between variables (V), whether dependent or independent. In contexts where explanatory variables are highly independent, we have

⁴⁴ Language and software used: R version 4.4.0 and RStudio version 2026.01.0+392.

more direct (*directa*) relationships and they can be identified by multiple linear regressions. When we suspect that the context and nature of the variables cannot give us so much independence between variables, we apply the structural equation and its generation of constructs, which can show us indirect (*indirecta*) relationships, in which the explanatory variables usually use the behavior of other variables, these intervening ones, to generate an effect on the outcome variable. We believe that this is the context of this research, which is why we chose a structural model. Those relationships considered spurious do not contribute to the study, and the excess of reciprocal relationships form a bad sign for the research design.

Thus, we will be able to discover not only how the four variables of our model can act together, but also independently, both in the proportion of their participation in the effects on y , *and* in their relationships between explanatory variables, forming a hypothetical causal mechanism.

3.4 Additional models to explore the dataset

The dataset built is rich and allows us to explore the relationship between stock exchange busts and the other variables aggregated in ways different than those proposed above to test the main hypothesis. Below, we describe nine additional econometric models, relatively simpler than the previous Structural Analysis, that will permit us to delve in different aspects of the financial behavior registered in those more than three decades. Their goal is not to contrapose results with the ones found with the Structural Analysis, but to add more context and, maybe, find partitioned trends. Furthermore, they aim to find answers to some pertinent questions that are outside the main hypothesis scope.⁴⁵

Model 1 – Domestic x International/ global events

This additional econometric model addresses the question: stock losses are predominantly driven by domestic or international/global events? To operationalize this inquiry, the empirical specification relies on the variables found on our dataset:

⁴⁵ To access a folder with all R scripts and files used in econometrics being discussed in this chapter, access: < <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/97AYMN> >.

“variation” x (“type_a” and “type_b” simply summed up, making one) + (“type_c” and “type_d” also summed up), which allows a direct comparison between aggregated domestic and international categories. The estimation employs OLS with a nonlinear Wald test, technique selected because it permits joint coefficient assessment and formal testing of whether the grouped effects differ statistically in magnitude.

Two composite variables were then constructed:

- Type AB = Type A + Type B (domestic events);
- Type CD = Type C + Type D (international/ global events).

The empirical relationship was estimated using an Ordinary Least Squares (OLS) regression model of the form:

$$Y_i = \beta_0 + \beta_1(\text{TypeAB}_i) + \beta_2(\text{TypeCD}_i) + \varepsilon_i \quad (5)$$

Where:

- Y_i represents the outcome variable measuring variation;
- β_1 and β_2 capture the marginal effects of each composite type;
- ε_i denotes the stochastic error term (Gujarati and Porter, 2009).

This specification evaluates whether belonging to either grouped category is associated with systematic changes in the outcome variable relative to the baseline.

Model 2 – Stock crashes x Time

The starting question here is: did stock crashes intensify over time? This is evaluated using “variation” x “date”, a structure that captures temporal dynamics in outcome fluctuations. The chosen estimator Linear time-trend regression (OLS), as it provides a parsimonious and interpretable framework for identifying systematic linear changes across the observed period (Gujarati and Porter, 2009). This procedure operationalizes a quantitative time-series analysis designed to evaluate whether a continuous outcome variable exhibits a systematic linear trend over time and whether such a trend is statistically reliable under standard econometric diagnostics. The dataset is first ordered chronologically according to the observation date to ensure temporal coherence. Time is then transformed into a continuous numerical variable representing

elapsed days since the initial observation. Formally, for each observation i with date d_i , a time index is constructed as:

$$t_i = d_i - \min(d) \quad (6)$$

This transformation produces a monotonic time scale beginning at zero, which allows time to be treated as a quantitative predictor in regression analysis. This approach assumes equal spacing between consecutive units and permits interpretation of coefficients as average change per day.

Then, a linear time-trend model is estimated using ordinary least squares (OLS). The specification is:

$$y_i = \beta_0 + \beta_1 t_i + \varepsilon_i \quad (7)$$

Where:

- y_i = observed value of the dependent variable (“variation”);
- t_i = time index;
- β_0 = intercept;
- β_1 = linear trend coefficient;
- ε_i = stochastic error term.

The parameter of substantive interest is β_1 , which represents the average change in the dependent variable per unit of time. A positive coefficient indicates upward trend; a negative coefficient indicates decline.

Model 3 – Domestic politics x Time

The present model investigates the question: did stock crashes driven by domestic political risk intensify over time? Empirically, this is structured through “variation” x “date” x “type_a”, enabling the identification of trend differences conditional on event classification. The specification applies OLS with time trend x type interaction (Difference-in-slopes model), which is particularly suitable for testing whether slopes vary significantly across categories.

The explanatory structure combines a time trend, a binary classificatory variable, and their interaction. The goal is to test whether the rate of change over time varies systematically across the two groups. The temporal dimension is operationalized as a continuous time trend. Rather than treating calendar dates as categorical or nominal markers, each observation is assigned a numeric value corresponding to the number of

days elapsed since the first recorded observation. This transformation produces a metric time scale suitable for regression analysis and allows the slope coefficient to be interpreted as the expected daily change in the dependent variable (Gujarati and Porter, 2009). The grouping variable (*type_a*) is specified as a dichotomous indicator distinguishing two categories (coded 0 and 1). This variable functions as a moderator, enabling comparison between trajectories rather than merely between group means (Gujarati and Porter, 2009).

The statistical model is an Ordinary Least Squares (OLS) regression with an interaction term (Gujarati and Porter, 2009) between time and group membership. Formally, the estimated equation is:

$$Y_i = \beta_0 + \beta_1 T_i + \beta_2 G_i + \beta_3 (T_i \times G_i) + \varepsilon_i \quad (8)$$

Where:

- Y_i is the dependent variable (variation);
- T_i is the numeric time trend;
- G_i is the binary group indicator;
- $T_i \times G_i$ is the interaction term;
- ε_i is the stochastic error term.

This specification corresponds to a difference-in-slopes design (Gujarati and Porter, 2009), which tests whether the slope of the time trend differs between groups. The coefficients have the following substantive interpretations:

- β_0 : baseline level of the dependent variable for the reference group at the initial time point.
- β_1 : rate of temporal change for the reference group.
- β_2 : difference in baseline level between groups at the starting time.
- β_3 : difference in temporal slopes between groups.

The interaction coefficient β_3 is the central parameter of interest. A statistically significant value indicates that the evolution of the outcome variable over time differs between the two categories.

Model 4 – Domestic private business x Time

This subsection considers the following: did stock crashes driven by domestic private business intensify over time? The design is based on “variation” x “date” x “type_b”, which isolates temporal evolution within that specific driver. Estimation proceeds via OLS with time trend x type interaction (Difference-in-slopes model), since this formulation directly evaluates heterogeneous time trajectories.

Model’s mathematics is the same as Model 3, just making the change for “type_b”.

Model 5 – International politics x Time

The guiding inquiry is: did stock crashes driven by international politics intensify over time? To examine this proposition, the model incorporates “variation” x “date” x “type_c”, aligning temporal and categorical dimensions. The analysis relies on OLS with time trend x type interaction (Difference-in-slopes model). Model’s mathematics is the same as Models 3 and 4, just making the change for “type_c”.

Model 6 – Transnational private business x Time

Here the empirical focus is: did stock crashes driven by transnational private business intensify over time? The model is structured according to “variation” x “date” x “type_d”, which captures whether this class of events displays changing impact across periods. The estimation strategy is, also, OLS with time trend x type interaction (Difference-in-slopes model). Model’s mathematics is the same as Models 3, 4 and 5, just making the change for “type_d”.

Models 2, 3, 4, 5 and 6 are justified by Koselleck’s (2018) *Sediments of Time* and the acceleration of historical change. By measuring the slope of international politics (Model 5), we are testing if Farrell and Newman’s (2019) *Weaponized Interdependence* is actually making the 21st century more hazardous than the End of History era (mostly the first half of the 1990s).

Model 7 – Stock crashes x Democratic institutions

This model tries to answer the following question: are stock crashes intensified by lesser democratic institutions? The statistical design employs “variation” x “polyarchy_year”, linking market outcomes to an institutional continuum (V-DEM’s

Electoral Democracy Index). The regression uses OLS regression with continuous institutional index, which is well suited for assessing linear associations two continuous numeric variables.

The primary objective is to estimate the linear impact of the polyarchy index (x) on the negative variations of the stock indexes (y). Mathematically, the relationship is expressed through the following linear equation:

$$Y = \beta_0 + \beta_1 X + \varepsilon \quad (9)$$

Where:

- β_0 represents the intercept (the baseline value of the dependent variable);
- β_1 represents the coefficient of interest, indicating the expected change in the dependent variable for every one-unit increase in the polyarchy index;
- ε represents the error term, capturing factors not explicitly included in the model.

While standard OLS provides a foundational estimate, social science data often exhibit heteroskedasticity: where the variance of the error terms is not constant across all levels of the independent variable (Gujarati and Porter, 2009). To address this, the analysis incorporates Robust Standard Errors (HC1). This adjustment ensures that the hypothesis tests (p-values) remain valid even if the assumption of constant variance is violated, thereby preventing misleading claims of statistical significance (Cribari-Neto and Da Silva, 2011).

Model 8 – Stock crashes x Country and Region

The subsection addresses the question: are stock crashes intensified by differences in countries and global regions? The empirical structure is defined by “variation” x “country” (nested in the hierarchical level “un_reg_group”). Estimation adopts Multilevel (hierarchical) linear model with country nested in UN region, as this framework properly partitions variance across individual countries and clustered geographic levels (Gujarati and Porter, 2009).

To analyze the nested nature of the data, where individual observations are grouped within countries, and countries are further nested within United Nations (UN) regions, a Multilevel (Hierarchical) Linear Model was employed. This approach is specifically designed to account for the non-independence of data points within shared geographical and administrative contexts, allowing for a more nuanced understanding of how variance is distributed across different scales.

The study utilizes a three-level nested structure. In this framework, the primary unit of analysis (Level 1) is nested within Countries, which are in turn nested within UN Regions (Level 2). Methodologically, this recognizes that countries within the same region may share political, economic, or cultural similarities that influence the dependent variable, just as observations within a single country are likely more similar to each other than to those from a different nation. The third level is the residual one, which represent the variation that cannot be explained by the two other levels.

Mathematically, the model decomposes the total variation of the dependent variable into components associated with each level of the hierarchy. The general form of the random intercept model can be expressed as:

$$Y_{ijk} = \gamma_{000} + U_{0k} + V_{0jk} + \epsilon_{ijk} \quad (10)$$

Where:

- Y_{ijk} represents the observed value for an individual unit i in country j and region k ;
- γ_{000} is the grand mean (the overall average across all regions and countries);
- U_{0k} represents the random effect of the UN region, capturing how much a specific region deviates from the grand mean;
- V_{0jk} represents the random effect of the country nested within that region;
- ϵ_{ijk} is the residual error, representing the remaining variation at the individual level.

It is also useful to understand, in this model, the effects of social structure (Granovetter, 2007) at different hierarchical levels. This means knowing whether stock indexes behave toward variables in predictable ways if analyzed within formal or informal groups or organizations. A stock exchange index is, by itself, a group with at least a dozen components, which in turn are the quotations of corporate shares of companies. It may not be necessary to make the price of each stock that makes up one of the 50 indexes listed part of the dataset and participate in the regressions, as we are interested in a generic understanding of the sensitivity of stock exchanges to politics, and not of effects on specific sectors of national economies. Thus, we would consider the indices as the atomized “individuals” of the groups.

Model 9 – Types of Events x Country and Region

Finally, the analysis turns to the question: how countries and regions differ in their correlations with different types of events and their intensity in stock crashes? This is modeled using “variation” x “country” (nested in the hierarchical level “un_reg_group”) x “type_a” + “type_b” + “type_c” + “type_d”, which integrates cross-level structure with event heterogeneity. The specification applies Cross-level interaction multilevel linear model (country and region random effects with event-type interactions), since this approach simultaneously captures hierarchical dependence and interaction-driven effect variation (Gujarati and Porter, 2009).

Along with Model 8, this choice tests the World Risk Society thesis of Ulrich Beck (1992), which argues that modern manufactured risks (like financial crises) transcend national borders. If the model shows zero regional variance, it validates Strange’s (2015) view of a global “Casino” where geographic refuges no longer exist for capital.

We are adding to the same Multilevel Linear Model used in the previous test, a Cross-Level Interactions scheme. Again, the methodological framework recognizes that “variation” is not distributed uniformly across the globe. By using a nested random-effects structure, the model accounts for the fact that observations within the same country are likely to be more similar to each other than to observations from other countries, and countries within the same UN region may share commonalities.

The model partitions the total variance into three distinct levels: the Regional Level (variance attributable to broad differences between UN regions); the Country Level (Variance attributable to differences between countries within those regions); and the Residual Level (the remaining variance within countries that is not explained by the included predictors). To quantify these environmental dependencies, the Intraclass Correlation Coefficient (ICC) is calculated. This metric determines what proportion of the total variation in the dependent variable is situated at the regional level versus the country level, justifying the need for a multilevel approach over a standard linear regression.

The primary objective of the analysis is to examine how different “event types” (Type A, B, C, and D) influence the outcome variable. Beyond these direct effects, the model tests for cross-level interactions.

A cross-level interaction investigates whether the impact of an event type is

moderated by the region in which it occurs. Mathematically, this means the slopes of the event predictors are allowed to vary across regions. This allows us to answer whether, for example, Type A events have a significantly stronger or weaker effect on “variation” in certain parts of the world compared to others.

The model can be expressed as follows:

$$Y_{ijk} = \gamma_{000} + \sum \beta_p X_{pijk} + \sum \zeta_q Z_{qjk} + \sum \eta_{pq} (X_{pijk} \times Z_{qjk}) + r_{jk} + u_k + \epsilon_{ijk} \quad (11)$$

Where:

- Y_{ijk} is the observed variation for an event in country j and region k;
- γ_{000} represents the overall intercept;
- β_p represents the direct effect of the event types;
- ζ_q represents the direct effect of the regions;
- η_{pq} represents the cross-level interaction terms between event types and regions;
- u_k and r_{jk} are the random intercepts for regions and countries, respectively;
- ϵ_{ijk} is the individual-level error term.

3.5 Hypothesis Test, Confidence Levels, Statistical Validity and other controls

Finally, we expose to the reader the statistical calculations and controls necessary to test the main hypothesis, the results from the additional models and the standard controls regarding statistical validity and other pertinent mathematical remarks regarding the particular tools used. These measures end our methodological chapter and make us ready to address the results with their particularities and cautions.

H_{1a}: variation and non-private business events

It regards a classical statistical inference. After estimating the model parameters by least squares, standard inferential statistics are computed: coefficient estimates; standard errors; t statistics; and p-values (Gujarati and Porter, 2009).

An overall F test evaluates whether the model explains a statistically significant portion of variance relative to a null model with no predictors (Gujarati and Porter, 2009).

This assesses the joint explanatory contribution of the independent variable.

H_{1b}: Structural Analysis – variation and Types A-D

Before extracting latent dimensions, two diagnostic tests were applied to evaluate whether the correlation structure was appropriate for factor analysis. Sampling adequacy was assessed using the Kaiser-Meyer-Olkin statistic, which measures whether partial correlations are sufficiently small to justify dimensional reduction (IBM, 2021). Sphericity was tested using Bartlett's test, which evaluates whether the correlation matrix significantly departs from an identity matrix; rejection of the null hypothesis indicates that meaningful latent factors may exist (*op. cit.*). Eigenvalues of the correlation matrix were also computed to quantify how much variance each latent dimension explains and to determine the number of factors to retain (Mardia, Kent and Bibby, 1979).

Latent dimensions were estimated using maximum likelihood factor analysis applied to the tetrachoric correlation matrix (*op. cit.*). The number of factors retained followed the Kaiser criterion, which selects only those with eigenvalues greater than one, under the rationale that each retained factor should explain at least as much variance as an individual observed variable. To enhance interpretability, the factor solution was orthogonally rotated using the varimax criterion (Braeken and Van Assen, 2017). This rotation redistributes variance across factors to produce a simpler structure in which each observed variable loads strongly on as few factors as possible, facilitating substantive interpretation. The resulting factor loadings represent the strength and direction of association between each observed indicator and each latent dimension.

After identifying the latent dimensions, factor scores were calculated for each observation using a regression-based method. These scores quantify each case's position along the extracted latent traits and serve as condensed representations of the multivariate information contained in the original indicators.

To identify groups of observations sharing similar latent profiles, hierarchical cluster analysis was conducted on the standardized factor scores (Gordon, 1999; Murtagh, 1985). Distances between observations were computed using Euclidean distance, and clusters were formed using Ward's minimum-variance method, which iteratively merges cases so as to minimize within-cluster heterogeneity (Murtagh and Legendre, 2014; Legendre and Legendre, 2012). The number of clusters was defined to match the number of retained factors, reflecting a heuristic assumption that each latent dimension may correspond to a distinct structural grouping in the data. Each observation was then

assigned to a cluster, generating a categorical grouping variable for subsequent analysis.

To assess whether the clusters differed substantively with respect to the outcome variable, a one-way analysis of variance (ANOVA) was conducted. This test evaluates whether mean values of the continuous dependent variable vary significantly across the identified groups (Gujarati and Porter, 2009). Complementary descriptive statistics were also computed for each cluster, including the mean, standard deviation, and number of observations, allowing substantive interpretation of how the groups differ in magnitude, dispersion, and size.

All analytical results were systematically organized into structured tables, including the tetrachoric correlation matrix, adequacy diagnostics, eigenvalues, rotated factor loadings, cluster descriptive statistics, and analysis-of-variance results.

Model 1

Standard regression outputs were produced, including estimated coefficients, standard errors, t statistics, p-values, and model fit indicators such as the number of observations, R^2 , adjusted R^2 , and the F statistic (Gujarati and Porter, 2009). These metrics allow assessment of both substantive effect sizes and statistical significance under conventional Ordinary Least Squares (OLS) assumptions (*op. cit.*). Because real-world social science data frequently violate the homoskedasticity assumption, the analysis also computed heteroskedasticity-consistent standard errors using the HC1 correction. These robust estimates adjust the variance–covariance matrix of the coefficients, producing inference that remains valid even if error variance differs across observations (Cribari-Neto and Da Silva, 2011).

A Wald test was conducted to evaluate whether the estimated effects of the two composite predictors are statistically equivalent, testing the null hypothesis ($H_0 : \beta_1 = \beta_2$), implemented as ($\beta_1 - \beta_2 = 0$). The test statistic follows a chi-square distribution and is computed using the robust variance estimator, assessing whether the two grouped categories exert distinguishable influences on the outcome. To assess whether model assumptions are satisfied, three diagnostic tests were performed: a heteroskedasticity test evaluating whether residual variance is constant, an autocorrelation test assessing independence of residuals across observations, and a normality test examining whether residuals approximate a normal distribution. Together, these diagnostics provide evidence about the reliability of parameter estimates and whether corrective procedures or

alternative specifications might be warranted.

Model 2

In addition to conventional standard errors, heteroskedasticity-robust standard errors are computed to adjust the variance–covariance matrix of the estimates so that statistical inference remains valid even if residual variance is not constant across observations. An F-test evaluates the null hypothesis that all slope coefficients are jointly equal to zero; in this single-predictor specification, it tests whether time explains any variation in the dependent variable, and a statistically significant result implies that the model provides explanatory power beyond random noise.

To ensure that statistical inferences are reliable, standard econometric diagnostics are conducted. Serial correlation is assessed using the Durbin–Watson test to determine whether residuals are temporally correlated, since such dependence violates OLS independence assumptions and can bias standard errors (Farebrother, 1984). Heteroskedasticity is evaluated using the Breusch–Pagan test, which determines whether residual variance changes across observations; if present, conventional standard errors are inconsistent, whereas robust errors compensate for this (Breusch and Pagan, 1979). Residual normality is tested using the Jarque–Bera statistic to determine whether residuals follow a normal distribution, which, although not required for unbiased estimation, affects the validity of small-sample inference (Gujarati and Porter, 2009). Stationarity of the dependent variable is examined using the Augmented Dickey–Fuller test to detect unit roots, because non-stationary data can generate spurious regression results if relationships arise from shared trends rather than substantive association (Elliott, Rothenberg and Stock, 1996). To quantify explanatory performance, standard goodness-of-fit metrics are reported, including (R^2) as the proportion of variance explained by time, adjusted (R^2) as a complexity-penalized version of this measure, and the sample size as the number of observations used in estimation (Gujarati and Porter, 2009).

Models 3, 4, 5 and 6

To ensure valid inference under potential violations of homoskedasticity, the variance–covariance matrix of the estimators is computed using a heteroskedasticity-robust procedure, producing robust standard errors that remain consistent even when error variance differs across observations. Hypothesis tests and confidence intervals for coefficients are therefore based on these robust estimates rather than conventional OLS

standard errors. Several global fit statistics are computed to assess explanatory performance, including the number of observations as an indicator of sample size, (R^2) as the proportion of variance explained by the model, adjusted (R^2) as the variance explained after penalizing for model complexity, and the (F)-statistic with its associated probability as a joint test of whether all slope coefficients equal zero.

