Grouping Acronyms as Heuristic Devices in Sovereign Bond Markets

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Abstract

With no global Leviathan to enforce contracts, investors' beliefs about a country's reputation matter for governments' ability to access capital. How do financial investors assess the risk of default in a country? What role does the media play in this assessment, if any? I introduce a model of country risk evaluation based on investors' activation of the representativeness and availability heuristics due to the use of grouping categories in the media, such as BRICS (Brazil, Russia, India, China, South Africa) and PIIGS (Portugal, Ireland, Italy, Greece, Spain). To evaluate a country's reputation, boundedly rational investors assess how much a country fits into a stereotypical "trustworthy" or "untrustworthy" class. Grouping acronyms act as a signaling mechanism about the class. The evaluative connotation of the grouping acronyms – negative (PIIGS) or positive (BRICS) – determines the qualitative nature of the class. As the label becomes widespread, its constitutive members are discursively linked together as a homogeneous class. This perceived homogeneity leads investors to update their priors about one class member's reputation even if they receive new information about only the other class members. Empirically, I explore the acronyms-induced contagion effects in sovereign bond markets during the period 2004-2020 (BRICS) and 2010-2015 (PIIGS). I show how countries can import a good or a bad reputation via *implicit* association with others. The direction of the effect is consistent with the idea that the PIIGS and BRICS acronyms convey opposite information about the class type. Moreover, I show that the effect of grouping acronyms is larger when investors are more uncertain and when international capital is scarce.

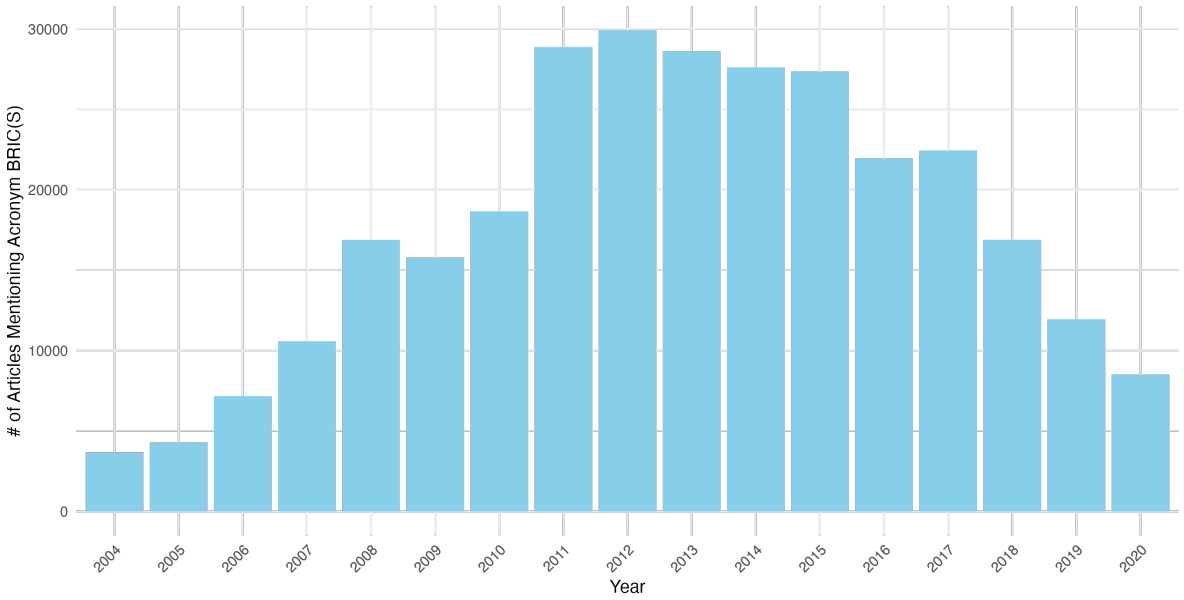
"First there was BRICs. Then came CIVETS. Then we were presented with BASIC, CRIM, BRICK, CEMENT, BEM, N11 and the 7% Club. Now barely a week goes by before someone tries to float another 'useful' investment acronym." (Global Dashboard, Jules Evans, December 6th, 2010).[1]

"Ireland is not Greece" (Irish Finance Minister Michael Noonan, June 23rd, 2011).[2]

In November 2001, a team of Goldman Sachs analysts led by then-chairman Jim O'Neill published a report entitled *Building Better Global Economic BRICs*. This new category - lumping together Brazil, Russia, India, and China - soon attracted the attention of journalists, investors, and policy-makers alike. This new grouping acronym caught on partly thanks to the investment banks' extensive network and influence on financial discourse (Fourcade 2013). As remarked in the columns of the *Financial Times*, Goldman Sachs' executives viewed the concept "as a a snappy way of discussing strategy. [...] Unlike phrases such as 'emerging markets' or 'developing world', BRICs did not sound patronising, or unpromising."[3] Encouraged by the initial success, Goldman Sachs soon produced a 2003 sequel to the original report. The report - *Dreaming with Brics: The Path to 2050* (Wilson and Purushothaman, 2003) - was even more acclaimed than the initial one. Eventually, it would be downloaded ten times more than any other previous report in the Goldman Sachs website (O'Neill, 2011). Since then the acronym's popularity in the media only grew (see Fig. 17) and went on to become what the *Financial Times* characterizes as "a near ubiquitous financial term, shaping how a generation of investors, financiers, and policymakers view the emerging markets." (*Financial Times*, 15-10-2010).

[1] Available at https://www.globaldashboard.org/2010/12/06/from-brics-to-pigs-whats-in-a-name/
[2] Available at https://www.independent.ie/irish-news/noonan-were-not-greece-put-that-on-a-t-shirt-26745253.html
[3] Available at https://www.ft.com/content/112ca932-00ab-11df-ae8d-00144feabdc0

Figure 1: Mentions of BRIC(S) in Newspapers (2004-2020)

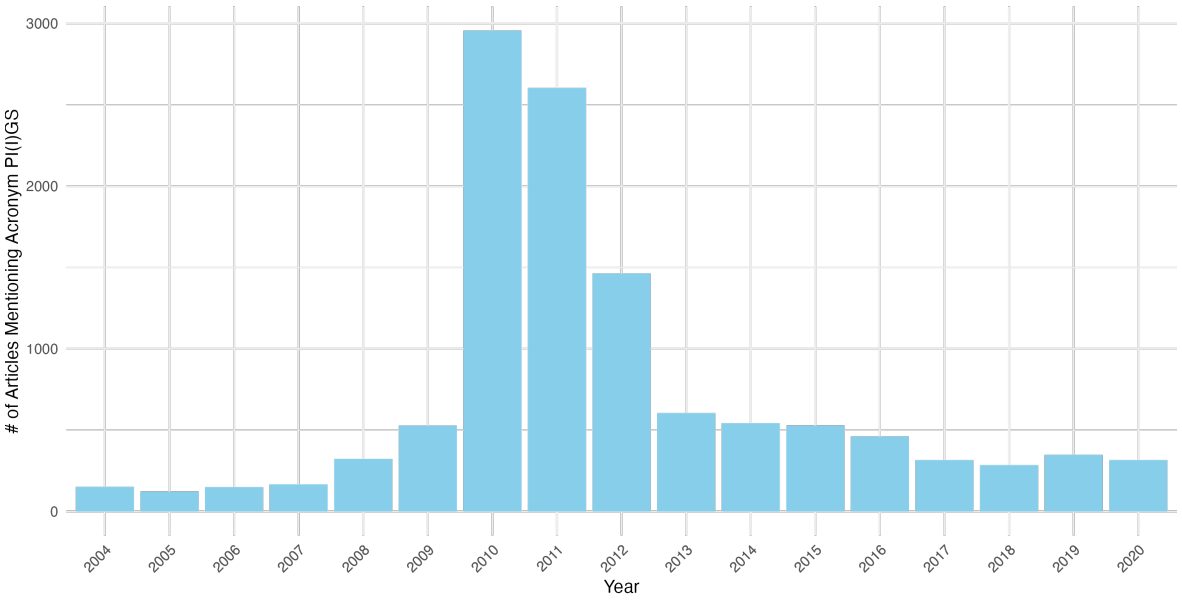


Source: Factiva. *Keyword search*: BRIC or BRICS not brac and (Brazil or India or Russia or China or South Africa)

Unlike the BRIC(S), the prominence of the PI(I)GS acronym is more recent and its widespread use more short-lived (see Fig. 2, and notice the different scale on the Y axis). Indeed, towards the end of the crisis, the term was used less than it probably would have been because of the decision of some news media and institutions, such as the *Financial Times* and *Barclays Capital*, to ban its use in print. To be true, the idea of Southern European economies representing a well defined socio-economic cluster with a pejorative connotation had already been around for some time and some variation of the terms can be tarced back even to the late 70s (Brazys and Hardiman 2015). It is with the beginning of the euro-crisis, and the addition of Ireland to the group, that the acronym gained new currency and became known as 'PIIGS.' Over time, the acronym arguably played a role in reviving *essentialist topoi* that degraded peripheral EU states as backward, lazy, irrational, corrupt, inefficient and wasteful (Fourcade 2013; Küsters and Garrido 2020). According to some, the acronym PIIGS transforms the dividing line between debtors and creditors into a morally charged one of saints and sinners (Dyson 2014; Nones 2024).[4]

[4]A similar, but opposite, essentialist narrative was also present in debtor countries against Northern creditors (Adler-Nissen 2017).

Figure 2: Mentions of PI(I)GS in Newspapers (2004-2020)



Source: Factiva. *Keyword search*: PIIGS or PIGS and (Italy or Ireland or Greece or Spain or Portugal) and econom* not meat* not farm*

Overall, there is little doubt that the term PIIGS contains an explicitly negative connotation. By contrast, BRIC(S) has a clear positive connotation and soon became "the developing world's most coveted club" (Brütsch and Papa 2013, p.300). As Fourcade aptly puts it: "Who would you rather put your money on – the BRICs or the PIGS? The terms (which evocate, respectively, a sturdy material and a filthy porcine) are not irrelevant here: we think and feel through language" (Fourcade 2013, p.262). Likely for this reason, the member countries themselves welcomed the concept. In June 2009, the group held its first yearly meeting. At around the same, South Africa began its efforts to join the group, which it successfully did in late 2010. Since then the BRIC would be known as BRICS.[5] Tellingly, South African leaders were not alone in their aspirations to be part of the new group (O'Neill 2011). Unsurprisingly, the PIIGS acronym never gained the same appeal as the BRICS.

What is particularly interesting about these "catchy" acronyms is the degree of arbitrariness regarding which country should or should not be considered BRICS or PIIGS. Regarding BRICS, one of the most interesting and evident aspects is its ill-defined membership criteria. As O'Neill himself readily conceded, the rationale resided not in the economic fundamentals of these economies, but on his views regarding their *potential* -

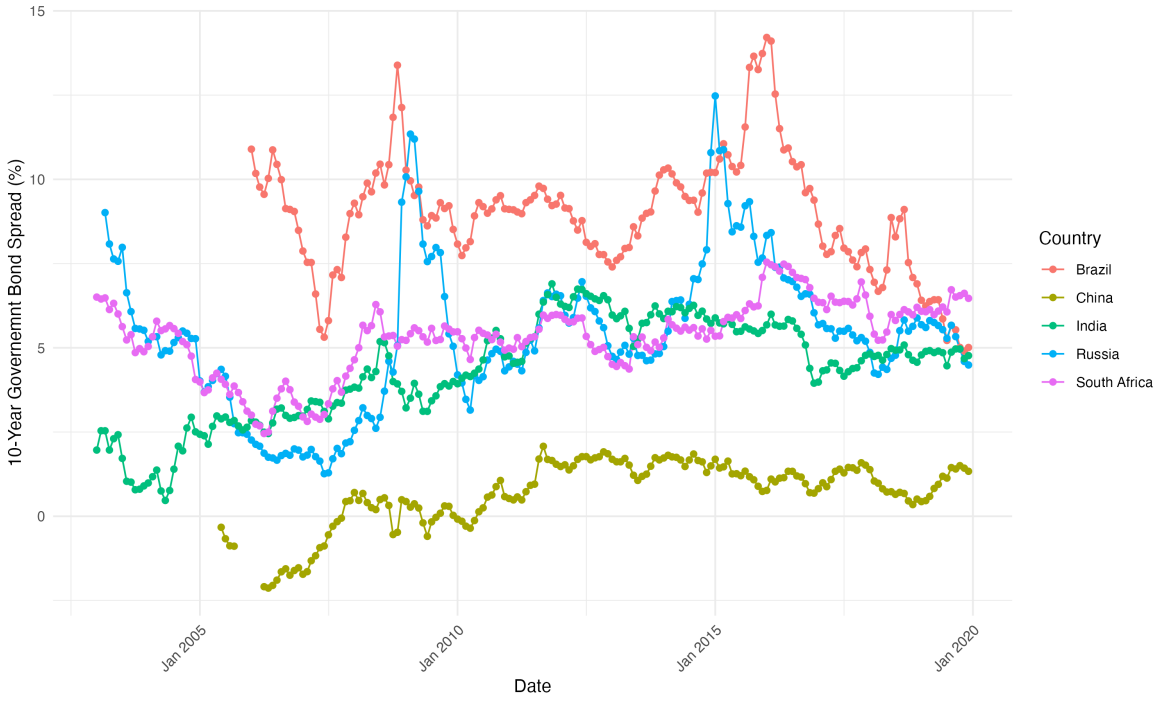
[5]From now on I will spell the acronym as "BRICS" for simplicity. Same for for "PIIGS".

largely yet unrealized at the time - economic and political influence. The analyst, who had never properly visited three of the four original countries, picked China and India mostly because of the sheer size of their population, while Russia was chosen given its participation at the G8 (O'Neill 2011, p.20). The inclusion of Brazil was arguably the most arbitrary of all. Beside the author's goal to draw a more geographically inclusive concept, the choice of Brazil over Mexico (the closest second candidate) was driven by the desire to construct the fitting metaphor of the resulting acronym,[6] but also because Brazil "happens to produce some of the world's best football players (an ongoing subject of obsession for this author)" (O'Neill 2011, p.22). Regarding South Africa, O'Neill himself (among other economists) criticized its inclusion, on the grounds that it was a political decisions not based on the country's economic prospects. According to him, South Africa was "nowhere near constituting a Bric [nation]" from an economic standpoint, further warning that "being part of the Bric political club doesn't guarantee that you are going to be regarded as a Bric economically."[7]. As we can glance from Fig. 3, it is hardly surprising that many have found the whole concept unconvincing. Overall, the five countries are quite different in their economic and political structures (more on this later) and this is reflected on their reputation vis-á-vis financial markets.