These measures provide complementary information on goodness of fit, parsimony, and overall statistical significance. Analytical interpretation centers on comparing time trajectories between groups: the time coefficient represents the trend for the reference category, the interaction coefficient quantifies how much faster or slower the second group changes relative to that reference, a statistically indistinguishable interaction implies parallel trends, and a statistically significant interaction indicates divergent trajectories and heterogeneous temporal dynamics.

Model 7

Four diagnostic dimensions are evaluated. Residual normality is tested using the Shapiro-Wilk procedure to determine whether residuals are normally distributed, a condition important for reliable small-sample inference (Royston, 1995). Homoskedasticity is examined with the Breusch-Pagan test to assess whether error variance is constant, since violations justify the use of robust errors. Independence is evaluated using the Durbin-Watson statistic to detect autocorrelation and confirm that observations are not influenced by temporal or sequential ordering. Functional form is assessed using the Ramsey RESET test to verify that the relationship is properly specified as linear and that no significant nonlinear variables have been omitted (Ramsey, 1969).

The explanatory power of the model is assessed through the coefficient of determination (R^2) and adjusted (R^2), which indicate the proportion of total variance in the dependent variable explained by the institutional index, and an (F)-test is conducted to evaluate overall statistical significance by testing the null hypothesis that the independent variable has no effect.

Model 8

The analysis proceeds in two stages to ensure robustness. First, a null model without independent predictors is estimated to establish a baseline for the total variance in the dataset and determine how much of that variance is attributable to grouping structures such as countries and regions rather than individual differences. Second, the

full multilevel model is estimated to obtain fixed effects representing average impacts across the sample and random effects representing variance components (Harville, 1974). To quantify the importance of hierarchical clustering, the Intraclass Correlation Coefficient is calculated for regional and country levels, indicating the proportion of total variance explained by grouping structure (Bartko, 1966). Formally, the regional ICC is defined as:

$$ICC_{region} = \frac{\sigma_{region}^2}{\sigma_{region}^2 + \sigma_{country}^2 + \sigma_{residual}^2} \quad (12)$$

Where:

- ICC_{region} : intraclass correlation coefficient at the regional level;
- σ_{region}^2 : variance component attributable to differences between regions;
- $\sigma_{country}^2$: variance component attributable to differences between countries (within regions);
- $\sigma_{residual}^2$: residual (within-unit) variance.

A high ICC at the regional level indicates that regional context plays a substantial role in shaping outcomes, whereas a low value suggests that variation is driven more by country-specific or individual factors. The model also undergoes a singularity check to ensure that estimates are mathematically stable and supported by the data (Rdocumentation, 2026). Likelihood Ratio Tests and information criteria such as Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) are used to compare hierarchical specifications with simpler alternatives, verifying that accounting for regional and national nesting significantly improves model accuracy (Gujarati and Porter, 2009; Sakamoto, Ishiguro and Kitagawa, 1986).

Model 9

Building directly on the multilevel structure established in Model 8, Model 9 retains the same hierarchical specification (countries nested within regions) and variance decomposition logic, but extends the full model by incorporating cross-level interaction terms between event types and regional context (Aguinis, Gottfredson and Culpepper, 2013).

As in Model 8, robustness is assessed through comparison between the baseline null model and the fully specified interaction model using a Likelihood Ratio Test. This verifies whether adding event-type effects and their regional interactions provides a

statistically meaningful improvement in explanatory power beyond the variance components previously identified.

Model fit is again evaluated using AIC and BIC, ensuring comparability with the criteria applied in Model 8 while penalizing unnecessary complexity. The model is also subjected to a singularity check, following the same diagnostic rationale, to confirm that the expanded random-effects structure remains empirically supported and that variance components are not estimated at (or near) zero, which would signal over-parameterization relative to the hierarchical structure validated in the previous specification.

3.6 The adding to the theoretical dialogue

The Joint Hypothesis problem is a central methodological and philosophical anchor in our analysis, particularly in how we critique the Efficient Market Hypothesis (EMH) and interpret the market's reaction to political shocks.

In our review of the neoclassical paradigm, we highlighted that Fama (2017; 1991) identified the Joint Hypothesis as a fundamental hurdle: market efficiency cannot be tested independently of an asset-pricing model. The problem is: any empirical test that seems to show market inefficiency (such as a massive, irrational crash after a political event) might actually just be showing that the model used to measure expected returns is flawed. Nevertheless, this allows proponents of market efficiency to argue that extreme volatility is not evidence of irrationality, but rather a rational risk premium for events that were previously unpriced.

Our research design (specifically H_{1b}) addresses the Joint Hypothesis by moving away from simple linear tests to Structural Equation Modeling. We argue that public (political) and private (business) events are irremediably interconnected. By using SEM, we are not testing a single economic variable in isolation; instead, we are observing how latent constructs (like Factor 1, “Domestic Dynamics” presented in the next chapter) exert a systemic penalty on stock valuations.

The most innovative application of the Joint Hypothesis in our work is its transformation from a technical limitation into a philosophical inquiry regarding historical time, drawing on Reinhart Koselleck. We challenge the EMH's assumption that markets simply reflect all available information. Following Koselleck, we argue that

information is only perceived through a conceptual framework that determines what is “thinkable” at a given moment. An event might be ignored by the market *ex-ante* not because the information was missing, but because it sat outside the investors’ Horizon of Expectation. When the event occurs, it causes a temporal collapse, demonstrating that the market’s pricing was based on a misread of experience.

We are suggesting that the Joint Hypothesis fails to account for the fact that a crash is the surface manifestation of multiple “sediments” (long-term institutional trends vs. short-term singular events) interacting at different speeds. It serves as a warning against oversimplified causal claims. It allows us to argue that:

1. Market irrationality is often a mismatch of temporal expectations rather than just a failure to process numbers;
2. Politics “hits harder” because it disrupts the very institutional frameworks that the market's joint models rely on to establish rational expectations in the first place;
3. The Black Swan nature of political risk (as discussed in Chapter 1) could be an empirical demonstration that the Joint Hypothesis will always remain unresolved, because the future is constitutively open and cannot be fully captured by historical pricing models.

In the next chapter, and finally, our results for H_{Ia} and H_{Ib} will show that even when accounting for this “joint” complexity, non-private crises drive stock losses significantly deeper than purely private business shocks.

“But, both in turbulent times and in normal periods, routine stock market reporting is, in truth, little more than fiction. Any novice journalist who happens to be assigned to cover the market feels the need to display insight and dig deep in order to explain what, to those who truly understand the intricacies and inner workings of the market, is actually driven by other causes. They know that the tides of the market follow flows of money moving in and out for reasons that are, most of the time, hidden”.

(Décio Bazin⁴⁶)

CHAPTER 4: POLITICS IS REGAINING ITS STRENGTH OVER THE PRIVATE SECTOR AS WE ENTER THE PRESENT CENTURY (RESULT ANALYSIS)

After pondering on the results for all the models described in the previous chapter, we found out, although with nuances and some limits, that H_I failed to be rejected. Recapitulating our main hypothesis:

H_I = Stock losses are predominantly driven by non-private business-related impacts, such as political, geopolitical, social and other public crises.⁴⁷

Since 1989 and going on in the first decades of the 21st century, the public sphere seems to truly present more stressful situations to financial markets, or at least stock indexes, than the private sphere. Although the result above was oversimplified in its description, we need to assess the overall results for our main hypothesis tests altogether with the outputs for the nine models proposed before, to understand the trends, nuances, and fragilities that our research presents. The full explanation for those outputs can be read in the following sections, and we will try to summarize them by the end of the

⁴⁶ Bazin, 2017 [1994], p. 281, freely translated from the original: “Mas, tanto em épocas tumultuadas como nas normais, o noticiário rotineiro da Bolsa não passa na verdade de ficção. Qualquer aprendiz de jornalista que esteja porventura encarregado de cobrir a Bolsa acha que precisa mostrar sabedoria e ir a fundo para explicar aquilo que, para os que conhecem realmente os meandros e os escaninhos da Bolsa, tem explicações em outras causas. Estes sabem que as marés do Mercado obedecem a fluxos de dinheiro que entram e saem por motivos que na maioria das vezes estão ocultos”.

⁴⁷ Again, we present the specification for the null hypothesis for H_1 :

H_0 = Stock losses are predominantly driven by private business-related impacts, being them domestic or transnational.

chapter.

The main remark we would like to make after testing H_I and seeing that it stands, is that the phenomenon is empirically observable, but it is composed of a time trend that is making politics stronger and private markets less important (to themselves in the stock exchanges) in a slow and consistent way. It means that the dataset shows that the private actors are still able to insulate themselves from the public sphere and make their assets resist political stress, and were abler in the 1990s and the early-2000s, when the ever-growing violent and politically complex 21st century still showed the illusion that it would be the age of the private sector driven by liberal-democracies. Politics is coming back to participate in the private economy, if it ever left the scene.

4.1 Descriptive statistics

It would be a waste to start showing results for this piece without exploring descriptive statistics for its dense dataset. We are dealing with variables that cover more than three decades of political and economic domestic and global phenomenon, and each one of them deserves to be exploited separately, before we analyze the results for H_{Ia} , H_{Ib} and Models 1-9 promised in the previous chapter. The variables from the dataset being summarized in descriptive statistics are:

- date;
- weekday;
- variation;
- country;
- un_reg_group;
- polyarchy_year;
- event_tag;
- type_a;
- type_b;
- type_c;
- type_d;
- n_priv.

The procedure consists of a structured protocol for producing a comprehensive

descriptive statistical report suitable for analytical purposes.

For each quantitative variable, the procedure computes a full set of distributional summary measures, including the number of valid observations, mean, standard deviation, minimum, maximum, median, first quartile, and third quartile. Mathematically, these statistics jointly describe central tendency and dispersion. Quartiles are included because they are resistant to outliers and therefore complement mean-based measures (Wicklin, 2017; Gujarati and Porter, 2009).

For each categorical variable, a frequency distribution is constructed by counting observations in each category and computing their relative frequencies as percentages of valid observations (*op. cit.*).

For the date variable, the procedure summarizes temporal scope rather than distributional properties by reporting the number of valid observations, the earliest observed date, and the latest observed date. These indicators describe the observational window of the dataset and provide contextual information essential for longitudinal or event-based research (*op. cit.*).

Table 4 below comprehends the descriptive statistical results:

Table 4 – Main Descriptive Statistics results derived from the dataset

Variable	N	Mean	SD	Min	Median	Max
date	638	-	-	1989-05-25	-	2023-09-04
weekday		-	-	Saturday: 4	-	Monday: 216
variation (%)		-8.955	4.074	59.020	-7.780	-6.000
country		-	-	Switzerland: 1	-	Russia: 183
un_reg_group		-	-	African: 18	-	Eastern European: 243
polyarchy_year		0.534	0.294	0.019	0.462	0.915

Variable	N	Mean	SD	Min	Median	Max
event_tag		-	-	Agriculture; Civil War/ Separatism; Judicial decision; Other (undefined); Private- private corruption (inside job): 1 (each)	-	Global/ regional financial shock (systemic): 164
type_a		-	-	1, presence: 256	-	0, absence: 382
type_b		-	-	1, presence: 141	-	0, absence: 497
type_c		-	-	1, presence: 242	-	0, absence: 396
type_d		-	-	0, absence: 212	-	1, presence: 426
n_priv		-	-	1, presence: 160	-	0, absence: 478

Source: elaborated by the authors.

Russia is, by far, the country whose presence is the most repeated. The transition to capitalism from late-1991, the financial crisis that culminated in 1998, the geopolitical struggle with Georgia and the Chechens, not to mention many political crises involving its leaders and private scandals of corruption in huge industries. Russia is not alone in the Eastern European region, which is also the most mentioned region amongst its peers: Hungary and Poland were also transition economies in stress (the latter was responsible for reflecting a lot of the Ukraine's crisis in different occasions, since the Warsaw Stock Exchange maintains the most important index for Ukrainian stocks, WIG20).

The most prominent event tag was the conceptual umbrella called "Global/regional financial shock". This kind of event could involve a positive result for all Types A-D and was used to label complex and widespread financial crisis like 2008's, the Eurozone's in the 2010s, and most events derived from the Asian and the Russian

financial crisis in the 1990s. It does not help a lot if the purpose of a tag is to differentiate things, but this kind of crisis extrapolate our typological efforts. Surprisingly, “private-private corruption” was tagged to one event only, since common sense saw a lot of auditing and fiscal scandals provoked by private businesses during the last decades. In our dataset, which captures stock speculation panic, those scandals were more present when they were of a “public-private nature”.

The distribution between Types A-D is relatively balanced and there is no type proving itself to be an outlier. Type D (transnational private business events) is the one with the most positive occurrences, which is central to understand the main hypothesis tests ahead, while Type B (domestic private business) champions the absences, which is also interesting: the stock indexes were made to calculate the joint performance of mostly domestic companies listed. In this light, speculators care less with stressful events regarding the main private companies listed in the national exchanges they are operating in. They care more about externalities and institutions than with the very particular situations of the companies they invest and trade, it seems.

“n_priv” events, being those with no participation at all of private economic actors, only comprise 25% of the dataset. This is the rate in which public actors show their faces all alone in the listed busts, without the joint participation of private banks, funds and companies – even after our measure to not count the obvious private panic on each observation as a cause to attribute Types B and D. Stock exchanges are a natural realm for private presence and inventiveness, so it should had been expected. Nevertheless, it seems that Fukuyama’s liberal-democratic-capitalism found a place to be and autoregulate even after the 1990s, and they use that place even to destroy their assets. The *Baba Yaga* they paint the state and political intervention to be, actually causes problems by themselves only ¼ of the time. Since we are not allowed to draw conclusions from descriptive statistics only, we will now proceed to finally test our hypothesis with more robust methods.

4.2 Main Hypothesis Testing results (H_{1a})

The last remarks on “n_priv” participation only counts for the repetition of observations, but not the dimension of each one. Taking not only the number of “n_priv”

repetitions, but especially the aggregate magnitude of each one, we need now to test the research design and model specification for H_{1a} , OLS regression provides empirical support for the hypothesis that non-private, political crises exacerbate stock losses. They appear only $\frac{1}{4}$ of the time, but when they do, the havoc is worse.

Before interpreting the baseline effects, the model's stochastic properties were evaluated to ensure the validity of OLS inferences:

- Heteroskedasticity: The Breusch-Pagan test yields a statistic of 0.443 ($p\text{-value} = 0.506$), failing to reject the null hypothesis of homoskedasticity. This indicates that the variance of the residuals is constant across the sample;
- Autocorrelation: The Durbin-Watson statistic of 1.63 ($p\text{-value} < 0.001$) suggests the presence of positive serial correlation in the residuals, a common phenomenon in financial time-series data;
- Normality: The Jarque-Bera test statistic is highly significant (74,220.15, $p\text{-value} = 0.000$), strongly rejecting the normality of residuals. This is a standard feature of financial market returns, which typically exhibit “fat-tailed” distributions.

Because of the non-normality and autocorrelation detected, robust standard errors were calculated to validate the statistical significance of the coefficients and ensure reliable scientific inference. The difference-in-means estimation expressed in regression form yields a baseline negative variation (the intercept, β_0) of -8.730 for privately-caused market observations. This baseline loss is highly statistically significant ($p < 0.001$).

The primary variable of interest, the binary indicator for non-private events ($n_priv = 1$), returns a coefficient (β_1) of -0.897. This implies that when a market bust is driven by political, geopolitical, or social crises, the stock variation experiences an *additional* average drop of 0.897 units compared to private events.

Crucially, this finding is statistically significant under standard OLS standard errors ($p = 0.0158$) and remains significant when subjected to robust standard errors ($p = 0.0290$), achieving the conventional ($\alpha = 0.05$) threshold for scientific validity.

The overall model fit, measured by the R-squared (0.0091) and Adjusted R-squared (0.0076), is low. While the independent variable explains less than 1% of the total variance in stock fluctuations – a typical magnitude for single-factor financial models subjected to high stochastic noise – the F-statistic of 5.85 confirms that the model's explanatory power is jointly significant.

The econometric tests corroborate hypothesis H_{1a} . While all observed market busts yield negative returns in the dataset, the data confirms that non-private impacts

(public, political, and social crises) exert a measurable, statistically significant penalty on stock valuations. Specifically, non-private shocks drive stock losses significantly deeper than those provoked by private business actors alone, justifying further causal exploration of the broader H_I hypothesis.

4.3 Main Hypothesis Testing results (H_{Ib})

To test hypothesis H_{Ib} , this study employed Factor Analysis and SEM to unpack the interdependent relationships between four structural variables: Type A (domestic politics), Type B (domestic private sector), Type C (international politics), and Type D (transnational private sector). By evaluating their joint impact on stock market index variations, we transit from an atomized variable approach to a structural one.

Prior to extracting latent dimensions, a Variance Inflation Factor (VIF) analysis was conducted. Very surprisingly, the results confirmed the absence of multicollinearity among the original explanatory variables, with all VIF values remaining close to 1 (ranging from 1.04 to 1.23), well below the restrictive threshold of 10.

Diagnostic tests for factor suitability, however, presented mixed signals. Bartlett's Test of Sphericity rejected the null hypothesis of an identity matrix ($p < 0.001$), confirming that the variables share sufficient covariance to justify clustering. Conversely, the KMO statistic yielded a severe value of 0.218. While this indicates statistically poor overall sampling adequacy for dimensional reduction – suggesting the variables share little common variance globally – the extraction proceeded under the theoretical assumption of structurally forced latent relationships.

Latent Construct Formation (Factor Loadings).

Maximum likelihood factor analysis successfully grouped the data into distinct constructs. According to the structural loadings, Factor 1 operates as a “Domestic Dynamics” cluster, heavily loaded by Type B (domestic private sector, $\lambda = 0.911$) and Type A (domestic politics, $\lambda = 0.711$). Type C (international politics) showed a weak but positive loading within this construct ($\lambda = 0.311$). Factor 2 acts as an almost pure “Transnational Market” construct, overwhelmingly driven by Type D (transnational private sector, $\lambda = 0.990$).

To estimate the causal influence of these latent structures on the outcome variable

(stock market variation), Pooled OLS, Fixed Effects, and Random Effects panel models were specified using the extracted factors. To determine the optimal econometric specification, the Hausman Test was applied. The test statistic generated a non-significant p-value of 0.588. By failing to reject the null hypothesis, we conclude that the unique errors are not correlated with the regressors. Therefore, the Random Effects model is both consistent and highly efficient for this dataset.

The Random Effects model yielded significant scientific findings regarding market behavior:

1. The Domestic Penalty: Factor 1 exhibits a strong, negative, and highly significant correlation with the dependent variable (Estimate = -2.136, $p < 0.001$). This indicates that localized public and private intertwining consistently exert a depreciative pressure on stock indexes.
2. The Transnational Premium: Factor 2 demonstrates a positive and significant effect on the indices (Estimate = 1.838, $p < 0.01$). This supports the notion that decentralized, transnational private sector activities behave with a distinct rationality that fundamentally boosts market valuations, isolated from the penalizing effects of domestic politics. The gets of Atlas and Fukuyama are able to escape and act against Baba Yaga's intervention.

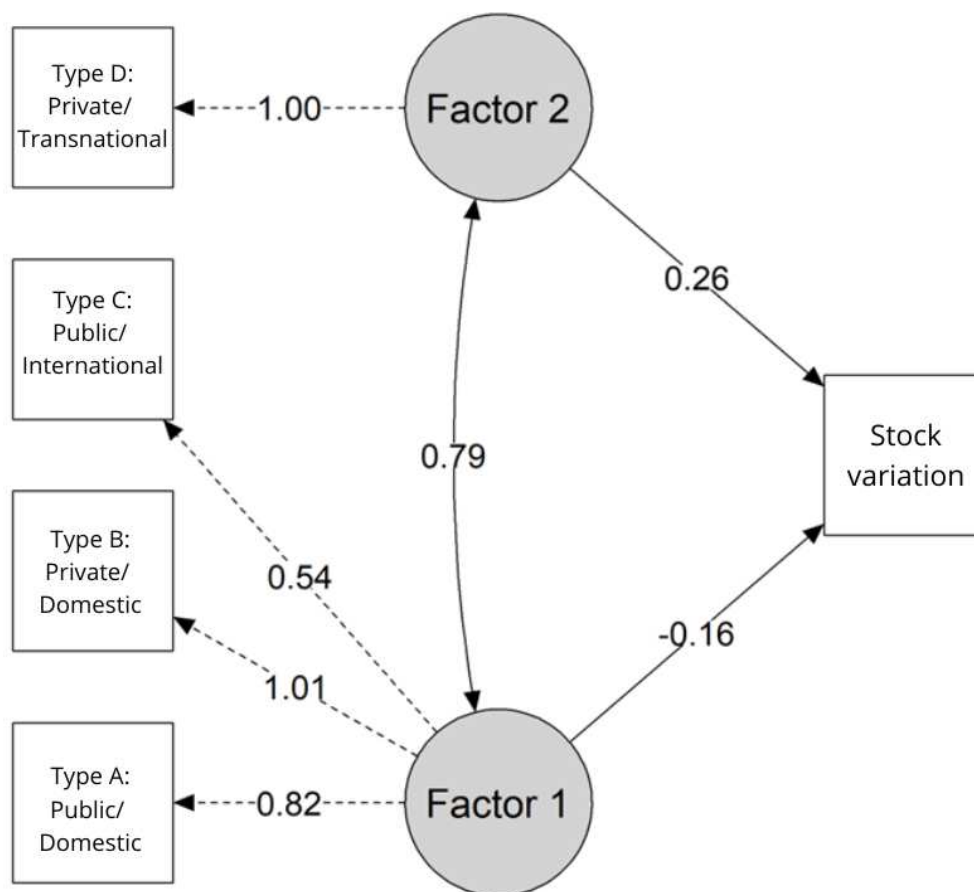
Nevertheless, these results should be taken with caution: while the individual regression paths inside the SEM confirm the directionality found in the panel data (e.g., Factor 1 regression estimate = -0.662, $p < 0.05$), the overall SEM global fit indices are exceptionally poor. The model reports a Comparative Fit Index (CFI) of 0.00 and a Root Mean Square Error of Approximation (RMSEA) of 0.411.