[6] As O'Neill himself recalled in 2010: "When I first spoke at a big group in Rio [after the paper was published], it was to around 1,000 investors from all of Latin America. The guy who was introducing me whispered in my ear as he went to the podium, 'we all know that the only reason the B is there is because without it there is no acronym.'" Available at https://www.ft.com/content/112ca932-00ab-11df-ae8d-00144feabdc0

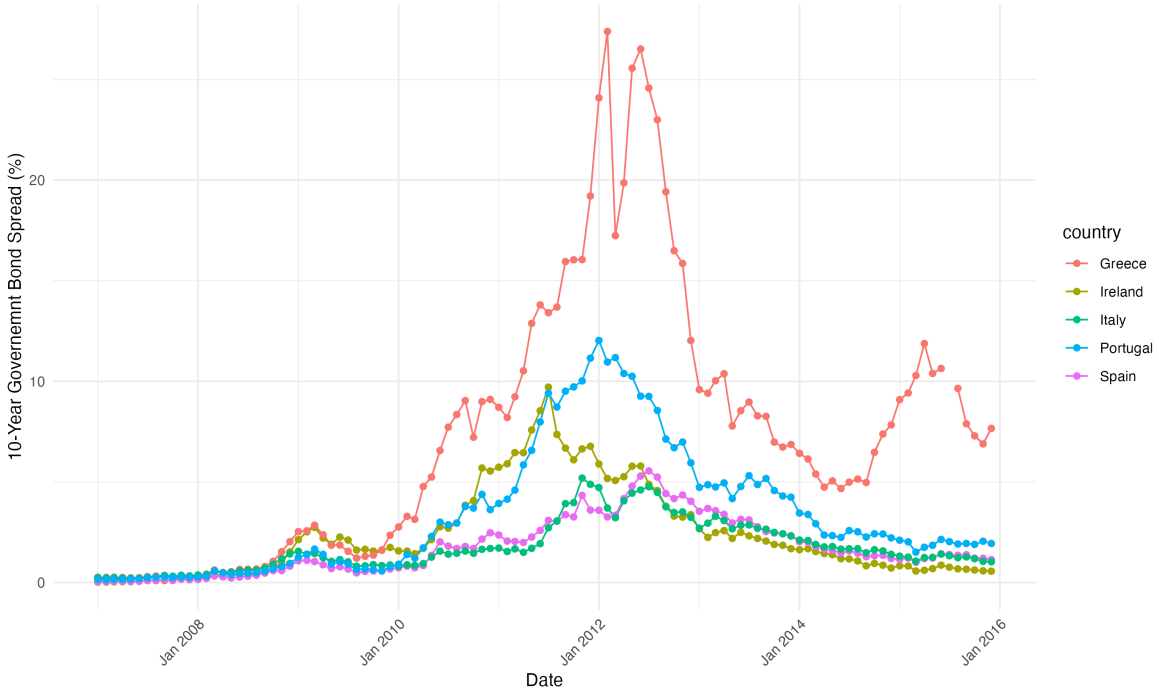
[7] Available at https://www.dailymaverick.co.za/article/2011-10-04-oneil-south-africas-inclusion-in-brics-smacks-of-politics/

Figure 3: BRICS Sovereign Bond Spread (2004-2020)



To be true, at least relative to the BRICS, the PIIGS do share more political and economic commonalities and similar experiences throughout the European Sovereign Bond crisis. Each had undergone a significant economic downturn, faced budgetary and debt crises, and required intervention by international institutions. Importantly, they all experienced a reputational crisis in the eyes of bondholders (see Fig. 4).

Figure 4: PIIGS Sovereign Bond Spread (2007-2015)



Nevertheless, several scholars have challenged the criteria for PIIGS membership as well, on the grounds that notable differences existed between the countries, especially in terms of their economic size, the root causes of their financial struggles, their crisis management strategies, and their recovery prospects (Blyth, 2013; Brazys and Hardiman, 2015). The arbitrary nature of the grouping becomes evident when comparing PIIGS countries to others that share enough similarities to potentially be included. Interestingly, despite the commonalities among PIIGS members, their financial market reputations were not markedly different from those of at least some other EU members, both within (Fig. 5) and outside of the Eurozone (see Fig. 6).[8]

[8] I show only Italy among the PIIGS for readability.

Figure 5: Italy and Selected Non-Eurozone Countries Bond Spread (2007-2015)

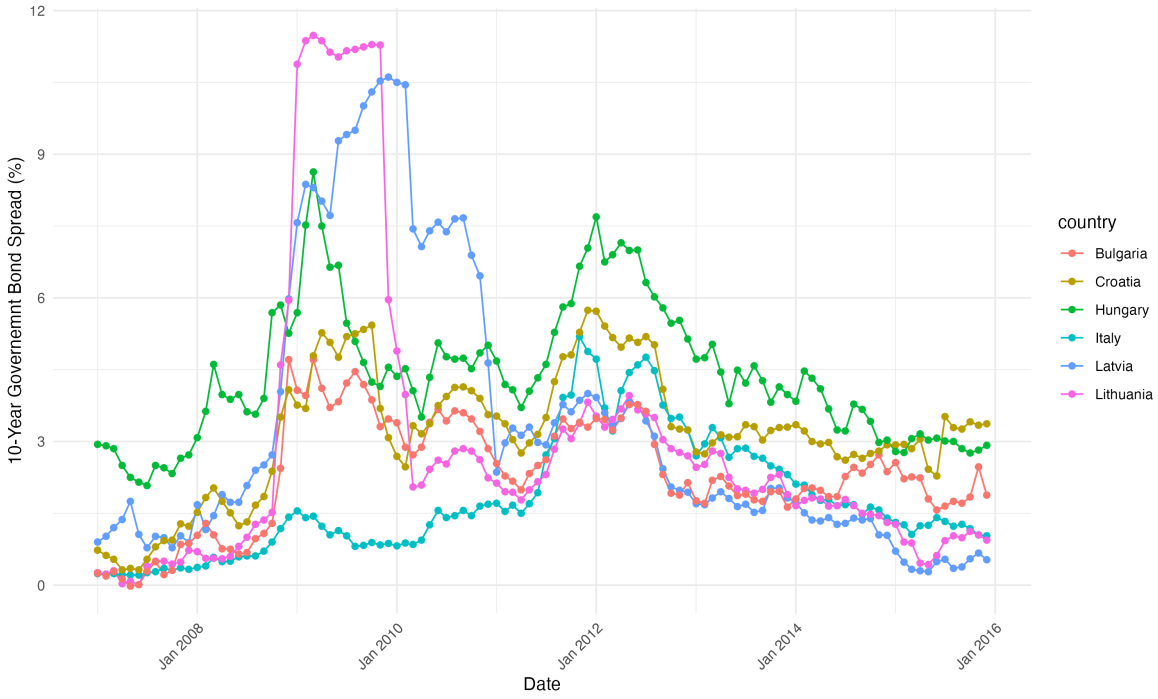
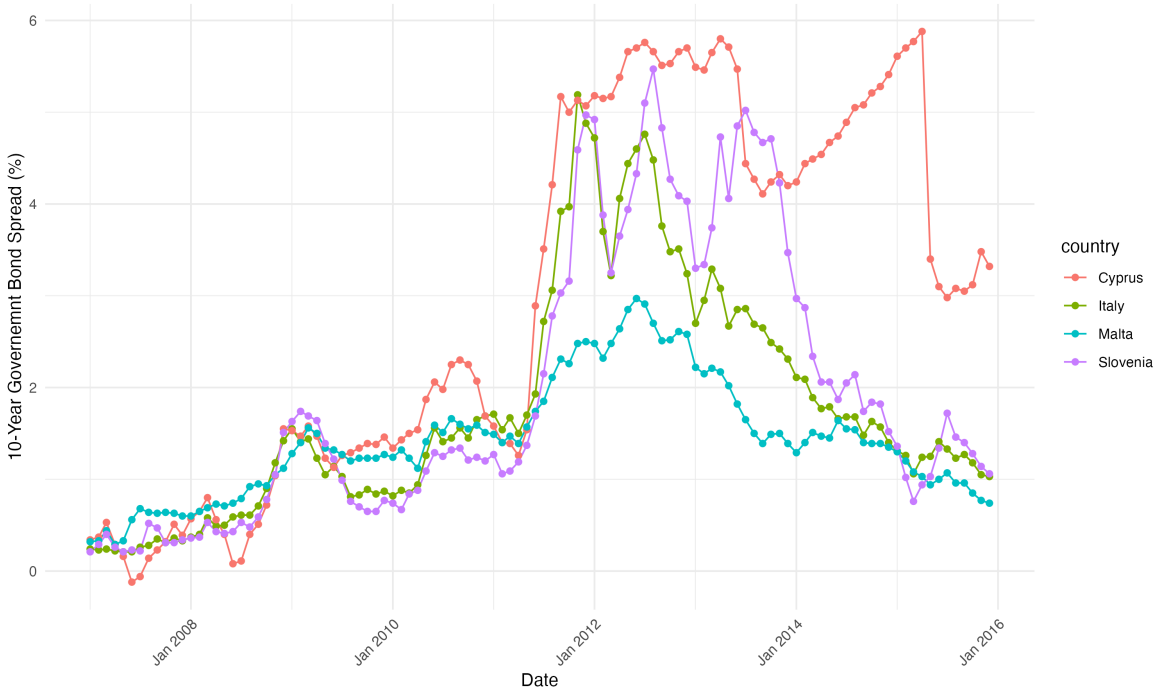


Figure 6: Italy and Selected Eurozone Countries Bond Spread (2007-2015)



We can investigate this issue more formally. The dendrogram below (Fig. 7), created using hierarchical clustering with Ward's method, further suggests that the PIIGS group lacks the macro-financial coherence that is often assumed. The algorithm iteratively groups Eurozone countries based on their similarity, calculated from a specified distance matrix. The distance is calculated from the pre-crisis average of five major economic indicators: debt-to-GDP, deficit (as a % of GDP), GDP growth, Credit Rating Scores, and the number of defaults in the 20 years before the launch of the euro. At each step, the two closest clusters are merged, creating a tree-like structure that visually represents the similarity or dissimilarity between observations. In this case, I used the Ward method, which minimizes the increase in the within-cluster variance at each merging step. [9]

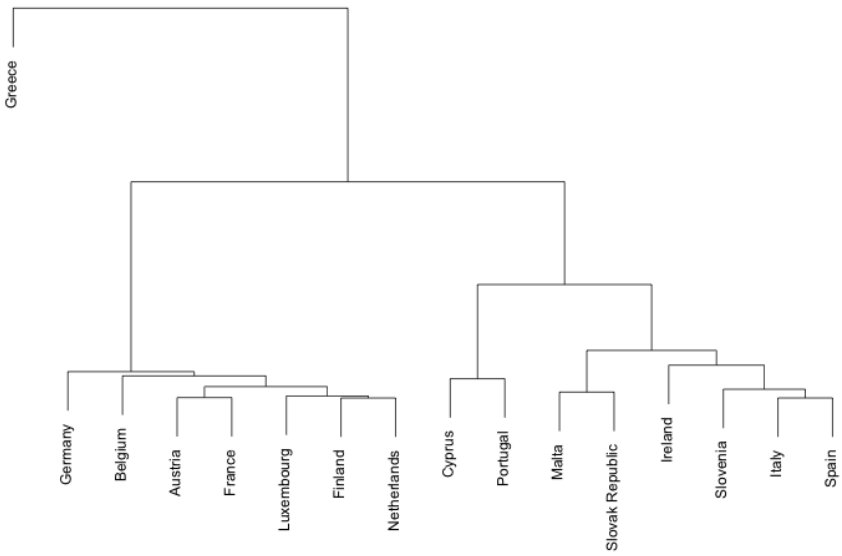
The resulting dendrogram shows that Greece forms its own distinct branch, indicating its unique characteristics relative to other Eurozone countries. The two remaining clusters loosely align with the familiar frugal vs. spendthrift distinction. Countries like Germany, Austria, the Netherlands, and Finland form one cluster, reflecting their historically conservative fiscal policies and disciplined budget management, often associated with lower debt levels and cautious spending. By contrast, countries commonly associated with higher debt levels and more expansive fiscal policies, including the PIIGS, form the other major cluster. Interestingly, however, the PIIGS (minus Greece) countries do not form a tightly coherent subgroup within the "spendthrift" cluster. For instance, Slovenia appears closer to Italy and Spain than Ireland, and Portugal is further away from its PIIGS peers than any other "spendthrift" country except Cyprus. This distribution suggests that while there are broad similarities, the PIIGS group lacks the uniformity implied by the PIIGS grouping.

[9] Mathematically, Ward's method aims to minimize the total sum of squared differences within each cluster. At each iteration, the algorithm identifies the pair of clusters A and B that will result in the smallest increase in within-cluster variance, given by:

$$\Delta = \frac{|A||B|}{|A|+|B|} d(A,B)^2$$

where $d(A,B)$ is the Euclidean distance between the centroids of clusters A and B, and $|A|$ and $|B|$ are the sizes of these clusters.

Figure 7: Hierarchical Clustering Dendrogram (2002-2009 country average



The partly arbitrary and exogenous (except for South Africa) nature of their inclusion criteria makes these acronyms an ideal venue to study the performative role of language in financial markets. What are the reputational consequences of attaching a label based on partly arbitrary criteria? Is the acronym just a descriptive device or does it carry valuable information for investors? If so, under which conditions does a grouping category help market agents coordinate their expectations? What are some possible mechanisms through which investors make sense of information that is largely orthogonal to a country's economic fundamentals? This paper attempts to answer these questions. In so doing, it contributes to the political economy literature on sovereign bond markets on theoretical, empirical, and methodological grounds. First, drawing from behavioral finance, I propose a theory linking the discursive reference to member countries as a cohesive "good" or "bad" group to investors' inference about each individual member's future economic prospects. In doing so, I clarify the psychological mechanisms through which the performative role of language on financial markets takes place (Blyth et al., 2002; McNamara, 2019). Moreover, I theorize and test a more specific set of scope

conditions under which investors are more (or less) likely to rely on the grouping acronym as a heuristic device. In so doing, this paper further advances our knowledge of the "peer effects" of socially constructed categories in financial markets (Brooks et al., 2015; Brazys and Hardiman, 2015). Empirically, I contribute to the literature by showing that heuristic matters also in the case of well-known countries - about which information are not scarce -, and not only in the case of relatively unknown countries about which investors do not have well-defined priors (Gray and Hicks, 2014). Finally, I propose a novel and straightforward measurement strategy of written texts to estimate the effects of being *implicitly* associated to other countries. Such a strategy allows us to minimize measurement errors in the identification of relevant texts, a problem that may have affected previous studies on similar topics (Büchel, 2013; Linsi and Schaffner, 2019).