Finally, the hypothesis H_{1b} finds robust partial validation. While the structural equations indicate that a perfectly fitted, holistic theoretical model remains statistically elusive (as shown by poor SEM fit and low KMO), the latent constructs themselves possess immense explanatory power. The structural decomposition successfully demonstrated that domestic politics entanglement with its national private sector (Factor 1) acts as a systemic market depressor, whereas transnational private forces (Factor 2) operate as positive, structurally insulated drivers of financial growth.

This finding validates the *House of Cards*' metaphor cited in the Introduction: money is the "McMansion" that falls apart, whereas power is the "old stone building". Again, the severity of political shocks reflects Keynes's (2017 [1936]) concept of Animal Spirits: when the political atmosphere becomes hostile, the spontaneous urge for

economic action withers regardless of fundamentals. It further confirms the Fat Tail distribution theory, where political risks are viewed as “airplane crashes” – rare but catastrophic compared to the “car crashes” of routine market volatility. Also, we can say that Factor 1 represents the “bad” or “extractive” institutions dynamics where the state intervenes to rebalance equality or capture rent, causing market anxiety (Acemoglu and Robinson, 2012; North, 1990). Factor 2 represents the hyperspace described by Bauman (2012): a digital transactional reality that operates above national rules, allowing transnational capital to escape the vigilance of the domestic state and maintain its own logic of growth.

Figure 3 – Trajectory Diagram



Source: the authors.

Figure 3 presents a trajectory diagram to the measurement results of our structural equation model. On the measurement side, four observed categories—Type A (Public/Domestic), Type B (Private/Domestic), Type C (Public/International), and Type

D (Private/Transnational)—serve as indicators of two latent constructs. Factor 1 is defined by strong positive loading from Type B (1.01), moderate positive loading from Type C (0.54), and a negative loading from Type A (0.82), indicating that it captures a dimension contrasting different domestic organizational configurations, particularly along public–private lines. Factor 2, in turn, is anchored by Type D with a loading fixed at -1.00 for identification, suggesting that it reflects a transnational private dimension. The differing signs and magnitudes of the loadings indicate that the latent variables are well differentiated and capture distinct underlying structures among the observed categories.

The structural component of the model specifies the relationships among the latent variables and their effects on stock variation. Factor 1 exerts a strong positive influence on Factor 2 (0.79), indicating that the dimension captured by Factor 1 is positively associated with the transnational orientation represented by Factor 2. In turn, Factor 2 has a positive effect on stock variation (0.26), whereas Factor 1 has a small negative direct effect (-0.16). This configuration implies that the influence of Factor 1 on stock variation is largely indirect, operating through Factor 2, and partially offset by its direct negative effect. Substantively, the results suggest that while domestic organizational configurations alone may not directly enhance stock performance, their association with transnational private structures plays a more decisive role in shaping market outcomes.

4.4 Model 1 results

The econometric analysis sought to determine whether stock losses are predominantly driven by domestic (Type AB) or international/global (Type CD) events. Based on the estimation of the Ordinary Least Squares (OLS) regression model with 638 observations, the findings indicate that domestic events are the primary statistically significant drivers of the observed variation in stock losses.

Evaluating the robust coefficient estimates (which correct for potential variance-covariance distortions), domestic events (Type AB) exhibit a statistically significant negative effect on the outcome variable ($\beta = -0.477$, *Robust SE* = 0.188, $t = -2.537$, $p = 0.011$). In contrast, the effect of international/global events (Type CD) is not statistically distinguishable from zero ($\beta = 0.132$, *Robust SE* = 0.216, $t = 0.612$, $p = 0.540$). These results suggest that within the specified model, domestic occurrences predominantly drive the variation in stock losses, whereas global events do not yield a systematic impact.

Despite the statistical significance of domestic events, the overall explanatory power of the model is remarkably low. The R-squared value is 0.0079 (*Adjusted R*² = 0.0047), indicating that less than 1% of the total variance in the outcome is explained by the aggregated event types. This suggests that while domestic events are a statistically significant factor, stock losses are heavily influenced by unobserved variables not captured in this specification. Furthermore, the nonlinear Wald test yielded a p-value of 1.00 ($\chi^2 = 1$, $df = 1$). Consequently, we fail to reject the null hypothesis of coefficient equivalence, suggesting that while only domestic events are individually significant, the statistical distinction between their comparative magnitudes is not definitive under this joint assessment.

To ensure the reliability of the parameter estimates, three post-estimation diagnostic tests were conducted:

1. Heteroskedasticity: The Breusch-Pagan test yielded a p-value of 0.604, failing to reject the null hypothesis of homoskedasticity. This indicates that residual variance is generally constant.
2. Autocorrelation: The Durbin-Watson statistic (1.638, $p < 0.001$) indicates the presence of positive autocorrelation among the residuals, violating the assumption of independent errors.
3. Normality: The Shapiro-Wilk test strongly rejected the normality of residuals (*Statistic* = 0.570, $p < 0.001$).

The diagnostics reveal significant departures from standard OLS assumptions regarding normality and autocorrelation, validating the methodological choice to employ HC1 robust standard errors for inference. Ultimately, the finding is straightforward: domestic events trigger a statistically significant variation in stock losses, whereas international events do not. However, the phenomenologically low R^2 underscores that event type alone is an insufficient predictor of overall market variation.

At least regarding stock markets, this outcome challenges Walker's (1992) "Inside/Outside" dichotomy, where the state acts as a "concrete and physical" house for the historical process, while the international realm is perceived as an "abstract and imaginary" non-world. Investors likely perceive domestic institutions as the primary source of Rule of Law and guarantees (therefore, expecting more of them and panicking more when they appear to fail the market), viewing international anarchy as a shared abstraction that has already been discounted or organized into the price.

4.5 Model 2 results

To address this research question – whether stock crashes intensified over time – a linear time-trend regression (OLS) was estimated over the dataset observations to capture the temporal dynamics of the “variation” outcome.

The regression results yield a significant, negative intercept ($\beta_0 = -7.86, p < 0.001$) and also with significance, a negative time-trend coefficient ($\beta_1 = -0.000177, p = 0.0042$). The parameter of substantive interest (β_1) reveals a systematic linear decline in the dependent variable over the observed period. The model was approved by the F-test (Statistic = 11.29, $p = 0.0008$). However, the explanatory power of time alone is inherently modest, accounting for approximately 1.74% of the variance in the outcome ($R^2 = 0.0174$; $Adj. R^2 = 0.0159$).

If the dependent variable (“variation”) represents the magnitude or severity of market returns during crashes, this statistically reliable negative slope suggests an intensification of the phenomenon over time – meaning the variation metric has trended systematically lower (i.e., further decline or intensified negative fluctuations) as the thirty-five years elapsed.

To ensure the robustness and reliability of these inferences, a suite of standard econometric diagnostics was conducted:

- Stationarity (Augmented Dickey-Fuller): The ADF test strongly rejects the null hypothesis of a unit root (Statistic = -7.43, $p = 0.01$). The dependent variable is stationary, confirming that the observed relationship is not a spurious regression driven by non-stationary shared trends;
- Heteroskedasticity (Breusch-Pagan): this test fails to reject the null hypothesis of constant variance (Statistic = 1.64, $p = 0.20$). While homoskedasticity is maintained, the preemptive use of heteroskedasticity-robust standard errors in the main model further secures the validity of the t-statistics.
- Serial Correlation (Durbin-Watson): The Durbin-Watson statistic of 1.66 ($p < 0.001$) indicates the presence of positive temporal autocorrelation in the residuals. Because observations are not perfectly independent, the standard errors might be inherently downward-biased, although the robust standard errors implemented provide a partial corrective measure;
- Normality (Jarque-Bera): this test strongly rejects the normality of residuals

(Statistic = 73,851.70, $p < 0.001$), indicating heavy tails or skewness. However, given the adequately large sample size ($N = 638$), the Central Limit Theorem holds, allowing the OLS estimators to remain consistent and asymptotic inferences to remain valid.

The analysis provides at least little empirical that the variation parameter exhibits a slight but systematic negative drift over the chronological index. We are able to infer that stock market panics were less intense from past to present. This trend supports Susan Strange's (2015) thesis on *Casino Capitalism*: since the end of the gold standard, financial assets have become uncoupled from government control, leading to a fluid space of transactional reality that is inherently more volatile. It also reflects Ulrich Beck's (1992) Risk Society, where late modernity generates manufactured uncertainties that transcend the management capacity of traditional institutions.

4.6 Model 3, 4, 5 and 6 results

The present analysis evaluates whether the severity of stock crashes, disaggregated by their precipitating drivers (domestic politics, domestic private business, international politics, and transnational private business), has systematically intensified over time. To test for heterogeneous temporal dynamics, four difference-in-slopes Ordinary Least Squares (OLS) models were estimated. Following methodological best practices for financial time-series data, all models apply a heteroskedasticity-robust procedure to estimate the variance-covariance matrix, ensuring that standard errors and subsequent hypothesis tests remain consistent despite potential variations in error variance.

All four models demonstrate global statistical significance (Model p-values ranging from 0.0038 to 4.76×10^{-6}), indicating that the combined explanatory structures – comprising the time trend, the binary event classifications, and their interactions – meaningfully capture variations in the data, albeit with modest R-squared values typical of financial return variance (ranging from 2.08% to 4.23%).

The central parameter of interest across all specifications is the interaction coefficient between the time trend and the typological indicator, which tests the null

hypothesis of parallel trends:

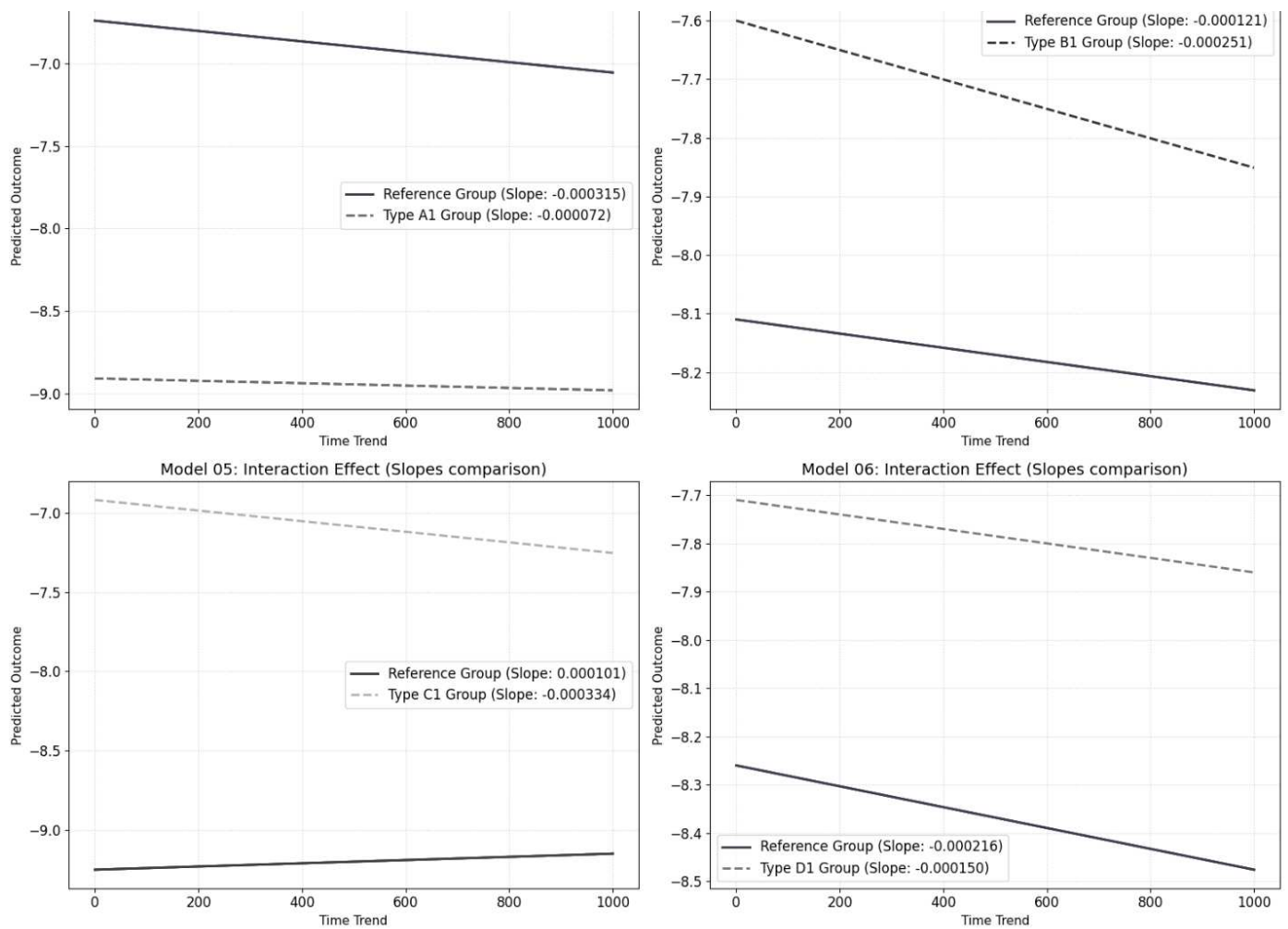
1. International Politics (Model 5) – Highly Significant Divergence: The most robust scientific finding emerges from Model 5. The interaction term for international political events (*time_trend: type_c positive*) yields a highly significant negative coefficient (-0.00043, $p = 0.00012$). This statistically significant interaction indicates that stock crashes driven by international politics do not follow the baseline temporal trajectory showed by Model 2. Instead, they exhibit a distinct, divergent dynamic, indicating that the impact of international political shocks has systematically intensified (i.e., exhibited a steeper downward trajectory) over the observed timeframe relative to other crash triggers. International politics slowly grew more dangerous for stocks over time. This phenomenon can be explained by Farrell and Newman's (2019) concept of Weaponized Interdependence. As global financial networks (like SWIFT) become central hubs, they are increasingly used by states as tools of coercion, materializing geopolitical friction into immediate market disruptions. This suggests we are moving away from the End of History benign globalization toward an era where international high politics directly “makes finance bleed”.
2. Domestic Politics (Model 3) – Marginally Significant Divergence: Model 3 reveals a marginally significant interaction effect for domestic political drivers (*time_trend : type_a positive*) with a positive coefficient (0.00024, $p = 0.0689$). While the baseline effect of domestic politics implies a notably lower intercept ($p = 0.0062$), the interaction suggests that the temporal evolution of domestic-driven crashes slightly offsets the baseline trend, though this finding is only robust at a 10% significance level ($\alpha = 0.10$) and warrants cautious interpretation. If the reader accepts the model and its results, it means that domestic politics slowly grew less dangerous for stocks over time.

Conversely, the models evaluating business-driven events fail to reject the null hypothesis of parallel trends:

- Domestic Private Business (Model 4): The interaction term (*time_trend : type_b positive*) is statistically indistinguishable from zero ($p = 0.2818$).
- Transnational Private Business (Model 6): The interaction term (*time_trend : type_d positive*) similarly lacks statistical significance ($p = 0.6375$).

For both categories of private business shocks, the trajectories are statistically parallel to the reference group. The rate of temporal change in crash severity does not vary systematically when the precipitating event is categorized as a private business driver. Graph 2 illustrates the longitudinal trajectories of predicted outcomes across four distinct econometric models:

Graph 2 – Types A, B, C and D time trends isolated against the baseline



Source: the authors.

4.7 Model 7 results

This investigates whether stock market crashes are intensified by weaker democratic institutions, measured by V-DEM's Electoral Democracy Index ("polyarchy_year"). The baseline approach relies on an Ordinary Least Squares (OLS) regression across 638 observations to estimate the linear impact of the institutional index on negative stock market variations.

The standard OLS regression yields a positive coefficient for the "polyarchy_year" variable ($\beta = 0.8898$). Contextually, this suggests that higher levels of *alpha* levels ($p = 0.1045$).

However, when applying HC1 Robust Standard Errors, the standard error for the "polyarchy_year" estimate decreases, pulling the p -value down to 0.0773. This still renders the institutional effect statistically significant at the 10% level. This finding provides weak but notable empirical evidence supporting the hypothesis that stronger democratic institutions may help mitigate the severity of stock crashes.

Despite the partial significance of the main predictor, the model's overall explanatory power is extremely limited. The R-squared is 0.0041, indicating that the democratic institutional index independently explains only about 0.41% of the variance in stock crash magnitude. Additionally, the global F-statistic (2.64) yields a p -value of 0.1045, meaning the overall model fit is statistically weak.

A rigorous assessment of the residual diagnostics highlights significant structural limitations in this simple bivariate specification:

- Normality (Shapiro-Wilk): The test decisively rejects the null hypothesis of normally distributed residuals ($p = 1.09 \times 10^{-36}$). While the relatively large sample size allows for asymptotic normality of the coefficients, the extreme non-normality suggests the presence of heavy tails or extreme market outliers that a simple linear fit fails to capture;
- Homoskedasticity (Breusch-Pagan): Interestingly, the test fails to reject the null hypothesis of constant variance ($p = 0.9488$). This indicates that heteroskedasticity is not a defining issue in this specific specification;
- Independence (Durbin-Watson): The statistic (1.62) yields a highly significant p -value ($p = 8.95 \times 10^{-7}$), confirming the presence of positive autocorrelation. This indicates that observations are influenced by temporal or sequential ordering,

which violates standard OLS assumptions, but is something irremovable from the present dataset, the way it was composed for;

- Functional Form (Ramsey RESET): The test rejects the null hypothesis of a correct linear specification ($p = 0.0186$). This is a critical finding, indicating that the model suffers from omitted variable bias or that the true relationship between democratic institutions and market crashes is non-linear.

Statistically, the robust estimates provide preliminary backing (significant at $\alpha = 0.10$) for the premise that lesser democratic institutions may intensify stock market crashes. However, the diagnostic tests clearly demonstrate that a simple linear, bivariate model is misspecified for this phenomenon. The pronounced presence of autocorrelation, non-normality, and failed specification tests strongly dictate the need for a multivariate approach.

This aligns with the conclusions of Rosendorff and Vreeland (2006), who contend that investors tend to prefer democracies due to their greater transparency and the availability of reliable information. In terms used by North (1990) and Acemoglu & Robinson (2012), democratic systems can be seen as inclusive, functioning as a “credible commitment device” that mitigates the risk of bad-news hoarding and the abrupt price adjustments often observed in autocratic contexts.

4.8 Model 8 results

The estimation of the full multilevel model yields a grand mean (fixed intercept) of -8.955. This coefficient represents the overall baseline for stock crashes across all observations and is highly statistically significant ($t = -55.52$, $p < 0.001$, 95% *CI* [-9.27, -8.63]). This establishes a strong, non-zero baseline for the dependent variable across the entire sample prior to accounting for any hierarchical grouping.

The core of the multilevel analysis relies on decomposing the variance across the three nested levels (Index Variation, Countries, and UN Regions). The empirical results reveal a striking absence of higher-level variation. The variance component for the UN Region (Level 3) is estimated at exactly 0.000. Similarly, the variance at the Country level (Level 2) is virtually non-existent (4.86×10^{-7}). Conversely, the residual variance at

Level 1 – representing the atomized individual indices – dominates the model (4.074). It means that countries idiosyncrasies are important to explain the variation, but not the regions they are in, not taking ICC into account.