The main results can be summarized as follows. First, by association with one another via the BRICS (PIIGS) acronym, the member countries have gained (lost) credibility in bond markets, thus paying lower (higher) interest rates at the margin. The PIIGS acronym's unambiguously negative connotation led its member countries to lose from being associated with each other in terms of their perceived creditworthiness. In other words, they have been perceived to be "guilty by association". In stark contrast, the BRICS acronym - with its positive connotation and "uplifting" character (Fourcade, 2013) - has allowed its members to enjoy *better* conditions on financial markets. Thus, financial investors have viewed the BRICS members as "virtuous by association." In this sense, the two acronyms can be seen as the two opposite sides of the same reputational coin. Second, within each group, the *implicit* association via the acronyms affect member countries differently. In line with the model, those with a relatively 'bad' reputation prior to becoming part of the group gain the most from the positive label. By contrast, those with a relatively "good" reputation prior to becoming part of the group lose the most from the negative label. In both cases, the prototypical "good" and "bad" type in the groups - China and Greece, respectively - remain largely unaffected. Both results can be rationalized in a standard Bayesian framework in which the posterior update is a function of the degree of surprisingness of new information. Grouping a country with "bad" ("good") reputation to a positive (negative) group will affect investors' perceptions, while grouping a country with "bad" ("good") reputation to a negative (positive) group will reinforce their beliefs, thus resulting in a smaller (or non existent) updates of the priors. A final

set of results concerns the conditional effects of the grouping heuristic. Drawing from the extant literature in behavioral finance and political economy, I argue that the effect of grouping acronyms is larger when investors are more uncertain about the country's creditworthiness and when international capital is scarce. Empirically, I show this to be the case for the BRICS acronym.

1 Investors, Sovereign Borrowing, and Heuristics

How do financial investors assess a country's default risk? A long literature in economics and political science has suggested and empirically tested a plethora of factors as determinants of sovereign bond yields (e.g. Mosley 2003, Bernhard and Leblang 2006, Bechtel 2009, Fender et al. 2012, Afonso and Martins 2012). While some degree of consensus regarding the most important determinants of sovereign creditworthiness have emerged, scholars disagree on the each factor's relative importance. In the economics literature, authors are often interested in disentangling the relative contributions of global or systemic factors on the one side, and country-specific factors on the other side. Several papers find that systemic variables - such as the US stock markets, international liquidity patterns, and other proxies for global risk premia - are more related to a country's creditworthiness than local factors (Longstaff, 2010; Fender et al., 2012). Others have stressed the importance of country-specific variables, with a particular emphasis on budget deficits and government debt as well as the economic business cycle (Afonso, 2003; Ardagna et al., 2007; Afonso and Martins, 2012; Bernoth et al., 2012). Within political science, scholars of comparative and international political economy have also identified a variety of factors that contribute to sovereign creditworthiness at both the global and country-specific level. An additional useful distinction often advanced is that between the ability and the willingness to repay one's debt. In this framework, economic factors influence a country's *ability* to repay its obligations, while political considerations affect its *willingness* to do so. A particularly vibrant area of research has explored how political regime type affects politicians' willingness to repay (Schultz and Weingast, 2003; Beaulieu et al., 2012; DiGiuseppe and Shea, 2015; Ballard-Rosa et al., 2021). Others have emphasized the role of global constraints (Spanakos and Renno, 2009), constitutional and institutional checks (North and Weingast, 1989; Eichler, 2014),

cabinet formation negotiations (Bernhard and Leblang, 2006), financial supervisory transparency (Copelovitch et al., 2018), and reputation (Tomz, 2012). Unsurprisingly, electoral outcomes have received much attention (Bernhard and Leblang, 2002, 2006). Elections have attracted particular interest because they can generate new information about a country's future economic policy (Jensen and Schmith, 2005; Bernhard and Leblang, 2006; Brooks et al., 2021). The upshot of the literature is that investors dislike political events that generate uncertainty, which in turn can generate a disjuncture between economic fundamentals and market movements (Kelly et al., 2016).

As much as investors may want to avoid uncertainty altogether, some degree of uncertainty in economic, financial, and political matters is unavoidable. If so, how do investors cope with uncertainty? With respect to this question, an emerging sub-literature suggests that investors rely on heuristics to infer a country's future trajectory. More specifically, scholars have been interested in the role of categories and classifications (Fourcade and Healy, 2017) or what may be called the "classificatory regime of international finance" (Wansleben, 2013). For example, Gray (2013) shows how joining a "good" international organization sends a signal to investors regarding the country's "quality". Importantly, the "company that states keep" in international organizations has a differential effect depending on each member country's prior creditworthiness. Lumping together "good" and "bad" types in a single institution results in the former's loss and the latter's gain in reputation (Gray, 2013; Gray and Hicks, 2014). Following a similar logic, Grittersová (2014) shows how the market entry of reputable multinational banks can signal the creditworthiness of the host country to financial investors. Still others have been investigating how investors weight the risk factors about a given sovereign (or a group of sovereigns) to infer the default risk of *other* related countries, thus emphasizing the role of "peer effects" due to socially constructed categories. Following this line of reasoning, Brazys and Hardiman (2015) investigate how Ireland's discursive inclusion in the PIIGS acronym relates to the country's credit rating, while Brooks et al. (2015) show similar peer effects due to different country groupings — based on geography, credit ratings, and level of development - in the case of emerging markets. Finally, Linsi and Schaffner (2019) emphasize the scope conditions of investment heuristics showing that they are more likely to affect short-term equity investments rather than long term foreign direct investments.

What these studies have in common is the view that categorizations/classifications transcend their prima facie descriptive character to produce (and reproduce) value judgements about the categorized/classified. These judgements, in turn, may have tangible material consequences (Fourcade and Healy 2017). Why should simple categories work as a mechanism of market sentiment diffusion? After all, one may argue that groups may simply reflect underlying similarities in economic and/or political fundamentals. As noticed before, though, scholars and practitioners have often found a good degree of arbitrariness in these categorizations (O'Neill 2011, Blyth et al. 2002, Wansleben 2013). Moreover, the possibly objective origin of these classifications does not exclude the possibility that its continued use in the public sphere might have real consequences for the countries in questions by shaping the way we talk about - and thus think of - them (Brazys and Hardiman 2015). In this sense, group acronyms can be seen as heuristic tools in the "classificatory regime of international finance" that may shape, and not only reflect, investment patterns (Wansleben 2013).

Conceptualized as such, the use of heuristics can be linked to another strand of the literature, which emphasizes the performative role of ideas (Blyth, 2003, 2013; Chwieroth, 2009; Hafner-Burton et al., 2017). The accentuation (minimization) of perceived differences between (within) the group in order to make sense of an information-rich environment leads the way to the performative role of stereotypical categorizations and classifications (Taylor and Hamilton 1981). From this perspective, agents' reliance on heuristic devices is related to the need to overcome problems of incomplete information. They help translating unmeasurable "Knightian" uncertainty into quantifiable risks (LeRoy and Singell Jr 1987). This way, economic agents obviate the costs of collecting complete information and of solving complex decision making processes. In other words, these heuristics offer the promise of being "good enough" (Brooks et al. 2015) or, to use Simon's famous terminology, "satisficing" (Simon, 1990).

What have we learned from the extant literature? Several scholars have convincingly theorized about and empirically tested how categorizations/classifications can have a performative role. Nevertheless, these studies have rarely explored how the degree of *salience/strength* of such categorizations may matter. In this sense, the role of the media as a transmitter of categorizations that links the present reality to future expectations has been overlooked. This is particularly surprising considering the intimate and co-constitutive relationship

between media fads, public attention, and financial markets (Davis, 2006b; Shiller, 2015, 2020). As Shiller (1999) suggests: "investor's attention to categories of investments [...] seems to be affected by alternating waves of public attention or inattention" (p.1346). While categories and classifications may not originate in the media *per se*, the media's reliance on and repetition of these concepts is likely to affect the relative salience of certain categories within the financial classificatory regime. As one investor aptly put it, "There are all sorts of classifications and generalizations that get slavishly followed and which prevent people from looking at fundamentals. And the media is responsible for a lot of it. It's journalists who are most obsessed with coming up with catchphrases, or awards, or lists of 'who's hot'."[10] After all, while a given category may be either fixed (e.g. Asian countries) or slowly varying (e.g. Emerging Markets), its salience largely depends on how frequently it is discussed. Hence, the media is likely to be an important channel through which socially constructed categories affect financial markets (Shiller, 2015). Consider two prominent studies in this literature. In an early study, Mosley (2003) convincingly showed that sovereign bond investors utilize distinct indicators to assess the creditworthiness of developed and developing countries. In particular, investors tend to focus on a 'narrow' range of government policies in the former case, and a 'broad' set of indicators in the case of developing countries. More recently, Brooks et al. (2015) show how peer effects diffuse across countries that have common credit ratings, similar levels of market developments, and belong to the same geographic area. In both studies, a country either belongs to a category or it does not. The varying degrees of salience/strength of the categorization itself is not explored. Second, even those studies stressing the changing salience/strength of the categorizations have not dug much further in the specific causal mechanisms tying classifications to investors' decisions concerning the classified entity. Moreover, with the partial exception of Linsi and Schaffner (2019), the extant literature has focused primarily on the direct unconditional effect of heuristic categories on capital flows, while paying scant attention to the scope conditions of the relationship, i.e. when and why these heuristics matter the most, and the possibility of heterogenous effects among the different group members. Third, much of these studies have focused on emerging economies (Brooks et al. 2015; Gray 2013; Gray and Hicks 2014; Linsi and Schaffner 2019).[11] Since poorer, non-Western countries are most often the target of

[10] https://www.globaldashboard.org/2010/12/06/from-brics-to-pigs-whats-in-a-name/

[11] The major exception here is Brazys and Hardiman (2015) but they focus only on one country (Ireland).

categorizations (e.g. Third World, emerging economies, frontier economies, LDCs, BRICs etc), we still lack an empirical application to rich(er) countries. The recent European Sovereign debt crisis - with its stark North-South, creditor-debtor, PIIGS/non-PIIGS cleavages - offers fertile ground for an empirical application to the cases of well-known countries - about which information are not scarce and investors can be assumed to have well-defined priors (Gray and Hicks, 2014) Finally, and notwithstanding the richness of these previous studies, relevant questions pertaining the measurement of peer effects via written texts loom large. As I will argue later, extant measurement strategies are prone to mis-classifications, thus increasing the probability of mis-measuring the effect of interest (e.g. Büchel 2013, Brazys and Hardiman 2015, Linsi and Schaffner 2019).

2 Grouping Acronyms and Investment Decisions

Standard economic models assume that agents possess relatively strong computational capabilities. Unfortunately, such assumptions are at odds with empirical psychological findings (Conlisk 1996). This is not surprising considering that modern professional investors tend to cover large numbers of countries about which there might be too little or, somehow paradoxically, too much information to make it possible to have an in-depth knowledge of most of them. Interestingly, practitioners seem well aware of this fact. As the CEO of a large Investment Management Company notices: "it is very difficult even for sophisticated individuals to do a lot of research on the creditworthiness [of countries or companies]. I don't care how smart you are, it's just impossible for you to do that" (cited in Naqvi 2019).

By contrast, behavioral scholars argue that agents employ mental shortcuts and "rules of thumb" to optimize deliberation costs. These specific shortcuts are often referred to as *decision heuristics* (Kahneman and Tversky 2013). Such heuristics, while individually rational, may lead to poor aggregate decision-making as they involve "blunders" that would otherwise be avoided if agents were to engage in a full Bayesian updating (Stracca 2004). Within the decision heuristics identified in the literature, two are particularly relevant for this study: the *representativeness* and the *availability* bias. Originally proposed in a classic study by Tversky and Kahneman (1974), these (and other) heuristics help us understand how people reason under conditions of

uncertainty. I propose that, under these conditions, clearly connotated investment groups can affect expectations by constructing "analytical bridges to the near future" (Holmes (2009), p. 386). As these concepts and frameworks are disseminated through the media, they become socially shared, thus coordinating the actions of otherwise disconnected investors (Daniel and Hirshleifer, 2015). In what follows, I sketch a model of country risk evaluation based on investors' activation of the representativeness and availability heuristic due to the media's usage of grouping acronyms.

The two main actors are the media and quasi-rational investors.[12] They are both assumed to be driven by a desire to maximize their profits. On the one side, under conditions of uncertainty and imperfect information, boundedly rational investors often lack the time and resources for collecting the amount of information required for a full cost-benefit analysis. As such, they evaluate the probability that an element A belongs to a class B by examining the degree to which A is *representative* of B, i.e. how much A *resembles* B. Then, agents simply assign high (low) probability of A belonging to B if A is similar (dissimilar) to (from) B. In the context under study, investors compare the country of interest with a stereotypical "trustworthy" or "untrustworthy" type to quickly assess a country's creditworthiness. On the other side, the media employs catchy grouping acronyms such as PIIGS and BRICS to attract the readers' attention. These rhetorical devices act as "fundamental propagators [...] through their efforts to make news interesting to their audience" (Shiller (2015), p. 95). While often based on a kernel of truth, these acronyms' membership criteria need not to be consistent with objective political and economic conditions. The evaluative connotation of the grouping acronyms – positive (e.g. BRICS) or negative (e.g. PIIGS) – determines the qualitative nature of the class. It is either a "trustworthy" or "untrustworthy" class. In other words, we can think of the BRICS (PIIGS) class as "trustworthy (untrustworthy) type" and each country as a (possible) element. The contention here is that the discursive inclusion of a country in the acronym functions as a signaling mechanism about its type. The more the grouping acronym is being used, the more its constitutive members are discursively linked together. In turn, such discursive proximity will result in economic agents perceiving the member countries as an increasingly homogeneous class. The more a country is discursively associated to the group (i.e. the more the acronym is being used in the media),

[12] I use the words "boundedly rational" and "quasi-rational" interchangeably.

the more quasi-rational investors will be sensitive to developments in that country to infer the future policies and performances of the remaining members of the group. Then, quasi-rational investors will respond to this perceived homogeneity by updating their priors about one class member even if they receive new information about only the other class members.

While relying on such stereotypical reasoning is not without value at times (to state otherwise would be equivalent to assume that investors can never learn anything about a country unless the information concerns solely that country), it may also lead to sub-optimal outcomes. The main reason is that, while somehow informative, representativeness is independent of (thus, unaffected by) other factors that *should* influence our assessment of the probability of interest, such as the baseline probability of the event of interest (in this case, the perceived probability of default of any individual element of the group) and sample size (in this case, n cannot be greater than four in order to infer something about the remaining member of the group). As several studies studies have shown, the neglect of prior baseline probabilities and insensitivity to small sample size lead agents to over-rely on representativenss in their decision making process (Tversky and Kahneman, 1974; Griffin and Tversky, 1992).