Correspondingly, the Intraclass Correlation Coefficients (ICC) are 0.000 for the UN Region and a negligible 1.42×10^{-14} for the Country level. These metrics definitively show that the proportion of total variance explained by geographical, political, or administrative grouping structures is zero. Observations within the same country or region are no more similar to each other than to observations drawn randomly from the global dataset.

Being so, the model diagnostics confirm the lack of hierarchical effects. The estimation procedure flagged the model as mathematically singular (*Singular Model* = True). In the context of mixed-effects modeling, a singular fit indicates that the random effect's structure is overly complex for the data, which happens precisely when variance components collapse to zero.

Furthermore, the Likelihood Ratio Test (LRT) yields a Chi-square statistic of 0. This lack of significance demonstrates that incorporating random effects for countries and UN regions does not improve the predictive power or accuracy of the model compared to a simple, single-level linear regression. Both the Akaike Information Criterion ($AIC = 3611.68$) and Bayesian Information Criterion ($BIC = 3629.51$) reflect a model where added hierarchical complexity is penalized without yielding explanatory benefits.

The central finding of Model 8 is the rejection of the hypothesis that stock crashes are systematically intensified by localized country or broader regional differences.

The theoretical assumption that countries within the same region share macroeconomic or cultural similarities that homogenize internal stock market behavior during crashes is unsupported by this dataset.

4.9 Model 9 results

The evaluation of Model 9 begins with the Likelihood Ratio Test (LRT), which assesses whether the inclusion of event-type main effects, regional fixed effects, and their cross-level interactions provides a meaningful improvement over the baseline null model. The LRT yields a Chi-square statistic of 43.29 across 24 degrees of freedom, resulting in

a statistically significant p-value of 0.0092. This confirms that the fully specified cross-level interaction model significantly enhances explanatory power, showing the importance of the Type A-D design implemented in this study.

Furthermore, the model converged successfully without singularity issues (*Singular Model* = False). This indicates that the hierarchical structure is empirically supported and not over-parameterized, validating the extraction of the estimated variance components, but only when we add Types A-D to it. The model fit indices stand at an AIC of 3572.46 and a BIC of 3697.30.

The Intraclass Correlation Coefficient (ICC) metrics justify the multilevel modeling choice, though they reveal that environmental dependencies are heavily skewed toward the country level rather than the broader regional level:

- **Country-Level Heterogeneity:** Differences between countries (nested within UN regions) account for 3.61% of the total variance in stock crashes. Examining the random effects reveals notable individual country offsets (e.g., the USA exhibits a strong positive intercept offset of 0.747, while Italy shows a notable negative offset of -0.980);
- **Regional-Level Heterogeneity:** Broader UN regional differences account for a marginal 0.27% of the variance;
- **Residual:** The vast majority of the variance ($SD = 3.97$) remains at the individual observation level, which is typical for highly volatile financial event data.

Despite the overall collective significance of the model demonstrated by the LRT, the fixed effects table reveals a highly nuanced statistical finding regarding isolated predictors:

- **Main Effects:** The baseline intercept is highly significant ($p < 0.001$). However, the isolated main effects for the different event types (Types A, B, C, and D) and the UN regions do not reach statistical significance at the standard alpha level of 0.05 (all p-values > 0.20).
- **Interaction Effects:** None of the cross-level interaction terms (e.g., *type_apositive : un_reg_group_{Asia-Pacific}* or *type_bpositive : un_reg_group_{WEOG}*) demonstrate independent statistical significance.

The core scientific takeaway from Model 9 is that while the joint inclusion of event types and their regional contextual interactions significantly improve our understanding of stock crash variations (as proven by the LRT), no single event type

exerts a uniformly dominant or statistically distinct impact within a specific region. Instead, the effects are distributed across the hierarchical structure, with market reactions being much more dependent on the specific, idiosyncratic characteristics of the individual country (captured by the nested random effects) rather than broad UN regional classifications or isolated event typologies.

Models 8 and 9 support Beck's (1992) argument that global risks do not respect national or regional borders. It also reflects the inextricable matrix of interconnected corporate balance sheets described by Adam Tooze (2018): a shock in one part of the system propagates instantly across the global financial web, rendering regional distinctions irrelevant in the face of systemic events.

4.10 Overall summary for the research findings

The key finding of this doctoral research were, if summarized separately, and in their order of importance regarding the main hypothesis test and statistical significance:

1. While all market busts in the dataset yield negative returns, non-private crises (public, political, and social) impose a statistically significant penalty, driving stock losses deeper than those caused by private actors alone. Despite the lack of a perfectly fitted holistic model, domestic political-private entanglements depress markets, while transnational private forces drive growth and a further resistance to losses. *The null hypothesis (H_0) was rejected, providing empirical support for H_1 : politics hits private markets harder than the private sector itself.*
2. Domestic events (public/ political or private) are the primary statistically significant drivers of stock loss variation;
3. International politics has become, albeit in a very short pace, increasingly and consistently hazardous for stocks over time. Interdependence driven by legitimate political leaders is getting stronger in the 21st century;
4. The analysis reveals a statistically significant linear time trend, showing a slight but systematic negative drift in the variation parameter over time. In the present time, the stock markets are messier than in the past;
5. Stronger democracies (higher polyarchy) correlate with less severe market losses,

though the overall model fit remains statistically weak. Democracy matters for financial markets, but it is still very discussable;

6. Domestic events significantly trigger stock losses, unlike international events. However, the low R^2 (how much the variation in the dataset explains outcomes) indicates that event type alone cannot fully predict market variation;
7. We can reject the hypothesis that localized country or regional differences systematically intensify stock crashes. Risk is for all;
8. While combining event types with regional contexts improves explanatory power, no single event type exerts a dominant or statistically distinct impact within any specific region. No region or country proves itself to be more or less apt to deal with domestic or international/ transnational crises, neither political/ private ones in the contemporaneous global capitalist system.

We end by stating that our times are not meant to be ever dominated by the private sphere, as the neoliberal *mania* of the 1990s believed it would be – and, in an inverted normative key, radical leftists still today. The private sector is showing that, even in its own natural domain (stock exchanges), it cannot avoid or defend itself from politics. Our goal was empirical and we do not want to derive normative or moral assumptions from these results. We are not stating that the private capital is naïve or that the public sphere is an *evil* to markets. That was an exercise in showing how privatism is truly going away from history.

Conclusion: Ours is a kingdom of loss

There is a scene that recurs across the thirty-five years this thesis has examined: a political event erupts – a coup, an election overturned, an invasion announced, a president impeached – and, hours or days later, trading floors convulse. Share prices fall, circuit breakers trip, and fortunes evaporate. The scene is so familiar that it has become a cliché of financial journalism, used as shorthand for the perpetual war between political disorder and market rationality. One of the more modest ambitions of this work was to ask whether the cliché contains a truth – and, if it does, to measure, however imperfectly, the dimensions of that truth.

The answer the data returned is affirmative, if also humbling in its limits. The central finding – that when the forces of politics and the state enter the scene unmediated by private sector logics, the wounds inflicted on market valuations are measurably deeper – is the kind of result that is at once unsurprising in its direction and significant in its confirmation. What was less obvious, and what the evidence established with some persistence, is the geography of this effect. It is the domestic arena, not the international one, that produces the most consistent financial damage. When the government falters, when institutions fail, when the rule of law is visibly placed under strain inside a country's own borders, investors panic in a manner that geopolitical events – however dramatic their global theater – simply do not replicate with the same reliability. International crises are already, in some sense, priced into the architecture of global finance; they belong to the imagined space of permanent background anarchy that market participants have learned to discount. The state – one's own state – is supposed to be different. It is the house in which the enterprise lives, and when the house begins to crack, no amount of fundamentals shields the stock.

A second evidence emerged from tracing these crashes across time. Stock market panics have not become more severe with each passing decade; if anything, the opposite is true. The collapses of the 1990s – the post-Soviet disintegrations, the Asian contagion, the Russian default – were, in raw terms, more violent than the panics of the 2010s. Markets have acquired a certain callousness, an institutional memory that has progressively reduced the amplitude of each new trauma, even as the triggers themselves have multiplied and globalized. Yet within this general trend of diminishing severity, a countercurrent was detected: the signature of international political conflicts on market

The relationship between the quality of a country's democratic institutions and the depth of its market crises offered a more tentative but nonetheless suggestive finding. Where polyarchy is stronger – where elections are genuinely contested, where institutions retain some capacity to check executive power, where civil society can make itself heard – market losses during political crises appear to be less catastrophic. Democracy, on this reading, functions as a kind of financial shock absorber: not because it produces better economic policy, but because it offers investors the expectation of peaceful transitions, legal recourse, and institutional continuity. This is not a conclusion that can be stated with great confidence from the results obtained here, but it is one that deserves to be pursued with more dedicated instruments in future research.

Perhaps the most structurally interesting finding concerns the geography of capital itself. When the analytical lens was placed on the difference between events that are anchored to specific national territories and those that belong to the transnational circuits of global private finance, a striking asymmetry emerged. The entanglement of domestic politics with the national private sector – when public institutions and local businesses become entwined in crisis – is systematically associated with deeper market depression, as seen in the 2008 subprime crisis. Transnational capital, by contrast, appears to operate with a logic that is, at least partially, insulated from this domestic political gravity. It floats above national crises, drawing on Zygmunt Bauman's vision of liquid, borderless accumulation that has escaped the weight of territorial belonging. Fukuyama's dream of a self-regulating global market may have dissolved as a political ideology, but its financial residue – capital organized transnationally, answering to no particular flag – continues to demonstrate a certain structural independence from the political storms that devastate domestically organized wealth.

These empirical findings, taken in isolation, risk being read as a catalogue of effects without a theory of causation – as if politics were simply one more input variable in a financial pricing model, its weight to be estimated and forgotten. The most important theoretical contribution of this thesis, if it has one, is to resist that reduction and to insist that what looks like a single event triggering a crash is almost never the whole story. It is here that Reinhart Koselleck's concept of "Sediments of Time" earns its place at the center of the analysis.

Koselleck's insight is geological in its metaphor and historical in its application: the visible surface of events – the coup announced, the sanctions imposed, the central bank governor dismissed – is underlain by strata of accumulated time, moving at different

speeds and deposited over different periods. Long-run institutional arrangements, medium-term political cycles, and short-term singular events coexist within any given moment of rupture, but their depths are not equally visible. What appears, in the newspaper account and even in the financial data, as the cause of a crash is typically the event that made the underlying fragility visible – not the fragility itself.

This matters acutely for interpreting what was observed in the dataset. Russia appears 183 times in the observations, towering over every other country. One could read this as evidence that Russia is a particularly reckless or chaotic polity, uniquely prone to generating the kinds of political events that spook financial markets. But our Koselleckian reading is more careful and, one suspects, more honest: Russia's remarkable frequency in the record of market disasters reflects not a series of independent, discrete political failures but the manifestation, over three decades, of structural sediments laid down across centuries of imperial autocracy, forty years of Soviet institutional inheritance, and the catastrophically compressed transition to capitalism in the 1990s. Each crash visible in the data is the surface eruption of a geological formation that was already there. The political event – Boris Yeltsin's erratic governance, the 1998 default, Putin's annexations – was the occasion on which those sediments cracked open. The fragility was the sediment, not the event.

The same logic applies to the broader pattern. The thesis found that domestic political events are the primary drivers of market panic, while international events exert a weaker and less consistent effect. This is precisely what Koselleck's framework would predict: international politics, for all its catastrophic potential, is constituted primarily in the short-term register of singular events – the invasion that happens, the treaty that collapses. It is dramatic, but it lacks the sedimentary depth of domestic institutional decay, the slow erosion of legal norms, the long accumulation of inequality that eventually produces a polity incapable of governing itself without financial convulsion.

This reading of the evidence also illuminates the finding about democracy. The correlation between stronger democratic institutions and less severe market losses is not, in this framework, a short-term causal relationship. It is the surface reflection of decades of institutional sedimentation: the gradual building of norms, independent courts, free presses, competitive elections – the slow accumulation of the structural conditions that make a polity legible to investors, predictable in its responses, and capable of handling crisis without dissolution. Democracies do not necessarily respond better to crashes; they have, over time, built the sedimentary foundations that make crashes less devastating

when they arrive.

What Koselleck adds that no regression model can supply is a theory of invisibility: the sediments are, by definition, not visible to the actors living inside them. This is why the dissertation found what it found – statistically significant effects combined with catastrophically low explanatory power. The events captured in the dataset are the moments of rupture, the instants when hidden fragility becomes legible. But the fragility itself – the debt accumulated over years, the institutional erosion across a decade, the democratic backsliding measured one election at a time – is not in the dataset. It is the absence that the data collected here cannot see, but could have been gathered in a different research design.

The dataset constructed for this dissertation is, in some respects, its most durable contribution. 638 observations of major stock exchange crashes, hand-coded for the type of political, private, domestic, and international events associated with them, spanning thirty-five years and dozens of countries, constitute a research infrastructure that this analysis has only partially exploited. Its most obvious limitation is also its most obvious invitation: it captures the moment of rupture but not the sediments beneath it.

The most intellectually ambitious extension of this work would be to construct a companion dataset that measures, for each observation in the existing record, the long-run institutional conditions that preceded the crash. How many years had the country's democratic institutions been in decline before the political event that triggered the market panic? What was the trajectory of public debt, income inequality, or press freedom in the decade before the crash? How many previous political crises had been absorbed without market rupture, gradually exhausting the institutional shock absorbers? Such a dataset would allow future researchers to test the Koselleckian hypothesis directly and empirically: not merely to demonstrate that political events are associated with market crashes, but to show that the severity of those crashes is a function of the sedimentary depth of the fragility they expose.

A second, more immediately feasible line of extension concerns the event typology itself. The four-category classification used here – domestic political, domestic private, international political, transnational private – is a necessary simplification that inevitably loses information. A *coup d'état* and a contested election result are both classified as domestic political events, but they carry profoundly different information about institutional resilience, the reversibility of damage, and the duration of market disruption. Future research could expand the typology to include a temporal dimension –

distinguishing between events that represent acute shocks and those that represent the crystallization of a long-developing process – and a severity dimension that captures not merely whether a political event occurred but how far it transgressed established institutional norms. The dataset’s existing structure would accommodate such extensions without requiring reconstruction from scratch.

The dataset’s temporal scope – 1989 to 2023 – is itself a product of particular historical conditions that future research should interrogate rather than take for granted. The period covered is almost exactly coterminous with the post-Cold War liberal international order: it begins with the collapse of the Soviet Union and ends just before the full crystallization of the new geopolitical competition between great powers. The finding that international political events have grown progressively more damaging to financial markets over these decades is probably, in part, a finding about the specific trajectory of that order – its formation, its maturation, and its current fracture. Whether the relationships identified here will hold in a world of deglobalization, reshoring, and financial weaponization remains entirely open. Extending the dataset both backward – into the Bretton Woods era, the Cold War, even the interwar period – and forward into whatever the post-liberal order produces would allow future scholars to test whether the political-financial nexus identified here is a structural feature of capitalist organization or a historically specific artifact of a particular globalization regime.

There is also a more granular research direction suggested by one of the thesis’s most intriguing negative results: the finding that country and regional classifications explain almost nothing about crash severity once event types are accounted for. The implication is that the transmission mechanism from political event to market disruption is, to a remarkable degree, universal – that a domestic political crisis in Brazil and a domestic political crisis in Hungary produce broadly similar market effects, despite the vast institutional, cultural, and economic differences between those contexts. This is a provocative result that invites qualitative case study work – the kind of deep, contextual analysis that can identify the specific mechanisms through which political events are translated into investor panic, and that can test whether the quantitative similarities conceal qualitative differences in how crises unfold, recover, and leave lasting damage.

This study has, throughout its pages, placed considerable emphasis on intellectual honesty about the limits of what financial data can tell us about political causation. It would be inconsistent, and somewhat cowardly, to close without applying that same honesty to the work itself.

The most fundamental problem is one that cannot be argued away: statistically, the models explain very little. Across virtually all specifications, the proportion of the total variance in crash severity accounted for by the political event variables is well below two percent. The statistically significant coefficients that were found – and several were found, surviving multiple robustness checks – establish direction but not magnitude. They confirm that politics matters to markets in the ways hypothesized, but they cannot say how much it matters in any given instance, which political events will be devastating and which will be absorbed, or why identical event types produce wildly different market responses in different contexts and periods.

The dataset's geographic distribution is not neutral. Eastern European countries – overwhelmingly Russia, but also Poland, Hungary, and their neighbors – account for more than a third of all observations. This is partly a reflection of the genuine volatility of post-communist transition economies, but it is also a reflection of data availability: extreme market crashes in the post-Soviet world left abundant and well-documented historical traces. Markets in Sub-Saharan Africa, South and Southeast Asia, and the smaller Latin American economies are underrepresented in ways that may cause the overall findings to systematically reflect the specific character of post-communist political risk rather than the universal political-financial nexus.

Finally, there is the question of time. The dataset captures crashes – the extreme negative tail of the market return distribution – without capturing the full context in which they occurred. On any given day that appears in this dataset, somewhere in the world another market was absorbing a comparably dramatic political event without collapsing. This dissertation states it, and cannot resolve it without a fundamentally different research design. That design – one that codes both crash and non-crash days for political event presence and absence – would require resources and institutional infrastructure that exceed what a single doctoral project can command.

What remains, after these admissions, is a work that has done something worth doing imperfectly. It has assembled a historical record of financial catastrophe and its political accompaniments that did not previously exist in this form. It has tested, against that record, a set of theoretical propositions drawn from political science, international relations, economic sociology, and the philosophy of history, and found that those propositions hold more often than they fail. It has identified a domain of inquiry – the long-run sedimentary preconditions of financial rupture – that remains almost entirely unmapped and that is, if the arguments assembled here are credible, among the most

important questions that the study of political economy can ask. The kingdom of loss is large and its geographical and historical map has only begun to be surveyed.

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APPENDIX I – ECONOMETRIC OUTPUT TABLES⁴⁸

HYPOTHESIS 1A – OLS MODEL WITH DUMMY VARIABLE (N_PRIV)

Table A.1.1 – OLS Coefficients (Conventional Standard Errors)

Term	Estimate	Std. Error	t-statistic	p-value	Sig.
(Intercept)	-8.7302	0.1856	-47.029	< 0.001	***
n_priv1	-0.8968	0.3707	-2.419	0.0158	**

Note: Dependent variable: variation. $N = 638$. Significance: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

Table A.1.2 – OLS Coefficients with Robust Standard Errors (HC)

Term	Estimate	Robust SE	t-statistic	p-value
(Intercept)	-8.7302	0.1750	-49.896	< 0.001
n_priv1	-0.8968	0.4098	-2.189	0.0290

Note: Heteroskedasticity-robust standard errors (HC type).

Table A.1.3 – Model Fit Statistics

Statistic	Value
Observations	638
R ²	0.0091
Adjusted R ²	0.0076
F-statistic	5.853

Table A.1.4 – Model Diagnostics

Test	Statistic	p-value
Breusch-Pagan (Heteroskedasticity)	0.4430	0.5057
Durbin-Watson (Autocorrelation)	1.6299	< 0.001
Jarque-Bera (Normality)	74220.15	< 0.001

Note: Rejection of the Jarque-Bera test indicates residuals do not follow a normal distribution.

⁴⁸ The tables in this appendix present complete statistical results for all econometric models estimated in the research. Coefficients are reported with heteroskedasticity-robust standard errors where applicable. Significance levels: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; † $p < 0.10$.

HYPOTHESIS 1B – FACTOR ANALYSIS AND PANEL MODELS

Table A.2.1 – Tetrachoric Correlation Matrix

	type_a	type_b	type_c	type_d
type_a	1.000	0.548	0.010	−0.334
type_b	0.548	1.000	0.235	0.287
type_c	0.010	0.235	1.000	−0.163
type_d	−0.334	0.287	−0.163	1.000

Note: Tetrachoric correlations among binary institutional-type variables.

Table A.2.2 – Factor Loadings (Factor Analysis with Rotation)

Variable	Factor 1 (ML2)	Factor 2 (ML1)	Communality
type_a	0.711	−0.247	—
type_b	0.911	0.406	—
type_c	0.311	−0.124	—
type_d	−0.126	0.990	—

Table A.2.3 – Factor Analysis Adequacy (KMO and Bartlett)

Statistic	Value
KMO	0.2180
Bartlett χ^2	761.66
Bartlett df	6
Bartlett p-value	< 0.001

Note: KMO values below 0.5 indicate limited suitability for factor analysis.

Table A.2.4 – Variance Inflation Factor (VIF)

Statistic	Value
type_a	1.2298
type_b	1.2320
type_c	1.0415
type_d	1.1328

Note: VIF < 5 indicates no serious multicollinearity.

A.2.1 Panel Models with Latent Factors

Table A.2.5 – Pooled OLS Model (Factors as Predictors)

Term	Estimate	Std. Error	t-statistic	p-value
(Intercept)	−9.1735	0.4071	−22.532	< 0.001
Factor 1	−2.1365	0.4160	−5.136	< 0.001
Factor 2	1.8380	0.6898	2.665	0.0079

Table A.2.6 – Fixed Effects Model

Term	Estimate	Std. Error	t-statistic	p-value
Factor 1	-1.9500	0.6417	-3.039	0.0025
Factor 2	1.7326	0.6733	2.573	0.0103

Note: Individual fixed effects absorbed. Intercept not reported.