A second psychological process, also widely documented in the literature, is likely to magnify the effect of representativeness. This is the availability heuristic (Tversky and Kahneman, 1974). Simply put, human beings tend to assess the probability of an event by the easiness with which examples of its occurrence can be brought to mind, i.e. are available. The implication to our case is straightforward. As element A (e.g. India or Italy) becomes more and more discursively associated to group B (the BRICS or PIIGS), the easiness with which - and hence the likelihood that - economic agents will think of B when they are exposed to A increases. Since the remaining countries (A^C) are also members of B, actors will update their priors about the rest of the group as well. In other words, as the grouping acronym catches on, its sheer repetition in relation to the member countries increases the likelihood that actors would think of the "trustworthy/untrustworthy" type upon being prompted to think of any individual member. That "trustworthy/untrustworthy" group type would then be translated in a favorable/unfavorable updating to every member of the group according to the representativeness heuristic. The mechanism suggested here has a close analogue in the literature on branding and advertising.

Indeed, it is well-known that recall ease affects consumers' estimates of perceived risk. Repeated exposure to the same brand makes a product easier to recall and does, in fact, increase the likelihood that we will purchase it from that brand (Folkes, 1988). Indeed, studies have found clearly positive brand images to be associated with better risk-return perceptions beyond what a rational assessment would predict (Jordan and Kaas, 2002). Similarly, empirical studies in financial economics have found that, when facing multiple alternatives, investors are more likely to consider options that attract their attention and disregard options that do not (Barber and Odean, 2008). In our case, the more the other countries are discussed in terms of a group, the more information about such countries will be viewed as somehow informative of the other group members. While the availability bias by itself is neither a necessary nor a sufficient condition for investors to update their priors about one member of the group upon receiving information about some other member, it is likely to facilitate the process by increasing the probability that the acronym would quickly come to mind.[13]

The theory sketched above, while novel in its application to sovereign entities, is consistent with well-known models constructed to explain stock market developments that are apparently at odds with the predictions of the Efficient Market Hypothesis (EMH). For example, Griffin and Tversky (1992) construct a model to explain the pattern of under- and over-reaction.[14] In their framework, agents update their beliefs based on both the *strength* and the *weight* of the evidence. Strength refers to aspects of the evidence such as its salience and extremeness, while weight refers to its statistical informativeness. The latter is clearly related to the previous mention of the small sample bias underlying the representativeness heuristic. In particular, Griffin and Tversky (1992) show how people tend to violate Bayes' theorem by focusing too little on the weight of the evidence and too much on its strength. More specifically, under-reaction (conservatism) tends to arise when actors face evidence that has high weight but low strength. Unimpressed by the low salience of the evidence, actors react only mildly. By contrast, when the evidence is of the high-strength/low-weight variety, actors over-react in a manner consistent with representativeness. In both cases, the reaction is present - and in the right direction, given the evidence - but is either exaggerated or attenuated relative to that of a fully Bayesian actor. Moreover, such psy-

[13] One possible observable implication of the availability heuristic is that the strength of relationship between the peer acronym and countries' creditworthiness may time-varying as a function of how established it is in the media. This conjecture is left for future research to explore.

[14] Technically, they are concerned with under and over-confidence more generally. Nevertheless, Barberis et al. (2005) - to be discussed shortly - show that it can be applied to under and over-reaction in financial markets more specifically.

chological sub-rational outcome is not minimized by expertise, experience, sophistication and, more generally, any of the traits associated with human capital (Daniel and Hirshleifer, 2015; Shiller, 2015). Indeed, experimental studies have found not only that such behavior is also present among experts, but that over-reaction is actually *more* likely among experts than novices as the overall uncertainty of an event increases Griffin and Tversky (1992). The connection to the present study should be straightforward. In general, news about a given country (say, X) are highly salient to investors in relation to their decision to invest in (or disinvest from) *that* country, but should have relatively low informativeness about *other* countries (say, Y). If, for some (possibly exogenous) reasons, investors employ a mental map that connects X to Y, though, they will over-rely on the information about X to update their priors about Y as well. Of course, as Griffin and Tversky (1992) notice, in practice the difficulty here is to empirically measure the informational content of various combinations of strength and weight. In a later section, I will delineate a simple procedure to select informational evidence that is relatively high (and varying) in strength and low (and fixed) in weight, thus allowing us to test the over-reaction part of the model.

Finally, it is worth noticing the theory underlined above also resonates with the anecdotal views of market participants. Over the years, investors have warned that such acronyms can affect the market in an undesirable fashion. As Gerard Fitzpatrick, senior portfolio manager at Russell Investments in London, succinctly put it "These acronyms [...] create herd behaviour." Similarly, Jerome Booth, former Head of Research at emerging market asset manager Ashmore Group plc, criticized the proliferation of investment acronyms, suggesting that "the problem with all these acronyms is they're short-cuts. They save you the effort of thinking. Thinking is hard work."[15]

Overall, the above discussion suggests the main hypothesis of this study:

- **Hypothesis 1**: An increase in the *implicit association* to the *positive* (*negative*) BRICS (PIIGS) label will lead to a decrease (iincrease) in the country's perceived riskiness.

Moreover, while the countries under study share some similarities in terms of economic and political characteristics - hence why they were grouped together in the first place - the argument proposed here suggests

[15]Both available at https://www.globaldashboard.org/2010/12/06/from-brics-to-pigs-whats-in-a-name/

that this acronym has also obfuscated systematic intra-group differences. As such, it is unlikely that the reputational effects associated with the two acronyms would affect all members in the same way. In fact, the proposed theoretical framework implies that new evidence - in the form of increased association with a trustworthy/untrustworthy type club - interacts with economic agents' priors regarding each country's reputation. For a country with a relatively "bad" ("good") reputation, association with the BRICS (PIIGS) group amount to "surprising" news, while for a country with a relative "good" ("bad") reputation, the association is likely to reinforce and confirm prior beliefs (Tomz, 2012). Hence, for the BRICS the greater gains should accrue to those members that are perceived relatively *less* trustworthy to begin with. By contrast, for the PIIGS the greater loss should accrue to those members that are perceived relatively *more* trustworthy to begin with.nThis logic underlying this "reputational transfer" has been proposed before. For example, Gray (2013) shows how when "good" and "bad" type join forces in a single international organization, reputational gains and losses are distributed according to each member's prior perceived creditworthiness.

While it is difficult to unambiguously rank each group's member's reputation a priori, we can look at established macro-financial indicators to suggest a tentative ranking. Table 1 below offers a intra-BRICS comparison of the average of four key variables. The debt and deficit ratios - averaged across the 2004-2020 sample - proxy the country's fiscal capacity, its ability to repay its debt.[16] The third variable records how often the country defaulted on its monthly debt obligations in the twenty years before the BRIC(S) acronym was coined. The data comes from Asonuma and Trebesch (2016). The final row shows the average Fitch's credit rating score (weighted by the number of days) for each country before entering the sample (2010 for South Africa and 2004 for the rest) after converting the original letter-based credit rating scores into numerical values (1-21). Higher scores indicate higher creditworthiness. The past frequency of default as well as the the credit scores before the establishment of (or joining) the group are meant to capture the country's historical reputation.