Table A.2.7 – Random Effects Model

Term	Estimate	Std. Error	z-statistic	p-value
(Intercept)	-9.1735	0.3192	-28.742	< 0.001
Factor 1	-2.1365	0.6143	-3.478	< 0.001
Factor 2	1.8380	0.6287	2.923	0.0035

Table A.2.8 – Hausman Test

Statistic	Value
χ^2 statistic	1.0615
p-value	0.5882

Note: Failure to reject the null hypothesis favors the random effects model.

A.2.2 Structural Equation Model (SEM)

Table A.2.9 – SEM Parameters

DV	Op.	IV	Est.	SE	z	p	Sig.
Factor 1	=~	type_a	0.711	—	—	—	—
Factor 1	=~	type_b	0.911	—	—	—	—
Factor 1	=~	type_c	0.311	—	—	—	—
Factor 2	=~	type_d	0.990	—	—	—	—
variation	~	Factor 1	-0.663	0.258	-2.564	0.010	*
variation	~	Factor 2	1.043	0.259	4.024	< 0.001	***

Table A.2.10 – SEM Fit Indices

Statistic	Value
χ^2 (chi-square)	870.38
Degrees of freedom	8
p-value	< 0.001
CFI	0.000
TLI	-5.211
RMSEA	0.411
SRMR	2.028

Note: Fit indices indicate inadequacy of the specified measurement model.

MODEL 1 – NONLINEAR OLS REGRESSION WITH WALD TEST

Table A.3.1 – OLS Coefficients (Conventional Standard Errors)

Term	Estimate	Std. Error	t-statistic	p-value
(Intercept)	−8.7964	0.3342	−26.322	< 0.001
type_ab	−0.4775	0.2173	−2.197	0.0284
type_cd	0.1322	0.2509	0.527	0.5983

Table A.3.2 – Coefficients with Robust Standard Errors (HC)

Term	Estimate	Robust SE	t-statistic	p-value
(Intercept)	−8.7964	0.3606	−24.394	< 0.001
type_ab	−0.4775	0.1882	−2.537	0.0114
type_cd	0.1322	0.2160	0.612	0.5406

Note: Heteroskedasticity-robust standard errors (HC type).

Table A.3.3 – Model Fit Statistics

Statistic	Value
Observations	638
R ²	0.0079
Adjusted R ²	0.0048
F-statistic	2.530

Table A.3.4 – Wald Test (Linear Restriction)

Statistic	Value
χ^2 statistic	1.000
Degrees of freedom	1
p-value	1.000

Note: H_0 : $\text{coeff}(\text{type_ab}) = \text{coeff}(\text{type_cd})$.

Table A.3.5 – Model Diagnostics

Test	Statistic	p-value
Breusch-Pagan (Heteroskedasticity)	1.0080	0.6041
Durbin-Watson (Autocorrelation)	1.6384	< 0.001
Shapiro-Wilk (Normality of Residuals)	0.5706	< 0.001

MODEL 2 – LINEAR TIME TREND REGRESSION

Table A.4.1 – Coefficients (Robust Standard Errors)

Term	Estimate	Robust SE	t-statistic	p-value
(Intercept)	−7.8627	0.3630	−21.662	< 0.001
Time trend	−0.0002	0.0001	−2.872	0.0042

Note: Dependent variable: variation. Time trend measured in days/months since the beginning of the series.

Table A.4.2 – Model Fit Statistics

Statistic	Value
R ²	0.0174
Adjusted R ²	0.0159
Observations	638

Table A.4.3 – Model Diagnostics

Test	Statistic	p-value
F-test (Overall Significance)	11.288	0.0008
Durbin-Watson (Autocorrelation)	1.6649	< 0.001
Breusch-Pagan (Heteroskedasticity)	1.6378	0.2006
Jarque-Bera (Normality)	73851.70	< 0.001
ADF (Stationarity of DV)	−7.431	< 0.01

Note: ADF = Augmented Dickey-Fuller. Rejection of the null hypothesis indicates a stationary series.

MODELS 3 TO 6 – DIFFERENCE IN SLOPES (TREND × TYPE INTERACTION)

Model 3 – Time Trend × type_a Interaction

Table A.5.1 – Coefficients (Robust Standard Errors)

Term	Estimate	Robust SE	t-statistic	p-value
(Intercept)	−6.7373	0.6969	−9.667	< 0.001
Time trend	−0.0003	0.0001	−2.539	0.0114
type_a1	−2.1715	0.7915	−2.744	0.0062
Trend × type_a1	0.0002	0.0001	1.822	0.0689

Table A.5.2 – Model Fit Statistics

Statistic	Value
Observations	638
R ²	0.0320
Adjusted R ²	0.0274
F-statistic	6.986
F p-value	< 0.001

Note: Interaction effect is marginally significant ($p = 0.069$).

Model 4 – Time Trend × type_b Interaction

Table A.6.1 – Coefficients (Robust Standard Errors)

Term	Estimate	Robust SE	t-statistic	p-value
(Intercept)	−8.1108	0.5052	−16.055	< 0.001
Time trend	−0.0001	0.0001	−1.251	0.2115
type_b1	0.5101	0.9610	0.531	0.5957
Trend × type_b1	−0.0001	0.0001	−1.077	0.2818

Table A.6.2 – Model Fit Statistics

Statistic	Value
Observations	638
R ²	0.0209
Adjusted R ²	0.0162
F-statistic	4.506
F p-value	0.0039

Note: Interaction effect is not statistically significant ($p = 0.282$).

Model 5 – Time Trend × type_c Interaction**Table A.7.1 – Coefficients (Robust Standard Errors)**

Term	Estimate	Robust SE	t-statistic	p-value
(Intercept)	−9.2417	0.4653	−19.862	< 0.001
Time trend	0.0001	0.0001	1.257	0.2093
type_c1	2.3193	0.6458	3.592	< 0.001
Trend × type_c1	−0.0004	0.0001	−3.854	< 0.001

Table A.7.2 – Model Fit Statistics

Statistic	Value
Observations	638
R ²	0.0423
Adjusted R ²	0.0378
F-statistic	9.339
F p-value	< 0.001

Note: Interaction effect is highly significant ($p < 0.001$): type_c moderates the time trend.

Model 6 – Time Trend × type_d Interaction**Table A.8.1 – Coefficients (Robust Standard Errors)**

Term	Estimate	Robust SE	t-statistic	p-value
(Intercept)	−8.2600	0.6696	−12.336	< 0.001
Time trend	−0.0002	0.0001	−1.623	0.1050
type_d1	0.5491	0.7626	0.720	0.4718
Trend × type_d1	0.0001	0.0001	0.471	0.6375

Table A.8.2 – Model Fit Statistics

Statistic	Value
Observations	638
R ²	0.0304
Adjusted R ²	0.0258
F-statistic	6.621
F p-value	< 0.001

Note: Interaction effect is not statistically significant ($p = 0.638$).

MODEL 7 – OLS WITH POLYARCHY × YEAR INTERACTION

Table A.9.1 – OLS Coefficients (Conventional Standard Errors)

Term	Estimate	Std. Error	t-statistic	p-value
(Intercept)	−9.4304	0.3338	−28.248	< 0.001
polyarchy_year	0.8898	0.5474	1.626	0.1045

Table A.9.2 – Coefficients with Robust Standard Errors (HC)

Term	Estimate	Robust SE	t-statistic	p-value
(Intercept)	−9.4304	0.3105	−30.374	< 0.001
polyarchy_year	0.8898	0.5030	1.769	0.0774

Note: Coefficient is marginally significant ($p = 0.077$) with robust standard errors.

Table A.9.3 – Model Fit Statistics

Statistic	Value
Observations	638
R ²	0.0041
Adjusted R ²	0.0026
F-statistic	2.643
F p-value	0.1045

Table A.9.4 – Model Diagnostics

Test	Statistic	p-value
Shapiro-Wilk (Normality)	0.5745	< 0.001
Breusch-Pagan (Heteroskedasticity)	0.0041	0.9488
Durbin-Watson (Autocorrelation)	1.6236	< 0.001
RESET Test (Specification)	4.0082	0.0186

Note: RESET test indicates possible functional misspecification.

MODEL 8 – MULTILEVEL MODEL (COUNTRY NESTED WITHIN UN REGION)

Table A.10.1 – Fixed Effects

Term	Estimate	SE	t-stat.	p-value	CI Low.	CI Up.
(Intercept)	−8.9551	0.1613	−55.521	< 0.001	−9.272	−8.638

Table A.10.2 – Random Variance Components

Level	Component	Variance	Std. Dev.
Country:UN Region	sd__(Intercept)	< 0.001	< 0.001
UN Region	sd__(Intercept)	0.000	0.000
Residual	sd__Observation	16.598	4.074

Table A.10.3 – Intraclass Correlation Coefficient (ICC)

Statistic	Value
UN Region	0.0000
Country (within Region)	≈ 0.000

Note: Near-zero ICC indicates variation lies almost entirely at the observation level. Singular model.

Table A.10.4 – Model Fit and Likelihood Ratio Test

Metric	Null Model	Current Model	Remark
AIC	3609.87	3611.68	Marginal increase
BIC	3627.70	3629.51	Marginal increase
Log-Likelihood	−1800.93	−1801.84	—

Note: The model is singular, indicating that the multilevel structure does not capture relevant variation in this specification.

MODEL 9 – FULL MULTILEVEL MODEL (WITH TYPE × REGION INTERACTIONS)

Table A.11.1 – Fixed Effects (Coefficients and 95% Confidence Intervals)

Term	Estimate	SE	t	p-value	95% CI
(Intercept)	-7.933	2.066	-3.839	< 0.001	[-12.0; -3.8]
type_a1	0.265	2.532	0.105	0.917	[-4.7; 5.2]
Region: Asia-Pacific	-2.455	2.229	-1.101	0.273	[-6.9; 2.0]
Region: Eastern European	-1.101	2.240	-0.492	0.624	[-5.6; 3.4]
Region: GRULAC	-0.916	2.800	-0.327	0.744	[-6.5; 4.6]
Region: WEOG	-1.045	2.265	-0.461	0.645	[-5.5; 3.4]
type_b1	0.572	3.224	0.177	0.859	[-5.8; 6.9]
type_c1	0.071	2.403	0.029	0.977	[-4.7; 4.8]
type_d1	-0.876	2.480	-0.353	0.724	[-5.7; 4.0]
type_a1 × Asia-Pacific	0.108	2.635	0.041	0.967	[-5.1; 5.3]
type_a1 × Eastern European	0.010	2.591	0.004	0.997	[-5.1; 5.1]
type_a1 × GRULAC	-1.520	3.611	-0.421	0.674	[-8.6; 5.6]
type_a1 × WEOG	-1.958	2.697	-0.726	0.468	[-7.3; 3.3]
Asia-Pacific × type_b1	-0.707	3.317	-0.213	0.831	[-7.2; 5.8]
Eastern European × type_b1	0.136	3.320	0.041	0.967	[-6.4; 6.7]
GRULAC × type_b1	-1.191	4.337	-0.275	0.784	[-9.7; 7.3]
WEOG × type_b1	-2.968	3.361	-0.883	0.377	[-9.6; 3.6]
Asia-Pacific × type_c1	0.807	2.515	0.321	0.748	[-4.1; 5.7]
Eastern European × type_c1	-1.182	2.466	-0.479	0.632	[-6.0; 3.7]
GRULAC × type_c1	-1.628	2.836	-0.574	0.566	[-7.2; 3.9]
WEOG × type_c1	0.379	2.517	0.150	0.880	[-4.6; 5.3]
Asia-Pacific × type_d1	2.636	2.594	1.016	0.310	[-2.5; 7.7]
Eastern European × type_d1	1.763	2.544	0.693	0.489	[-3.2; 6.8]
GRULAC × type_d1	1.762	2.964	0.594	0.553	[-4.1; 7.6]
WEOG × type_d1	2.131	2.642	0.807	0.420	[-3.1; 7.3]

Note: Reference category for Region: African. No interaction coefficient is statistically significant.

Table A.11.2 – Variance Components and ICC

Level	Std. Dev.	ICC
Country:UN Region	0.7706	0.0361
UN Region	0.2125	0.0027
Residual	3.9748	—

Note: Total ICC = 0.0389. The majority of variance lies at the observation level.

Table A.11.3 – Model Fit and Likelihood Ratio Test

Parameter	Base Model	Full Model	Δ	p-value (LRT)
npar	4	28	+24	–
AIC	3609.87	3572.46	–37.41	–
BIC	3627.70	3697.30	+69.60	–
Log-Likelihood	–1800.93	–1758.23	+42.70	–
LRT χ^2 statistic	–	–	43.291	0.0092

Note: LRT with 24 degrees of freedom ($p = 0.009$): the full model fits significantly better than the null model.

A.11.4 Intercept Estimates by Country and Region (Random Effects)

Table A.11.4a – Intercept Offsets by UN Region

UN Region	Intercept Offset
African	≈ 0.000
Asia-Pacific	≈ 0.000
Eastern European	≈ 0.000
GRULAC	≈ 0.000
WEOG	0.000

Note: Regional-level intercept offsets are near zero, consistent with the low ICC.

Table A.11.4b – Intercept Offsets by Country (Random Effects)

Country : Region	Intercept Offset
Australia : WEOG	0.120
Austria : WEOG	0.190
Brazil : GRULAC	0.167
Canada : WEOG	–0.383
China : Asia-Pacific	0.420
Egypt : African	–0.068
Egypt : Asia-Pacific	0.158
EU : WEOG	–0.218
France : WEOG	0.097
Germany : WEOG	0.048
Hungary : Eastern European	0.241
India : Asia-Pacific	0.051
Indonesia : Asia-Pacific	0.424
Israel : WEOG	–0.024
Italy : WEOG	–0.981
Japan : Asia-Pacific	–0.210
Mexico : GRULAC	–0.167
Morocco : African	–0.016
Netherlands : WEOG	0.242
Philippines : Asia-Pacific	–0.930
Poland : Eastern European	0.340

Country : Region	Intercept Offset
Portugal : WEOG	0.170
Russia : Eastern European	−0.582
Saudi Arabia : Asia-Pacific	0.004
South Africa : African	0.084
South Korea : Asia-Pacific	0.417
Spain : WEOG	−0.030
Sweden : WEOG	0.276
Switzerland : WEOG	−0.101
Thailand : Asia-Pacific	−0.333
Turkey : WEOG	−0.300
United Kingdom : WEOG	0.145
USA : WEOG	0.747

APPENDIX II – DATASET ⁴⁹

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
1989-05-25	THU	-8.52	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.101	Social unrest/ outrage	1	0	0	0	1
1989-06-05	MON	-21.75	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.101	Social unrest/ outrage	1	0	0	0	1
1989-10-13	FRI	-6.91	dji	Dow Jones Industrial Average (DJIA)	New York Stock Exchange (NYSE)	USA	WEOG	0.861	Mergers & Acquisitions	0	1	0	1	0
1989-10-13	FRI	-6.13	us500	Standard & Poor's 500	Nasdaq + NYSE	USA	WEOG	0.861	Mergers & Acquisitions	0	1	0	1	0
1989-10-16	MON	-6.49	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.101	Mergers & Acquisitions	0	0	0	1	0
1989-10-16	MON	-6.57	aex	Amsterdam Exchanges Index	Euronext Amsterdam	Netherlands	WEOG	0.861	Mergers & Acquisitions	0	0	0	1	0
1989-10-16	MON	-13.14	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.870	Mergers & Acquisitions	0	0	0	1	0
1989-10-16	MON	-10.52	swi20	Swiss Market Index 20	SIX Swiss Exchange	Switzerland	WEOG	0.876	Mergers & Acquisitions	0	0	0	1	0
1990-08-06	MON	-7.42	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.094	War	0	0	1	1	0
1991-08-19	MON	-9.18	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.896	Coup d'etat (attempted or completed)	0	0	1	0	1
1991-08-19	MON	-8.38	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.094	Coup d'etat (attempted or completed)	0	0	1	0	1
1991-08-19	MON	-7.29	fchi	CAC 40	Euronext Paris	France	WEOG	0.877	Coup d'etat (attempted or completed)	0	0	1	0	1
1992-08-11	TUE	-10.44	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.097	Government economic intervention (other)	1	1	0	0	0
1992-08-12	WED	-9.52	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.097	Government economic intervention (other)	1	1	0	0	0
1992-10-26	MON	-9.43	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.097	Government economic intervention (other)	1	1	0	0	0
1992-10-27	TUE	-11.18	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.097	Government economic intervention (other)	1	1	0	0	0
1992-12-03	THU	-8.01	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.097	Weak macroeconomy	0	0	1	1	0
1992-12-09	WED	-10.28	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.097	Weak macroeconomy	1	0	0	0	0
1993-03-01	MON	-10.46	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.101	Weak macroeconomy	1	0	0	0	0
1993-03-22	MON	-11.75	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.101	Weak macroeconomy	1	0	0	0	0
1993-05-24	MON	-10.30	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.101	Weak macroeconomy	1	0	0	0	0
1993-12-20	MON	-13.08	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.101	Financial regulation	1	0	0	0	0

⁴⁹ For an Excel spreadsheet with the complete dataset (with event summary and sources for each line), access: < <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/97AYMN> >. File: *dataframe_complete 2026 02 10_done.xlsx*.

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
1994-01-06	THU	-6.44	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.101	Central Bank/ interest rates	0	0	1	1	0
1994-02-07	MON	-6.11	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.101	Central Bank/ interest rates	0	0	1	1	0
1994-04-26	TUE	-9.92	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.890	Financial bubble	1	0	1	1	0
1994-04-28	THU	-9.83	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.890	Financial bubble	1	0	1	1	0
1994-06-01	WED	-7.07	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.890	Central Bank/ interest rates	0	0	1	1	0
1994-06-13	MON	-9.84	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.890	Financial bubble	1	0	1	1	0
1994-06-14	TUE	-9.35	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.890	Financial bubble	1	0	1	1	0
1994-06-20	MON	-6.04	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.890	Central Bank/ interest rates	0	0	1	1	0
1994-06-21	TUE	-6.25	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.890	Central Bank/ interest rates	0	0	1	1	0
1994-07-14	THU	-6.41	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.890	Central Bank/ interest rates	0	0	1	1	0
1994-07-20	WED	-9.12	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.890	Financial bubble	1	0	1	1	0
1994-08-09	TUE	-12.69	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.101	Financial regulation	1	0	0	0	1
1994-08-21	SUN	-9.66	ta35	Tel Aviv 35 Index	Tel Aviv Stock Exchange	Israel	WEOG	0.774	Financial regulation	1	0	0	0	1
1994-09-06	TUE	-8.21	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.890	Central Bank/ interest rates	0	0	1	1	0
1994-09-13	TUE	-7.37	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.890	Central Bank/ interest rates	0	0	1	1	0
1994-10-05	WED	-10.71	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.101	Political/ institutional crisis	1	0	0	0	1
1994-10-13	THU	-10.64	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.101	Political/ institutional crisis	1	0	0	0	1
1995-04-26	WED	-6.72	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.888	Financial bubble	1	1	0	0	0
1995-05-23	TUE	-16.39	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.102	Financial regulation	1	0	0	0	1
1995-05-23	TUE	-16.75	szi	Shenzhen Component Index	Shenzhen Stock Exchange	China	Asia-Pacific	0.102	Financial regulation	1	0	0	0	1
1995-05-30	TUE	-6.13	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.888	Financial bubble	1	1	0	0	0
1995-10-04	WED	-8.08	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.476	Weak macroeconomy	1	1	0	1	0
1995-11-02	THU	-6.34	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.476	Fraud	1	1	0	0	0
1996-01-17	WED	-6.76	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.463	Weak macroeconomy	1	1	0	1	0
1996-03-11	MON	-7.31	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.102	Weak macroeconomy	0	0	1	1	0
1996-05-29	WED	-9.08	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.463	Elections	1	0	0	0	1
1996-06-28	FRI	-10.35	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.463	Elections	1	0	0	0	1

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
1996-07-08	MON	-12.12	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.463	Elections	1	0	1	0	0
1996-07-10	WED	-7.04	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.463	Public debt	1	0	1	0	0
1996-07-11	THU	-7.53	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.463	Public debt	1	0	1	0	0
1996-09-24	TUE	-6.16	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.463	Other (undefined)	1	0	1	0	0
1996-12-16	MON	-9.91	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.102	Financial regulation	1	0	0	0	1
1996-12-16	MON	-10.08	szi	Shenzhen Component Index	Shenzhen Stock Exchange	China	Asia-Pacific	0.102	Financial regulation	1	0	0	0	1
1996-12-17	TUE	-9.44	ssec	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange	China	Asia-Pacific	0.102	Financial regulation	1	0	0	0	1
1996-12-17	TUE	-9.99	szi	Shenzhen Component Index	Shenzhen Stock Exchange	China	Asia-Pacific	0.102	Financial regulation	1	0	0	0	1
1997-02-18	TUE	-9.46	szi	Shenzhen Component Index	Shenzhen Stock Exchange	China	Asia-Pacific	0.102	Financial regulation	1	0	0	0	1
1997-03-31	MON	-8.46	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.741	Parliamentary decision	1	0	0	0	1
1997-08-29	FRI	-6.87	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.201	Financial regulation	1	1	0	1	0
1997-10-22	WED	-6.17	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.102	Currency/ foreign exchange oscillation	1	1	0	1	0
1997-10-23	THU	-10.41	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.102	Currency/ foreign exchange oscillation	1	1	0	1	0
1997-10-27	MON	-13.34	mxx	Índice de Precios y Cotizaciones	Mexican Stock Exchange	Mexico	GRULAC	0.556	Currency/ foreign exchange oscillation	0	0	0	1	0
1997-10-27	MON	-6.39	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	0	0	0	1	0
1997-10-27	MON	-6.40	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.869	Global/ regional financial shock (systemic)	0	0	0	1	0
1997-10-27	MON	-7.18	dji	Dow Jones Industrial Average (DJIA)	New York Stock Exchange (NYSE)	USA	WEOG	0.866	Global/ regional financial shock (systemic)	0	1	0	1	0
1997-10-27	MON	-7.02	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.866	Global/ regional financial shock (systemic)	0	1	0	1	0
1997-10-27	MON	-6.86	us500	Standard & Poor's 500	Nasdaq + NYSE	USA	WEOG	0.866	Global/ regional financial shock (systemic)	0	1	0	1	0
1997-10-28	TUE	-13.70	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.102	Currency/ foreign exchange oscillation	0	1	0	1	0
1997-10-28	TUE	-20.81	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Currency/ foreign exchange oscillation	0	0	0	1	0
1997-10-28	TUE	-19.02	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Currency/ foreign exchange oscillation	0	0	0	1	0
1997-10-28	TUE	-7.87	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.741	Currency/ foreign exchange oscillation	0	0	0	1	0
1997-10-28	TUE	-9.41	ta35	Tel Aviv 35 Index	Tel Aviv Stock Exchange	Israel	WEOG	0.776	Currency/ foreign exchange oscillation	0	0	0	1	0
1997-10-28	TUE	-13.20	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.869	Currency/ foreign exchange oscillation	0	0	0	1	0
1997-10-28	TUE	-8.59	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.201	Currency/ foreign exchange oscillation	0	1	0	1	0
1997-10-28	TUE	-6.63	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.754	Currency/ foreign exchange oscillation	0	1	0	1	0

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
1997-10-30	THU	-9.99	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	0	0	0	1	0
1997-11-07	FRI	-6.90	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.754	Global/ regional financial shock (systemic)	0	1	0	1	0
1997-11-10	MON	-7.71	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	1	0	0	1	0
1997-11-10	MON	-8.27	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	1	0	0	1	0
1997-11-12	WED	-7.78	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	0	0	0	1	0
1997-11-12	WED	-9.25	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	0	0	0	1	0
1997-11-12	WED	-6.05	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.869	Global/ regional financial shock (systemic)	1	0	0	1	0
1997-11-24	MON	-7.17	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.754	Global/ regional financial shock (systemic)	0	1	0	1	0
1997-11-25	TUE	-6.11	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	1	0	1	0
1997-12-09	TUE	-6.47	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.754	International organization intervention	1	0	1	1	0
1997-12-11	THU	-7.57	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	0	0	0	1	0
1997-12-11	THU	-8.10	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	0	0	0	1	0
1997-12-12	FRI	-7.07	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.754	Global/ regional financial shock (systemic)	1	1	1	1	0
1997-12-12	FRI	-7.64	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.201	Political/ institutional crisis	1	0	0	1	0
1997-12-15	MON	-7.19	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.201	Political/ institutional crisis	1	0	0	1	0
1997-12-19	FRI	-6.70	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	1	0	0	1	0
1997-12-23	TUE	-7.50	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.754	Sovereign credit rating	1	0	0	1	0
1998-01-08	THU	-11.95	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.283	Government economic intervention (other)	1	0	1	0	0
1998-01-08	THU	-6.08	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Weak company results	1	0	0	1	0
1998-01-08	THU	-6.82	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Weak company results	1	0	0	1	0
1998-01-12	MON	-8.70	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.102	Bankruptcy	0	1	0	1	0
1998-01-12	MON	-13.11	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Bankruptcy	1	1	1	1	0
1998-01-12	MON	-14.35	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Bankruptcy	1	1	1	1	0
1998-01-12	MON	-7.69	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.878	Global/ regional financial shock (systemic)	1	0	0	1	0
1998-01-15	THU	-7.02	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.102	Global/ regional financial shock (systemic)	0	1	0	1	0
1998-01-26	MON	-8.55	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	1	0	0	1	0
1998-01-29	THU	-7.59	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	1	0	0	1	0

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
1998-02-04	WED	-9.54	seti	Thailand SET Index	Stock Exchange of Thailand	Thailand	Asia-Pacific	0.508	Financial bubble	0	1	0	1	0
1998-02-12	THU	-9.29	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.283	Political/ institutional crisis	1	0	0	0	1
1998-03-05	THU	-6.47	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.819	Global/ regional financial shock (systemic)	0	0	0	1	0
1998-04-27	MON	-6.16	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.846	Weak company results	0	1	1	1	0
1998-05-13	WED	-7.19	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	1	0	0	1	0
1998-05-13	WED	-6.61	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.283	Political/ institutional crisis	1	0	1	0	1
1998-05-18	MON	-7.51	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	1	0	0	1	0
1998-05-18	MON	-11.81	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	0	0	1	0
1998-05-25	MON	-6.78	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.819	General regulation	1	1	0	1	0
1998-05-26	TUE	-6.00	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.819	General regulation	1	1	0	1	0
1998-05-27	WED	-6.51	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.878	Global/ regional financial shock (systemic)	1	0	0	1	0
1998-05-27	WED	-9.50	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	0	0	1	0
1998-05-27	WED	-10.56	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	0	0	1	0
1998-06-01	MON	-6.32	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.878	Global/ regional financial shock (systemic)	1	0	0	1	0
1998-06-01	MON	-11.00	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	0	1	1	0
1998-06-01	MON	-10.24	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	0	1	1	0
1998-06-10	WED	-8.37	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	1	0	0	1	0
1998-06-10	WED	-6.21	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	1	0	0	1	0
1998-06-11	THU	-6.22	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	1	0	0	1	0
1998-06-12	FRI	-8.10	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.819	Public debt	1	0	1	1	0
1998-06-15	MON	-7.31	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Central Bank/ interest rates	1	0	0	1	0
1998-06-15	MON	-6.61	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.878	Global/ regional financial shock (systemic)	0	0	0	1	0
1998-06-19	FRI	-8.76	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Central Bank/ interest rates	1	0	0	1	0
1998-06-21	SUN	-7.17	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.215	International trade (Oil)	1	1	0	1	0
1998-06-26	FRI	-8.39	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	International organization intervention	1	0	1	0	1
1998-06-29	MON	-6.75	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	International organization intervention	1	0	1	0	1
1998-06-29	MON	-6.11	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	International organization intervention	1	0	1	0	1

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
1998-07-07	TUE	-7.35	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	International organization intervention	1	0	1	0	1
1998-07-22	WED	-6.64	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	International organization intervention	1	0	0	1	0
1998-07-22	WED	-9.55	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	International organization intervention	1	0	0	1	0
1998-07-23	THU	-6.91	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	International organization intervention	1	0	0	1	0
1998-07-27	MON	-8.43	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	International organization intervention	1	0	0	1	0
1998-07-27	MON	-9.05	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	International organization intervention	1	0	0	1	0
1998-08-03	MON	-6.19	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Financial regulation	1	0	0	1	0
1998-08-07	FRI	-8.81	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Financial regulation	1	0	0	1	0
1998-08-10	MON	-8.99	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Financial regulation	1	0	0	1	0
1998-08-11	TUE	-7.77	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.878	Global/ regional financial shock (systemic)	0	0	0	1	0
1998-08-11	TUE	-9.11	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	0	0	1	0
1998-08-11	TUE	-17.31	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	0	0	1	0
1998-08-13	THU	-6.49	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	0	0	0	0
1998-08-13	THU	-6.66	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.878	Public debt	1	0	0	0	0
1998-08-13	THU	-15.77	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Weak macroeconomy	1	0	0	1	0
1998-08-18	TUE	-9.00	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Government economic intervention (other)	1	0	1	0	1
1998-08-19	WED	-10.95	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Government economic intervention (other)	1	0	1	0	1
1998-08-19	WED	-9.43	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Government economic intervention (other)	1	0	1	0	1
1998-08-20	THU	-6.59	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Government economic intervention (other)	1	0	1	0	1
1998-08-26	WED	-13.83	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Parliamentary decision	1	0	0	1	0
1998-08-27	THU	-17.13	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Parliamentary decision	0	0	1	1	0
1998-08-27	THU	-9.92	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.878	Parliamentary decision	0	0	1	1	0
1998-08-28	FRI	-9.01	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Parliamentary decision	0	0	1	1	0
1998-08-31	MON	-7.08	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.102	Global/ regional financial shock (systemic)	0	0	1	1	0
1998-08-31	MON	-6.37	dji	Dow Jones Industrial Average (DJIA)	New York Stock Exchange (NYSE)	USA	WEOG	0.867	Global/ regional financial shock (systemic)	0	0	1	1	0
1998-08-31	MON	-8.56	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.867	Global/ regional financial shock (systemic)	0	0	1	1	0
1998-08-31	MON	-6.80	us500	Standard & Poor's 500	Nasdaq + NYSE	USA	WEOG	0.867	Global/ regional financial shock (systemic)	0	0	1	1	0

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
1998-09-01	TUE	-6.48	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.878	Global/ regional financial shock (systemic)	0	0	1	1	0
1998-09-03	THU	-6.40	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Global/ regional financial shock (systemic)	1	0	0	1	0
1998-09-08	TUE	-16.51	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Parliamentary decision	1	0	0	0	0
1998-09-09	WED	-11.70	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Parliamentary decision	1	0	0	0	0
1998-09-10	THU	-9.82	mxx	Índice de Precios y Cotizaciones	Mexican Stock Exchange	Mexico	GRULAC	0.598	Political/ institutional crisis	0	0	1	0	1
1998-09-10	THU	-7.07	es35	Spain Stock Market Index	Madrid Stock Exchange	Spain	WEOG	0.895	Political/ institutional crisis	0	0	1	1	0
1998-09-11	FRI	-9.67	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	0	0	1	0
1998-09-14	MON	-10.30	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	0	0	1	0
1998-09-15	TUE	-8.87	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.283	Public debt	0	0	0	1	0
1998-09-17	THU	-6.77	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	0	0	1	0
1998-09-17	THU	-11.13	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Public debt	1	0	0	1	0
1998-10-01	THU	-7.59	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.896	Central Bank/ interest rates	0	0	1	1	0
1998-10-01	THU	-9.21	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.878	Central Bank/ interest rates	0	0	1	1	0
1998-10-01	THU	-6.00	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.458	Central Bank/ interest rates	0	0	1	1	0
1998-10-01	THU	-13.43	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Central Bank/ interest rates	0	0	1	1	0
1998-10-01	THU	-7.08	es35	Spain Stock Market Index	Madrid Stock Exchange	Spain	WEOG	0.895	Central Bank/ interest rates	0	0	1	1	0
1998-10-02	FRI	-16.03	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Central Bank/ interest rates	0	0	1	1	0
1998-10-04	SUN	-10.39	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.215	Public debt	0	1	0	1	0
1998-10-05	MON	-7.09	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.748	Fraud	0	1	1	1	0
1998-10-08	THU	-6.65	omxs30	OMX Stockholm 30 Index	Stockholm Stock Exchange	Sweden	WEOG	0.912	Global/ regional financial shock (systemic)	0	1	1	1	0
1998-10-23	FRI	-6.84	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Agriculture	1	0	0	0	1
1998-11-25	WED	-8.88	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.458	Weak macroeconomy	0	0	1	0	1
1998-11-25	WED	-7.78	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.283	Weak macroeconomy	0	0	1	0	1
1999-01-13	WED	-6.72	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.462	Currency/ foreign exchange oscillation	0	0	1	0	1
1999-01-13	WED	-7.53	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.462	Currency/ foreign exchange oscillation	0	0	1	0	1
1999-01-13	WED	-6.88	es35	Spain Stock Market Index	Madrid Stock Exchange	Spain	WEOG	0.895	Currency/ foreign exchange oscillation	0	0	1	0	1
1999-01-13	WED	-9.25	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.878	Diplomatic crisis	0	0	1	0	1

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
1999-02-26	FRI	-8.54	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.462	Weak macroeconomy	1	1	1	1	0
1999-03-18	THU	-6.10	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.462	Weak macroeconomy	1	1	1	1	0
1999-04-17	SAT	-7.42	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.743	Parliamentary decision	1	0	0	0	1
1999-05-12	WED	-12.54	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.462	Political/ institutional crisis	1	0	0	0	1
1999-05-12	WED	-16.19	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.462	Political/ institutional crisis	1	0	0	0	1
1999-07-23	FRI	-7.34	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.827	Weak company results	0	1	0	0	0
1999-07-29	THU	-7.38	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.462	Financial regulation	1	0	0	0	1
1999-08-04	WED	-7.87	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.462	Weak macroeconomy	1	1	1	1	0
1999-08-05	THU	-6.03	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.462	None	0	0	0	0	0
1999-08-09	MON	-7.01	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.462	Political/ institutional crisis	1	0	0	0	1
1999-08-26	THU	-10.38	xu100	Borsa Istanbul 100 Index	Istanbul Stock Exchange	Turkey	WEOG	0.577	Environmental crisis	0	0	0	0	0
1999-09-13	MON	-6.46	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.462	Terrorism	1	0	0	0	1
1999-09-20	MON	-6.09	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.462	Civil War/ Separatism	1	1	0	0	0
1999-12-29	WED	-6.74	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.462	None	0	0	0	0	0
2000-01-05	WED	-7.18	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.101	Financial bubble	0	0	0	1	0
2000-01-05	WED	-6.87	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.842	Financial bubble	0	0	0	1	0
2000-01-31	MON	-6.44	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.407	None	0	0	0	0	0
2000-03-13	MON	-6.74	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.407	Financial bubble	0	0	0	1	0
2000-03-30	THU	-6.60	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.878	Financial bubble	0	0	0	1	0
2000-04-03	MON	-7.64	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.868	Financial bubble	0	1	0	1	0
2000-04-04	TUE	-6.95	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.728	Financial bubble	0	0	0	1	0
2000-04-12	WED	-7.06	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.868	Financial bubble	0	1	0	1	0
2000-04-14	FRI	-9.67	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.868	Financial bubble	1	1	0	0	0
2000-04-17	MON	-11.63	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.842	Financial bubble	0	0	0	1	0
2000-04-17	MON	-8.55	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.101	Financial bubble	0	0	0	1	0
2000-04-17	MON	-8.07	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.407	Financial bubble	0	0	0	1	0
2000-04-17	MON	-7.84	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.407	Financial bubble	0	0	0	1	0

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2000-04-17	MON	-7.42	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.878	Financial bubble	0	0	0	1	0
2000-05-19	FRI	-6.90	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.407	Financial bubble	0	0	0	1	0
2000-05-23	TUE	-7.01	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.407	Financial bubble	0	0	0	1	0
2000-05-26	FRI	-6.13	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.842	Financial bubble	0	0	0	1	0
2000-09-18	MON	-8.06	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.842	Currency/ foreign exchange oscillation	0	1	0	1	0
2000-09-18	MON	-7.03	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.671	Terrorism	1	0	1	0	1
2000-09-22	FRI	-7.17	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.842	Currency/ foreign exchange oscillation	0	1	0	1	0
2000-09-22	FRI	-7.40	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.407	Financial bubble	0	0	0	1	0
2000-10-17	TUE	-6.77	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.842	Weak company results	0	1	0	0	0
2000-10-18	WED	-6.18	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.407	Financial bubble	0	0	0	1	0
2000-11-28	TUE	-9.01	xu100	Borsa Istanbul 100 Index	Istanbul Stock Exchange	Turkey	WEOG	0.592	Political/ institutional crisis	1	1	0	0	0
2000-11-30	THU	-6.88	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.407	Currency/ foreign exchange oscillation	0	0	0	1	0
2000-11-30	THU	-10.89	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.407	Currency/ foreign exchange oscillation	0	0	0	1	0
2000-12-07	THU	-6.09	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.407	General regulation	0	1	0	0	1
2000-12-07	THU	-9.85	xu100	Borsa Istanbul 100 Index	Istanbul Stock Exchange	Turkey	WEOG	0.592	General regulation	1	0	0	0	1
2000-12-14	THU	-6.61	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.407	International trade (Oil)	0	0	0	1	0
2000-12-15	FRI	-8.42	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.407	International trade (Oil)	0	0	0	1	0
2000-12-15	FRI	-8.79	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.407	International trade (Oil)	0	0	0	1	0
2000-12-20	WED	-7.12	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.868	Financial bubble	0	1	0	1	0
2001-01-02	TUE	-7.23	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.821	Financial bubble	0	1	0	1	0
2001-01-02	TUE	-7.26	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.895	Financial bubble	0	0	0	1	0
2001-01-03	WED	-6.00	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.380	Financial bubble	0	0	0	1	0
2001-01-03	WED	-8.56	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.380	Financial bubble	0	0	0	1	0
2001-01-05	FRI	-6.20	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.821	Financial bubble	0	1	0	1	0
2001-02-19	MON	-14.61	xu100	Borsa Istanbul 100 Index	Istanbul Stock Exchange	Turkey	WEOG	0.593	Political/ institutional crisis	1	0	0	0	1
2001-02-21	WED	-7.73	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.380	Central Bank/ interest rates	0	0	1	1	0
2001-02-21	WED	-7.87	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.380	Central Bank/ interest rates	0	0	1	1	0

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2001-02-21	WED	-18.11	xu100	Borsa Istanbul 100 Index	Istanbul Stock Exchange	Turkey	WEOG	0.593	Political/ institutional crisis	1	0	0	0	1
2001-03-12	MON	-6.30	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.821	Financial bubble	0	1	0	1	0
2001-03-12	MON	-9.11	xu100	Borsa Istanbul 100 Index	Istanbul Stock Exchange	Turkey	WEOG	0.593	Political/ institutional crisis	1	0	0	0	1
2001-03-12	MON	-6.95	omxs30	OMX Stockholm 30 Index	Stockholm Stock Exchange	Sweden	WEOG	0.911	Weak company results	0	1	0	1	0
2001-03-13	TUE	-6.11	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.728	Private-private corruption (inside job)	1	1	0	1	0
2001-04-03	TUE	-6.17	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.821	Financial bubble	0	1	0	1	0
2001-07-06	FRI	-9.01	xu100	Borsa Istanbul 100 Index	Istanbul Stock Exchange	Turkey	WEOG	0.593	Political/ institutional crisis	1	0	0	0	1
2001-09-11	TUE	-7.57	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.834	Terrorism	0	0	1	0	1
2001-09-11	TUE	-9.18	bvsp	Ibovespa	B3	Brazil	GRULAC	0.857	Terrorism	0	0	1	0	1
2001-09-11	TUE	-6.95	aex	Amsterdam Exchanges Index	Euronext Amsterdam	Netherlands	WEOG	0.862	Terrorism	0	0	1	0	1
2001-09-11	TUE	-7.39	fchi	CAC 40	Euronext Paris	France	WEOG	0.877	Terrorism	0	0	1	0	1
2001-09-11	TUE	-8.49	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.895	Terrorism	0	0	1	0	1
2001-09-11	TUE	-8.17	omxs30	OMX Stockholm 30 Index	Stockholm Stock Exchange	Sweden	WEOG	0.911	Terrorism	0	0	1	0	1
2001-09-12	WED	-8.87	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.101	Terrorism	0	0	1	0	1
2001-09-12	WED	-12.02	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.845	Terrorism	0	0	1	0	1
2001-09-13	THU	-7.26	bvsp	Ibovespa	B3	Brazil	GRULAC	0.857	Terrorism	0	0	1	0	1
2001-09-14	FRI	-6.62	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.834	Terrorism	0	0	1	0	1
2001-09-14	FRI	-7.25	aex	Amsterdam Exchanges Index	Euronext Amsterdam	Netherlands	WEOG	0.862	Terrorism	0	0	1	0	1
2001-09-14	FRI	-6.29	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.895	Terrorism	0	0	1	0	1
2001-09-17	MON	-7.13	dji	Dow Jones Industrial Average (DJIA)	New York Stock Exchange (NYSE)	USA	WEOG	0.821	Terrorism	0	0	1	0	1
2001-09-17	MON	-6.83	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.821	Terrorism	0	0	1	0	1
2001-11-15	THU	-6.76	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.380	Public debt	1	1	0	1	0
2001-11-15	THU	-6.00	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.380	Public debt	1	1	0	1	0
2002-06-26	WED	-7.15	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.845	Fraud	0	0	0	1	0
2002-07-22	MON	-6.53	bvsp	Ibovespa	B3	Brazil	GRULAC	0.858	Elections	1	0	0	0	1
2002-07-22	MON	-6.92	aex	Amsterdam Exchanges Index	Euronext Amsterdam	Netherlands	WEOG	0.852	Fraud	0	0	0	1	0
2002-07-24	WED	-7.39	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.351	Financial bubble	0	0	1	1	0

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2002-09-30	MON	-6.14	aex	Amsterdam Exchanges Index	Euronext Amsterdam	Netherlands	WEOG	0.852	Financial bubble	0	0	0	1	0
2002-09-30	MON	-6.12	omxs30	OMX Stockholm 30 Index	Stockholm Stock Exchange	Sweden	WEOG	0.910	Financial bubble	0	0	0	1	0
2002-10-14	MON	-10.36	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.671	Terrorism	1	0	0	0	1
2003-02-03	MON	-9.91	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.208	War	0	0	1	0	1
2003-03-03	MON	-12.48	xu100	Borsa Istanbul 100 Index	Istanbul Stock Exchange	Turkey	WEOG	0.653	Parliamentary decision	0	0	1	0	1
2003-03-17	MON	-10.57	xu100	Borsa Istanbul 100 Index	Istanbul Stock Exchange	Turkey	WEOG	0.653	Parliamentary decision	0	0	1	0	1
2003-03-24	MON	-6.38	aex	Amsterdam Exchanges Index	Euronext Amsterdam	Netherlands	WEOG	0.857	War	0	0	1	0	1
2003-03-24	MON	-6.14	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.897	War	0	0	1	0	1
2003-07-16	WED	-6.46	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.339	Fraud	0	1	0	0	0
2003-08-15	FRI	-59.02	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.841	Weak macroeconomy	0	1	0	1	0
2003-10-27	MON	-10.06	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.339	Fraud	0	1	0	0	0
2003-10-27	MON	-6.64	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.339	Fraud	0	1	0	0	0
2003-10-30	THU	-8.14	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.339	Fraud	1	1	0	0	0
2003-10-30	THU	-9.95	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.339	Fraud	1	1	0	0	0
2003-11-05	WED	-12.97	cse	Canadian Securities Exchange	Canadian Stock Exchange	Canada	WEOG	0.831	International organization intervention	0	0	1	1	0
2004-01-29	THU	-6.14	bvsp	Ibovespa	B3	Brazil	GRULAC	0.856	Weak macroeconomy	0	0	1	1	0
2004-02-09	MON	-10.54	cse	Canadian Securities Exchange	Canadian Stock Exchange	Canada	WEOG	0.830	International trade (Other)	0	0	0	1	0
2004-04-06	TUE	-9.48	cse	Canadian Securities Exchange	Canadian Stock Exchange	Canada	WEOG	0.830	Central Bank/ interest rates	0	0	1	0	1
2004-04-29	THU	-6.65	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.326	Fraud	1	1	0	0	0
2004-05-11	TUE	-6.05	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.210	None	0	0	0	0	0
2004-05-14	FRI	-7.87	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.730	Elections	1	0	0	0	1
2004-05-17	MON	-7.50	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.696	Central Bank/ interest rates	0	0	1	0	1
2004-05-17	MON	-12.24	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.730	Elections	1	0	0	0	1
2004-07-28	WED	-6.79	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.326	Judicial decision	1	1	0	0	0
2004-12-08	WED	-6.03	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.326	Mergers & Acquisitions	1	1	0	0	0
2005-03-17	THU	-6.27	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.210	None	0	0	0	0	0
2006-03-14	TUE	-6.40	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.213	Weak company results	1	1	0	1	0

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
2006-05-06	SAT	-9.60	tasi	Tadawul All-Share Index	Tadawul Stock Exchange	Saudi Arabia	Asia-Pacific	0.019	Financial bubble	0	1	0	0	0
2006-05-15	MON	-6.31	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.707	Currency/ foreign exchange oscillation	0	0	0	1	0
2006-05-16	TUE	-9.24	tasi	Tadawul All-Share Index	Tadawul Stock Exchange	Saudi Arabia	Asia-Pacific	0.019	Financial regulation	1	0	0	0	1
2006-05-18	THU	-6.77	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.722	Central Bank/ interest rates	0	0	0	1	0
2006-05-22	MON	-9.65	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.323	Diplomatic crisis	1	0	1	0	1
2006-05-22	MON	-9.05	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.323	Diplomatic crisis	1	0	1	0	1
2006-05-22	MON	-6.76	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.213	General regulation	1	0	0	0	1
2006-05-22	MON	-6.03	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.707	None	0	0	0	0	0
2006-05-23	TUE	-7.62	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.213	None	0	0	0	0	0
2006-06-06	TUE	-6.37	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.323	Central Bank/ interest rates	0	0	1	1	0
2006-06-08	THU	-7.70	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.323	Central Bank/ interest rates	0	0	1	1	0
2006-06-08	THU	-6.25	ftwizafl	FTSE South Africa Index	Johannesburg Stock Exchange	South Africa	African	0.768	Central Bank/ interest rates	0	0	1	1	0
2006-06-13	TUE	-9.18	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.323	Private-public corruption	1	0	0	0	1
2006-06-13	TUE	-9.37	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.323	Private-public corruption	1	0	0	0	1
2006-07-15	SAT	-9.36	tasi	Tadawul All-Share Index	Tadawul Stock Exchange	Saudi Arabia	Asia-Pacific	0.019	Financial bubble	0	1	0	0	0
2006-12-19	TUE	-14.84	seti	Thailand SET Index	Stock Exchange of Thailand	Thailand	Asia-Pacific	0.236	Financial regulation	1	0	0	0	1
2007-01-09	TUE	-7.18	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.316	Central Bank/ interest rates	0	0	1	1	0
2007-01-09	TUE	-6.41	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.316	Central Bank/ interest rates	0	0	1	1	0
2007-01-31	WED	-6.68	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.094	Government economic intervention (other)	1	0	0	0	1
2007-02-27	TUE	-9.04	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.094	Financial regulation	1	0	0	0	1
2007-02-27	TUE	-9.39	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.094	Financial regulation	1	0	0	0	1
2007-02-27	TUE	-9.29	szl	Shenzhen Component Index	Shenzhen Stock Exchange	China	Asia-Pacific	0.094	Financial regulation	1	0	0	0	1
2007-02-27	TUE	-6.63	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Government economic intervention (other)	0	0	1	1	0
2007-05-30	WED	-7.22	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.094	Financial regulation	1	0	0	0	1
2007-05-30	WED	-6.70	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.094	Financial regulation	1	0	0	0	1

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
2007-06-04	MON	-7.84	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.094	Financial regulation	1	0	0	0	1
2007-06-04	MON	-7.23	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.094	Financial regulation	1	0	0	0	1
2007-08-15	WED	-6.44	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.709	Bankruptcy	0	0	0	1	0
2008-01-21	MON	-7.47	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-21	MON	-7.38	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-21	MON	-8.70	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.722	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-21	MON	-6.60	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-21	MON	-6.14	aex	Amsterdam Exchanges Index	Euronext Amsterdam	Netherlands	WEOG	0.871	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-21	MON	-6.83	fchi	CAC 40	Euronext Paris	France	WEOG	0.886	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-21	MON	-7.54	es35	Spain Stock Market Index	Madrid Stock Exchange	Spain	WEOG	0.886	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-21	MON	-6.73	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.895	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-21	MON	-7.16	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.906	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-22	TUE	-7.86	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-22	TUE	-7.24	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-22	TUE	-8.65	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-22	TUE	-7.70	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.711	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-01-22	TUE	-9.61	tasi	Tadawul All-Share Index	Tadawul Stock Exchange	Saudi Arabia	Asia-Pacific	0.020	Weak macroeconomy	0	0	0	1	0
2008-01-28	MON	-6.81	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.095	Weak macroeconomy	0	0	0	1	0
2008-01-28	MON	-7.16	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.095	Weak macroeconomy	0	0	0	1	0
2008-04-14	MON	-6.42	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-04-14	MON	-6.44	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-06-10	TUE	-8.34	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-06-10	TUE	-8.43	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-06-19	THU	-7.31	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
2008-06-19	THU	-7.15	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-08-08	FRI	-6.51	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	War	0	0	1	0	1
2008-08-19	TUE	-6.01	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	War	0	0	1	1	0
2008-09-09	TUE	-7.51	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	War	0	0	1	1	0
2008-09-09	TUE	-9.08	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	War	0	0	1	1	0
2008-09-15	MON	-6.18	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	Bankruptcy	0	0	0	1	0
2008-09-15	MON	-7.59	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Bankruptcy	0	0	0	1	0
2008-09-16	TUE	-11.47	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Diplomatic crisis	0	0	1	1	0
2008-09-16	TUE	-17.45	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	International trade (Oil)	1	1	0	1	0
2008-09-17	WED	-6.74	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Government economic intervention (bailout)	0	0	1	1	0
2008-09-17	WED	-6.39	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Government economic intervention (bailout)	0	0	1	1	0
2008-09-29	MON	-10.24	sml1	Índice Small Cap	B3	Brazil	GRULAC	0.869	Global/ regional financial shock (systemic)	0	0	1	1	0
2008-09-29	MON	-7.11	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	1	1	0
2008-09-29	MON	-7.98	bf1	S&P/ASX 200	Australian Securities Exchange	Australia	WEOG	0.890	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-09-29	MON	-6.98	dji	Dow Jones Industrial Average (DJIA)	New York Stock Exchange (NYSE)	USA	WEOG	0.898	Global/ regional financial shock (systemic)	0	0	1	1	0
2008-09-29	MON	-8.81	us500	Standard & Poor's 500	Nasdaq + NYSE	USA	WEOG	0.898	Global/ regional financial shock (systemic)	0	0	1	1	0
2008-09-29	MON	-9.36	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Global/ regional financial shock (systemic)	0	0	1	1	0
2008-09-29	MON	-9.14	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.898	Government economic intervention (bailout)	1	0	0	1	0
2008-10-02	THU	-7.34	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-03	FRI	-7.09	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-06	MON	-9.04	fchi	CAC 40	Euronext Paris	France	WEOG	0.886	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-06	MON	-18.66	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-06	MON	-19.10	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-06	MON	-10.03	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.711	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-06	MON	-7.44	ftwizafl	FTSE South Africa Index	Johannesburg Stock Exchange	South Africa	African	0.766	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-06	MON	-8.24	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.857	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-06	MON	-7.85	uk100	FTSE 100 Index	London Stock Exchange	United Kingdom	WEOG	0.867	Global/ regional financial shock (systemic)	0	0	0	1	0

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
2008-10-06	MON	-6.06	es35	Spain Stock Market Index	Madrid Stock Exchange	Spain	WEOG	0.886	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-06	MON	-6.87	bfk	S&P/ASX 200	Australian Securities Exchange	Australia	WEOG	0.890	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-06	MON	-7.07	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.906	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-06	MON	-7.24	omxs30	OMX Stockholm 30 Index	Stockholm Stock Exchange	Sweden	WEOG	0.915	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-06	MON	-9.14	aex	Amsterdam Exchanges Index	Euronext Amsterdam	Netherlands	WEOG	0.871	Global/ regional financial shock (systemic)	0	1	0	1	0
2008-10-06	MON	-9.81	tasi	Tadawul All-Share Index	Tadawul Stock Exchange	Saudi Arabia	Asia-Pacific	0.020	Weak macroeconomy	0	0	0	1	0
2008-10-07	TUE	-16.47	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.214	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-08	WED	-10.38	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.711	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-08	WED	-8.17	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-08	WED	-7.09	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.214	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-08	WED	-6.31	fchi	CAC 40	Euronext Paris	France	WEOG	0.886	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-08	WED	-7.36	bfk	S&P/ASX 200	Australian Securities Exchange	Australia	WEOG	0.890	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-08	WED	-6.15	omxs30	OMX Stockholm 30 Index	Stockholm Stock Exchange	Sweden	WEOG	0.915	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-08	WED	-14.35	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	Weak macroeconomy	0	0	0	1	0
2008-10-08	WED	-11.25	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Weak macroeconomy	0	0	0	1	0
2008-10-08	WED	-9.38	jp225	Nikkei 225	Tokyo Stock Exchange	Japan	Asia-Pacific	0.857	Weak macroeconomy	0	0	0	1	0
2008-10-09	THU	-7.62	us500	Standard & Poor's 500	Nasdaq + NYSE	USA	WEOG	0.898	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-09	THU	-7.33	dji	Dow Jones Industrial Average (DJIA)	New York Stock Exchange (NYSE)	USA	WEOG	0.898	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-10	FRI	-9.62	jp225	Nikkei 225	Tokyo Stock Exchange	Japan	Asia-Pacific	0.857	Global/ regional financial shock (systemic)	0	1	0	1	0
2008-10-10	FRI	-7.19	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-10	FRI	-6.65	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.722	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-10	FRI	-7.14	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.857	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-10	FRI	-8.85	uk100	FTSE 100 Index	London Stock Exchange	United Kingdom	WEOG	0.867	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-10	FRI	-7.73	fchi	CAC 40	Euronext Paris	France	WEOG	0.886	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-10	FRI	-8.10	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.895	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-10	FRI	-7.01	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.906	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-10	FRI	-9.14	es35	Spain Stock Market Index	Madrid Stock Exchange	Spain	WEOG	0.886	Weak macroeconomy	0	0	0	1	0

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
2008-10-10	FRI	-9.61	seti	Thailand SET Index	Stock Exchange of Thailand	Thailand	Asia-Pacific	0.401	Weak macroeconomy	0	0	0	1	0
2008-10-13	MON	-6.34	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-15	WED	-11.39	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Bankruptcy	1	0	0	1	0
2008-10-15	WED	-10.12	smll	Índice Small Cap	B3	Brazil	GRULAC	0.869	Bankruptcy	1	0	0	1	0
2008-10-15	WED	-9.47	rut	Russell 2000 Index	Nasdaq + NYSE	USA	WEOG	0.898	Bankruptcy	1	0	0	1	0
2008-10-15	WED	-9.03	us500	Standard & Poor's 500	Nasdaq + NYSE	USA	WEOG	0.898	Bankruptcy	1	0	0	1	0
2008-10-15	WED	-9.26	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-15	WED	-8.67	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-15	WED	-7.16	uk100	FTSE 100 Index	London Stock Exchange	United Kingdom	WEOG	0.867	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-15	WED	-6.82	fchi	CAC 40	Euronext Paris	France	WEOG	0.886	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-15	WED	-6.29	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.895	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-15	WED	-8.47	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.898	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-15	WED	-7.87	dji	Dow Jones Industrial Average (DJIA)	New York Stock Exchange (NYSE)	USA	WEOG	0.898	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-15	WED	-6.49	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.906	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-16	THU	-9.52	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-16	THU	-9.11	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-16	THU	-6.78	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.857	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-16	THU	-6.54	bfk	S&P/ASX 200	Australian Securities Exchange	Australia	WEOG	0.890	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-16	THU	-9.44	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.770	Government economic intervention (other)	0	0	0	1	0
2008-10-16	THU	-11.41	jp225	Nikkei 225	Tokyo Stock Exchange	Japan	Asia-Pacific	0.857	Government economic intervention (other)	1	0	1	1	0
2008-10-17	FRI	-6.48	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-17	FRI	-6.35	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.895	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-22	WED	-10.18	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-22	WED	-10.07	smll	Índice Small Cap	B3	Brazil	GRULAC	0.869	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-22	WED	-8.85	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.214	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-22	WED	-7.17	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-22	WED	-8.16	es35	Spain Stock Market Index	Madrid Stock Exchange	Spain	WEOG	0.886	Global/ regional financial shock (systemic)	0	0	0	1	0

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
2008-10-22	WED	-7.60	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.895	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-22	WED	-6.10	us500	Standard & Poor's 500	Nasdaq + NYSE	USA	WEOG	0.898	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-24	FRI	-8.30	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-24	FRI	-6.91	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.711	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-24	FRI	-6.91	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-24	FRI	-14.24	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	Weak macroeconomy	0	0	0	1	0
2008-10-24	FRI	-13.68	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Weak macroeconomy	0	0	0	1	0
2008-10-24	FRI	-12.20	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.722	Weak macroeconomy	0	0	0	1	0
2008-10-24	FRI	-10.57	ks11	Korea Composite Stock Price Index	Korea Stock Exchange	South Korea	Asia-Pacific	0.770	Weak macroeconomy	0	0	0	1	0
2008-10-24	FRI	-9.60	jp225	Nikkei 225	Tokyo Stock Exchange	Japan	Asia-Pacific	0.857	Weak macroeconomy	0	0	0	1	0
2008-10-26	SUN	-6.79	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.214	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-27	MON	-7.44	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-27	MON	-7.35	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-27	MON	-6.30	jkse	Jakarta Stock Exchange Composite Index	Indonesia Stock Exchange	Indonesia	Asia-Pacific	0.711	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-27	MON	-6.50	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-10-27	MON	-12.70	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.095	Weak macroeconomy	0	0	0	1	0
2008-10-27	MON	-10.50	seti	Thailand SET Index	Stock Exchange of Thailand	Thailand	Asia-Pacific	0.401	Weak macroeconomy	0	0	0	1	0
2008-11-05	WED	-6.13	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-06	THU	-7.08	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-06	THU	-6.30	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-06	THU	-6.84	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.906	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-06	THU	-6.27	es35	Spain Stock Market Index	Madrid Stock Exchange	Spain	WEOG	0.886	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-06	THU	-6.33	omxs30	OMX Stockholm 30 Index	Stockholm Stock Exchange	Sweden	WEOG	0.915	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-06	THU	-9.62	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	Terrorism	1	0	1	0	1
2008-11-11	TUE	-6.66	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.722	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-11	TUE	-6.20	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.857	Global/ regional financial shock (systemic)	0	0	0	1	0

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
2008-11-11	TUE	-12.64	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	Lesser Paramilitary action (non-terrorism)	0	0	1	0	1
2008-11-11	TUE	-10.67	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Lesser Paramilitary action (non-terrorism)	0	0	1	0	1
2008-11-12	WED	-7.75	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-12	WED	-12.53	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	War	0	0	1	0	1
2008-11-13	THU	-7.62	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-18	TUE	-7.37	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-18	TUE	-7.48	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-18	TUE	-7.78	egx30	EGX 30 Index	Egyptian Exchange	Egypt	Asia-Pacific	0.214	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-20	THU	-7.38	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-20	THU	-9.02	gsptse	S&P/TSX Composite Index	Toronto Stock Exchange	Canada	WEOG	0.832	International trade (Other)	0	0	0	1	0
2008-11-21	FRI	-6.45	bvsp	Ibovespa	B3	Brazil	GRULAC	0.869	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-11-22	SAT	-9.20	tasi	Tadawul All-Share Index	Tadawul Stock Exchange	Saudi Arabia	Asia-Pacific	0.020	Weak macroeconomy	0	0	0	1	0
2008-12-01	MON	-19.71	hk50	Hong Kong 50	Hong Kong Stock Exchange	China	Asia-Pacific	0.095	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-12-01	MON	-9.32	gsptse	S&P/TSX Composite Index	Toronto Stock Exchange	Canada	WEOG	0.832	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-12-01	MON	-7.21	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.305	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-12-01	MON	-6.25	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.857	Global/ regional financial shock (systemic)	0	0	0	1	0
2008-12-01	MON	-11.85	rut	Russell 2000 Index	Nasdaq + NYSE	USA	WEOG	0.898	Global/ regional financial shock (systemic)	1	1	0	1	0
2008-12-01	MON	-9.32	gsptse	S&P/TSX Composite Index	Toronto Stock Exchange	Canada	WEOG	0.832	Political/ institutional crisis	1	0	1	1	0
2009-01-07	WED	-6.18	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.690	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-01-14	WED	-6.84	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.311	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-01-19	MON	-6.19	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.311	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-02-17	TUE	-7.52	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.895	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-02-17	TUE	-9.38	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.311	Weak company results	0	1	0	0	0
2009-02-17	TUE	-9.40	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.311	Weak company results	0	1	0	0	0
2009-03-02	MON	-6.02	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.854	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-03-30	MON	-6.37	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.311	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-03-30	MON	-6.57	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.854	Global/ regional financial shock (systemic)	0	0	0	1	0

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2009-06-03	WED	-7.46	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.311	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-06-22	MON	-7.80	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.311	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-06-22	MON	-6.21	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.895	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-08-17	MON	-6.07	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.094	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-08-31	MON	-6.87	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.094	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-08-31	MON	-6.54	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.094	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-10-28	WED	-6.00	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.311	Global/ regional financial shock (systemic)	0	0	0	1	0
2009-11-30	MON	-7.97	egx30	EGX 30 Index	Egyptian Exchange	Egypt	Asia-Pacific	0.212	Global/ regional financial shock (systemic)	0	0	0	1	0
2010-05-14	FRI	-6.64	es35	Spain Stock Market Index	Madrid Stock Exchange	Spain	WEOG	0.891	Public debt	0	0	1	0	1
2010-05-25	TUE	-6.49	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.309	International trade (Oil)	0	0	1	1	0
2010-05-25	TUE	-6.07	egx30	EGX 30 Index	Egyptian Exchange	Egypt	Asia-Pacific	0.214	Public debt	0	0	1	0	1
2010-11-22	MON	-10.18	cse	Canadian Securities Exchange	Canadian Stock Exchange	Canada	WEOG	0.833	Government economic intervention (other)	0	0	1	1	0
2011-01-26	WED	-6.14	egx30	EGX 30 Index	Egyptian Exchange	Egypt	Asia-Pacific	0.206	Sovereign credit rating	0	0	1	1	0
2011-01-27	THU	-10.52	egx30	EGX 30 Index	Egyptian Exchange	Egypt	Asia-Pacific	0.206	Social unrest/ outrage	1	0	0	0	1
2011-03-15	TUE	-10.04	jp225	Nikkei 225	Tokyo Stock Exchange	Japan	Asia-Pacific	0.857	Environmental crisis	1	0	0	0	1
2011-03-23	WED	-8.92	egx30	EGX 30 Index	Egyptian Exchange	Egypt	Asia-Pacific	0.206	Sovereign credit rating	0	0	1	1	0
2011-08-05	FRI	-6.01	uk100	FTSE 100 Index	London Stock Exchange	United Kingdom	WEOG	0.867	Sovereign credit rating	0	0	1	1	0
2011-08-08	MON	-7.84	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.297	Sovereign credit rating	0	0	1	1	0
2011-08-08	MON	-8.08	bvsp	Ibovespa	B3	Brazil	GRULAC	0.876	Sovereign credit rating	0	0	1	1	0
2011-08-10	WED	-6.75	bux	Budapest Stock Exchange Index	Budapest Stock Exchange	Hungary	Eastern European	0.782	Sovereign credit rating	0	0	1	1	0
2011-08-10	WED	-6.65	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.860	Sovereign credit rating	0	0	1	1	0
2011-08-15	MON	-16.97	stoxx50	Euro Stoxx 50	Various	EU	WEOG	0.874	Global/ regional financial shock (systemic)	1	1	1	1	0
2011-08-18	THU	-6.15	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.860	Sovereign credit rating	0	0	1	1	0
2011-09-09	FRI	-6.19	bux	Budapest Stock Exchange Index	Budapest Stock Exchange	Hungary	Eastern European	0.782	Sovereign credit rating	0	0	1	1	0
2011-09-22	THU	-7.82	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.297	Sovereign credit rating	0	0	1	1	0
2011-09-22	THU	-8.61	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.297	Sovereign credit rating	0	0	1	1	0
2011-09-22	THU	-7.27	wig20	Warsaw Stock Exchange WIG20 Index	Warsaw Stock Exchange	Poland	Eastern European	0.894	Sovereign credit rating	0	0	1	1	0

date	weekday	variation	ticker	index	stock_exchange	country	un_reg_group	polyarchy_year	event_tag	type_a	type_b	type_c	type_d	n_priv
2011-10-28	FRI	-40.91	psi	PSEi Composite	Philippine Stock Exchange	Philippines	Asia-Pacific	0.553	None	0	0	0	0	0
2011-11-01	TUE	-6.80	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.860	Sovereign credit rating	0	0	1	1	0
2012-11-25	SUN	-9.59	egx30	EGX 30 Index	Egyptian Exchange	Egypt	Asia-Pacific	0.296	Political/ institutional crisis	1	0	0	0	1
2013-06-13	THU	-6.75	psi	PSEi Composite	Philippine Stock Exchange	Philippines	Asia-Pacific	0.551	Central Bank/ interest rates	0	0	1	0	1
2013-06-24	MON	-6.13	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.086	Central Bank/ interest rates	0	0	1	0	1
2013-06-24	MON	-6.49	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.086	Central Bank/ interest rates	0	0	1	0	1
2014-03-03	MON	-12.01	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.269	War	0	0	1	0	1
2014-03-03	MON	-10.79	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.269	War	0	0	1	0	1
2014-12-15	MON	-10.12	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.269	Diplomatic crisis	0	0	1	1	0
2014-12-16	TUE	-12.41	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.269	Currency/ foreign exchange oscillation	1	0	1	1	0
2015-01-19	MON	-7.28	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-01-19	MON	-9.28	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-03-10	TUE	-6.43	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.267	Financial regulation	0	0	1	0	1
2015-05-28	THU	-6.46	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-05-28	THU	-6.42	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-06-19	FRI	-6.54	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-06-26	FRI	-8.04	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-06-26	FRI	-6.58	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-07-03	FRI	-6.00	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-07-08	WED	-7.10	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-07-08	WED	-6.78	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-07-27	MON	-8.67	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-07-27	MON	-8.48	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-08-18	TUE	-6.93	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1

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2015-08-24	MON	-6.70	psi	PSEi Composite	Philippine Stock Exchange	Philippines	Asia-Pacific	0.549	Financial regulation	0	0	1	0	1
2015-08-24	MON	-6.07	bux	Budapest Stock Exchange Index	Budapest Stock Exchange	Hungary	Eastern European	0.616	Financial regulation	0	0	1	0	1
2015-08-24	MON	-6.11	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.875	Financial regulation	0	0	1	0	1
2015-08-24	MON	-8.99	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-08-24	MON	-8.72	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-08-25	TUE	-7.46	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2015-08-25	TUE	-6.39	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.082	Financial regulation	1	0	0	0	1
2016-01-04	MON	-7.20	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.080	Financial regulation	1	1	0	0	0
2016-01-07	THU	-7.25	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.080	Financial regulation	1	0	0	0	1
2016-01-26	TUE	-6.42	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.080	International trade (Oil)	0	0	0	1	0
2016-02-25	THU	-6.59	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.080	Weak macroeconomy	0	1	1	1	0
2016-06-24	FRI	-8.62	stoxx50	Euro Stoxx 50	Various	EU	WEOG	0.862	Financial bubble	0	0	1	0	1
2016-06-24	FRI	-6.99	psi20	Portuguese Stock Index	Euronext Lisbon	Portugal	WEOG	0.887	Financial bubble	0	0	0	1	0
2016-06-24	FRI	-7.04	atx	Austrian Traded Index	Vienna Stock Exchange	Austria	WEOG	0.848	Financial bubble	0	0	0	1	0
2016-06-24	FRI	-12.35	es35	Spain Stock Market Index	Madrid Stock Exchange	Spain	WEOG	0.847	Plebiscite or referendum	0	0	1	0	1
2016-06-24	FRI	-12.48	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.872	Plebiscite or referendum	0	0	1	0	1
2017-01-03	TUE	-23.72	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.078	None	0	0	0	0	0
2017-05-18	THU	-9.55	smll	Índice Small Cap	B3	Brazil	GRULAC	0.778	Private-public corruption	1	1	0	0	0
2017-05-18	THU	-8.80	bvsp	Ibovespa	B3	Brazil	GRULAC	0.778	Private-public corruption	1	1	0	0	0
2018-04-09	MON	-11.44	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.266	Diplomatic crisis	0	0	1	0	1
2020-02-03	MON	-7.77	djsh	Dow Jones Shanghai Index	Shanghai Stock Exchange	China	Asia-Pacific	0.075	Health crisis	1	1	1	1	0
2020-02-03	MON	-7.07	ftxin	FTSE China A50 Index	Shanghai and Shenzhen Stock Exchanges	China	Asia-Pacific	0.075	Health crisis	1	1	1	1	0
2020-02-26	WED	-7.00	bvsp	Ibovespa	B3	Brazil	GRULAC	0.699	Health crisis	1	1	1	1	0
2020-03-09	MON	-6.76	psi	PSEi Composite	Philippine Stock Exchange	Philippines	Asia-Pacific	0.425	Health crisis	1	1	1	1	0
2020-03-09	MON	-7.55	bux	Budapest Stock Exchange Index	Budapest Stock Exchange	Hungary	Eastern European	0.468	Health crisis	1	1	1	1	0

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2020-03-09	MON	-8.45	stxx50	Euro Stoxx 50	Various	EU	WEOG	0.829	Health crisis	1	1	1	1	0
2020-03-09	MON	-7.69	uk100	FTSE 100 Index	FTSE 100 Index	United Kingdom	WEOG	0.870	Health crisis	1	1	1	1	0
2020-03-09	MON	-8.66	psi20	Portuguese Stock Index	Euronext Lisbon	Portugal	WEOG	0.884	Health crisis	1	1	1	1	0
2020-03-09	MON	-12.48	smll	Índice Small Cap	B3	Brazil	GRULAC	0.699	Health crisis	1	1	1	1	0
2020-03-09	MON	-9.01	atx	Austrian Traded Index	Vienna Stock Exchange	Austria	WEOG	0.860	International trade (Oil)	1	1	1	1	0
2020-03-09	MON	-12.17	bvsp	Ibovespa	B3	Brazil	GRULAC	0.699	International trade (Oil)	1	1	1	1	0
2020-03-09	MON	-10.27	gsptse	S&P/TSX Composite Index	Toronto Stock Exchange	Canada	WEOG	0.849	International trade (Oil)	1	1	1	1	0
2020-03-09	MON	-11.17	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.866	International trade (Oil)	1	1	1	1	0
2020-03-09	MON	-9.37	rut	Russell 2000 Index	Nasdaq + NYSE	USA	WEOG	0.807	International trade (Oil)	1	1	1	1	0
2020-03-10	TUE	-13.02	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.256	International trade (Oil)	1	1	1	1	0
2020-03-11	WED	-7.64	bvsp	Ibovespa	B3	Brazil	GRULAC	0.699	Health crisis	1	1	1	1	0
2020-03-12	THU	-6.47	mima00000pma	MSCI Morocco Index	Casablanca Stock Exchange	Morocco	African	0.256	Health crisis	1	1	1	1	0
2020-03-12	THU	-8.18	bsesn	S&P BSE SENSEX	Bombay Stock Exchange	India	Asia-Pacific	0.394	Health crisis	1	1	1	1	0
2020-03-12	THU	-8.03	omxc25	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.394	Health crisis	1	1	1	1	0
2020-03-12	THU	-14.21	aex	Amsterdam Exchanges Index	Euronext Amsterdam	Netherlands	WEOG	0.857	Health crisis	1	1	1	1	0
2020-03-12	THU	-9.71	psi	PSEi Composite	Philippine Stock Exchange	Philippines	Asia-Pacific	0.425	Health crisis	1	1	1	1	0
2020-03-12	THU	-10.75	aex	Amsterdam Exchanges Index	Euronext Amsterdam	Netherlands	WEOG	0.857	Health crisis	1	1	1	1	0
2020-03-12	THU	-11.03	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.256	Health crisis	1	1	1	1	0
2020-03-12	THU	-11.55	bux	Budapest Stock Exchange Index	Budapest Stock Exchange	Hungary	Eastern European	0.468	Health crisis	1	1	1	1	0
2020-03-12	THU	-12.34	gsptse	S&P/TSX Composite Index	Toronto Stock Exchange	Canada	WEOG	0.849	Health crisis	1	1	1	1	0
2020-03-12	THU	-12.24	dax	Deutscher Aktienindex	Frankfurt Stock Exchange	Germany	WEOG	0.872	Health crisis	1	1	1	1	0
2020-03-12	THU	-12.28	fchi	CAC 40	Euronext Paris	France	WEOG	0.866	Health crisis	1	1	1	1	0
2020-03-12	THU	-14.78	bvsp	Ibovespa	B3	Brazil	GRULAC	0.699	Health crisis	0	0	1	0	1
2020-03-12	THU	-16.66	smll	Índice Small Cap	B3	Brazil	GRULAC	0.699	Health crisis	0	0	1	0	1
2020-03-12	THU	-10.87	uk100	FTSE 100 Index	London Stock Exchange	United Kingdom	WEOG	0.870	Health crisis	1	1	1	1	0
2020-03-12	THU	-9.51	us500	Standard & Poor's 500	Nasdaq + NYSE	USA	WEOG	0.807	Health crisis	1	1	1	1	0
2020-03-12	THU	-9.43	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.807	Health crisis	1	1	1	1	0

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2020-03-12	THU	-9.99	dji	Dow Jones Industrial Average (DJIA)	New York Stock Exchange (NYSE)	USA	WEOG	0.807	Health crisis	1	1	1	1	0
2020-03-12	THU	-16.92	it40	Italy Stock Market Index	Milano Indice di Borsa (FTSE MIB)	Italy	WEOG	0.866	Health crisis	1	1	1	1	0
2020-03-12	THU	-14.06	es35	Spain Stock Market Index	Madrid Stock Exchange	Spain	WEOG	0.873	Health crisis	1	1	1	1	0
2020-03-12	THU	-9.76	psi20	Portuguese Stock Index	Euronext Lisbon	Portugal	WEOG	0.884	Health crisis	1	1	1	1	0
2020-03-12	THU	-11.18	rut	Russell 2000 Index	Nasdaq + NYSE	USA	WEOG	0.807	Health crisis	1	1	1	1	0
2020-03-12	THU	-10.42	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.614	Health crisis	1	0	1	0	1
2020-03-12	THU	-10.57	omxs30	OMX Stockholm 30 Index	Stockholm Stock Exchange	Sweden	WEOG	0.902	Health crisis	0	0	1	0	1
2020-03-12	THU	-12.40	stoxx50	Euro Stoxx 50	Various	EU	WEOG	0.829	International organization intervention	0	0	1	0	1
2020-03-12	THU	-10.80	seti	Thailand SET Index	Stock Exchange of Thailand	Thailand	Asia-Pacific	0.198	Social unrest/ outrage	1	0	0	0	1
2020-03-12	THU	-13.65	atx	Austrian Traded Index	Vienna Stock Exchange	Austria	WEOG	0.860	Terrorism	0	0	1	0	1
2020-03-15	SUN	-9.34	egx30	EGX 30 Index	Egyptian Exchange	Egypt	African	0.175	Central Bank/ interest rates	1	0	0	0	0
2020-03-16	MON	-9.79	mima00000pma	MSCI Morocco Index	Casablanca Stock Exchange	Morocco	African	0.256	Health crisis	1	1	1	1	0
2020-03-16	MON	-13.92	bvsp	Ibovespa	B3	Brazil	GRULAC	0.699	Health crisis	1	1	1	1	0
2020-03-16	MON	-13.92	smll	Índice Small Cap	B3	Brazil	GRULAC	0.699	Health crisis	1	1	1	1	0
2020-03-16	MON	-14.22	rut	Russell 2000 Index	Nasdaq + NYSE	USA	WEOG	0.807	Health crisis	1	1	1	1	0
2020-03-16	MON	-12.93	dji	Dow Jones Industrial Average (DJIA)	New York Stock Exchange (NYSE)	USA	WEOG	0.807	Health crisis	1	1	1	1	0
2020-03-16	MON	-12.32	ixic	Nasdaq Composite	Nasdaq	USA	WEOG	0.807	Health crisis	1	1	1	1	0
2020-03-16	MON	-11.98	us500	Standard & Poor's 500	Nasdaq + NYSE	USA	WEOG	0.807	Health crisis	1	1	1	1	0
2020-03-16	MON	-9.70	axjo	S&P/ASX 200	Australian Securities Exchange	Australia	WEOG	0.843	Health crisis	1	1	1	1	0
2020-03-16	MON	-9.89	gsptse	S&P/TSX Composite Index	Toronto Stock Exchange	Canada	WEOG	0.849	Health crisis	1	1	1	1	0
2020-03-16	MON	-10.46	atx	Austrian Traded Index	Vienna Stock Exchange	Austria	WEOG	0.860	Health crisis	1	1	1	1	0
2020-03-16	MON	-7.96	bsesn	S&P BSE SENSEX	Bombay Stock Exchange	India	Asia-Pacific	0.394	Health crisis	1	1	1	1	0
2020-03-16	MON	-7.91	psi	PSEi Composite	Philippine Stock Exchange	Philippines	Asia-Pacific	0.425	Health crisis	1	1	1	1	0
2020-03-16	MON	-6.03	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.614	Health crisis	1	1	1	1	0
2020-03-18	WED	-9.04	ftwizafl	FTSE South Africa Index	Johannesburg Stock Exchange	South Africa	African	0.723	Central Bank/ interest rates	1	0	0	0	1
2020-03-18	WED	-15.10	smll	Índice Small Cap	B3	Brazil	GRULAC	0.699	Health crisis	1	1	1	1	0
2020-03-18	WED	-10.96	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.256	Health crisis	1	1	1	1	0

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2020-03-18	WED	-10.35	bvsp	Ibovespa	B3	Brazil	GRULAC	0.699	Health crisis	1	1	1	1	0
2020-03-18	WED	-10.42	rut	Russell 2000 Index	Nasdaq + NYSE	USA	WEOG	0.807	Health crisis	1	1	1	1	0
2020-03-18	WED	-7.79	atx	Austrian Traded Index	Vienna Stock Exchange	Austria	WEOG	0.860	Health crisis	1	1	1	1	0
2020-03-18	WED	-6.54	bux	Budapest Stock Exchange Index	Budapest Stock Exchange	Hungary	Eastern European	0.468	Health crisis	1	1	1	1	0
2020-03-19	THU	-13.34	psi	PSEi Composite	Philippine Stock Exchange	Philippines	Asia-Pacific	0.425	Health crisis	1	1	1	1	0
2020-03-23	MON	-9.12	seti	Thailand SET Index	Stock Exchange of Thailand	Thailand	Asia-Pacific	0.198	Health crisis	1	1	1	1	0
2020-03-23	MON	-13.15	bsesn	S&P BSE SENSEX	Bombay Stock Exchange	India	Asia-Pacific	0.394	Health crisis	1	1	1	1	0
2020-03-23	MON	-12.98	nsei	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.394	Health crisis	1	1	1	1	0
2020-03-23	MON	-6.58	nzdow	Nifty 50	National Stock Exchange	India	Asia-Pacific	0.394	Health crisis	1	1	1	1	0
2020-04-16	THU	-7.07	psi	PSEi Composite	Philippine Stock Exchange	Philippines	Asia-Pacific	0.425	Health crisis	1	1	1	1	0
2021-04-19	MON	-7.63	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.584	Public debt	0	0	1	0	1
2022-01-24	MON	-8.00	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.576	War	0	0	1	0	1
2022-02-21	MON	-6.58	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.576	War	0	0	1	0	1
2022-02-21	MON	-13.21	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.207	War	0	0	1	0	1
2022-02-21	MON	-10.50	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.207	War	0	0	1	0	1
2022-02-23	WED	-6.05	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.576	War	0	0	1	0	1
2022-02-24	THU	-7.22	atx	Austrian Traded Index	Vienna Stock Exchange	Austria	WEOG	0.838	War	0	0	1	0	1
2022-02-24	THU	-38.30	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.207	War	0	0	1	0	1
2022-02-24	THU	-33.28	imoex	MOEX Russia Index	Moscow Exchange	Russia	Eastern European	0.207	War	0	0	1	0	1
2022-02-24	THU	-9.76	bux	Budapest Stock Exchange Index	Budapest Stock Exchange	Hungary	Eastern European	0.452	War	0	0	1	0	1
2022-02-24	THU	-38.63	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.576	War	0	0	1	0	1
2022-03-01	TUE	-7.08	atx	Austrian Traded Index	Vienna Stock Exchange	Austria	WEOG	0.838	War	0	0	1	0	1
2022-03-01	TUE	-11.02	bux	Budapest Stock Exchange Index	Budapest Stock Exchange	Hungary	Eastern European	0.452	War	0	0	1	0	1
2022-03-01	TUE	-13.89	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.576	War	0	0	1	0	1
2022-03-02	WED	-17.47	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.576	War	0	0	1	0	1
2022-03-04	FRI	-6.97	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.576	War	0	0	1	0	1
2022-03-07	MON	-12.28	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.576	War	0	0	1	0	1

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2022-03-21	MON	-6.33	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.576	War	0	0	1	0	1
2022-04-27	WED	-9.54	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.576	War	0	0	1	0	1
2022-06-13	MON	-6.71	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.576	War	0	0	1	0	1
2022-09-20	TUE	-9.31	irts	RTS Index	Moscow Exchange	Russia	Eastern European	0.207	Weak macroeconomy	0	0	0	1	0
2023-03-15	WED	-6.30	atx	Austrian Traded Index	Vienna Stock Exchange	Austria	WEOG	0.846	Weak company results	0	0	0	1	0
2023-09-04	MON	-6.31	wigua	WIG Ukraine Index	Warsaw Stock Exchange	Poland	Eastern European	0.590	War	0	0	1	0	1