In macroeconomic terms, Brazil and India clearly stand out relative to the rest of the group, with the

[16]If my argument is correct, there might be some endogeneity here since the BRICS acronym might have affected its members' interest rates which, in turn, may affect a country fiscal capacity. Unfortunately, I do not have comparable and consistent data for all five countries from the 90s. At any rate, it seems unlikely that a marginal decrease in interest rates would be enough to change the ranking of the table.

highest and second highest debt and deficit ratio, and with the lowest and second lowest credit rating score, respectively. Brazil's chequered macroeconomic history is also reflected in five defaults in the 80s and early 90s. These two countries are good candidates for reaping the reputational gains of membership. Russia is an interesting case insofar as it displays remarkably sound macroeconomic data, with the lowest debt ratio in the group and a budget surplus. Nevertheless, three reasons point at Russia as a net reputational winner. First, the country's relatively appealing economic situation is the result of Russia's massive energy sector more than sound macroeconomic policies. Second, the country's perceived creditworthiness has suffered mostly due to geopolitical reasons. at least since the late 2000s. Finally, the country's historical reputation in financial markets is as bad as, if not worse than, that of Brazil. This is reflected in a low credit score and four monthly default episodes in the late 90s, likely to be more salient in investors' minds due to their recency (Shiller, 2015). Overall, Russia is also likely to be a net winner from the BRICS-induced reputational transfer. By contrast, it is hard to suggest clear-cut expectations regarding the group's late-comer, South Africa. On the one side, the country's macroeconomic indicators place South Africa in between Brazil/India and China in terms of fiscal capacity. Although this may suggest the possibility of some reputational gains, neither the debt nor the deficit can be characterized as out of control. Indeed, its relatively negative macroeconomic situation does not seem to be reflected in greater riskiness. South Africa had the second highest credit rating score just before becoming a BRICS. Its only default - in 1992 - was relatively inconsequential and likely discounted as the result of the post-apartheid political transition.[17] Finally, Beijing stands on its own. With relatively low debt and deficit figures, and no default episode, investors tend to view Chinese long term bonds as particularly safe. Indeed, it was the country with the highest credit score in 2003. Clearly the most economically dynamic country and a raising world power, China is the accepted leader of the group, the "colossus within the group" (Cooper 2016, p.12). As such, it is the stereotypical "good" type, i.e. the least likely to be affected by the BRICS acronym due to the already positive perceptions regarding its creditworthiness.

[17] Other datasets do not code this event as a default, e.g. Reinhart and Rogoff 2009.

Table 1: Country by Country Fiscal Capacity (2004-2020 Average), Number of Defaults and Credit Rating Scores (prior to 2004 or 2010)

	BRA	RUS	IND	CHI	SAF
Debt-to-GDP Ratio	62.67	12.29	71.11	39.26	45.00
Budget-to-GDP Ratio	-5.14	0.84	-4.63	-2.15	-3.91
Defaults	5	4	0	0	1
Fitch Credit Rating Score	7.25	10.48	10.04	15	14.75

We can do a similar analysis for the PIIGS. Here, though, the historical number of defaults is a meaningless indicator since none of the five countries ever defaulted in the two decades prior. As such, I look directly at the spread.[18] In addition, I look at the debt and government budget statistics in the pre-crisis period.

Table 2 below provides a familiar picture. Greece and Italy top everyone else in terms of public debt. Spain and Ireland, by contrast, entered the crisis with levels of public debt lower than the 60% threshold enshrined in the 1992 Maastricht treaty. Portugal is in between the two pairs in terms of debt burden, although its deficit is larger than that of Italy. The countries' fiscal stance is by and large mirrored by their reputation vis-á-vis investors. The ranking is the same across both indicators: Greece has the highest spread and the lowest credit rating, followed by Italy, Portugal, Spain, and Ireland. Overall, Greece can be easily seen as the stereotypical "bad" type. It is the least likely country to be affected by the PIIGS acronym due to its already negative reputation. Ireland and, to a lesser extent, Spain stand out in terms of good reputation prior to the crisis. The two countries seem to be the most likely candidates for PIIGS-induced negative reputational transfer. Portugal also seems a likely candidate for the negative reputational transfer, albeit to a slightly lesser extent than Spain and Ireland. Finally, Italy is an interesting case. It is the second worst country in the eyes of investors, has a massive debt, and a sizeable (but not ballooning) government deficit. Nevertheless, with the exception of public debt, the other indicators are much closer to those of Ireland, Portugal and Spain rather than the equivalent indicators for Greece. As with South Africa, my priors about Italy are not as strong as they are for the rest of the group. However, across most dimensions, Italy appears to align more closely with the PIS than with the G in the acronym PIIGS. Whether this distinction is sufficient to justify a reputational transfer is ultimately a

[18] In the PIIGS case, I use the data prior to the launch of the euro (2002) to minimize the homogenizing effects of the monetary union on interest rates and credit rating scores. The ranking remains the same if we look at the full pre-crisis data. Unfortunately, I do not have the equivalent spread data for the BRICS in the 90s.

question for the data to resolve.

Table 2: Country by Country Fiscal Capacity (pre-2009 Average), Spread and Credit Rating Scores (prior to 2002)

	PRT	ITA	IRL	GRC	ESP
Debt-to-GDP Ratio	65.0	108.0	31.0	105.0	46.7
Budget-to-GDP Ratio	-4.61	-3.05	-0.04	-7.14	-0.09
10 Year gov Spread	1.68	2.02	0.65	6.32	1.64
Fitch Credit Rating Score	18.5	18.1	20.4	13.4	19.3

Aside from the possibility of heterogeneous effects across group members, the above discussion hypothesizes an *unconditional* effect of the BRICS/PIIGS heuristic on financial investors. The (informal) model of country risk evaluation that I have proposed so far shares some similarities with Rational Inattention (RI) (formal) models proposed in the decision making and economics literature (Sims, 2003; Maćkowiak et al., 2023). In fact, important topics explored within this analytical framework concern financial phenomena, such as why financial contagion can exceed the co-movements of similar assets (Peng and Xiong, 2006; Mondria et al., 2010). In essence, this class of models aims to explain how cognitively limited individuals simplify and assess available information. It is, in a sense, a "behavioral model with a special discipline" (Maćkowiak et al. 2023, p.254). Nevertheless, RI models and the one I am proposing here are conceptually different. While mistakes (i.e. deviations from full rationality) are systematic also in RI models, an agent can always choose to arbitrarily reduce the errors by working harder on a given decision, albeit at some cost. The key points is that the agent *chooses* which information to look at and, by extension, which information to ignore by optimizing its utility subject to the cost of gathering information and cognitive constraints (in addition to the usual classical assumptions, such as a fixed budget constraint). Hence, RI models the formation of *optimal* heuristics and allows agents to choose which ones to follow.

By contrast, the behavioral interpretation that I propose here suggests that agents do *not* choose to focus on the grouping acronyms. Rather, they draw their attention to some investment opportunity (e.g. Brazilian bonds) and, upon selecting what media reports to consume about Brazil's economic and political outlook, they will be prompted to update their beliefs about other countries to the extent that the latter are tied to the former via a grouping heuristics. This line of thinking seems reasonable considering that, for most individuals, we know

that the reliance on heuristic is automatic and usually precedes conscious information analysis (Payne et al., 1993; Itzkowitz and Itzkowitz, 2017). Moreover, the automaticity of heuristic thinking is particularly strong in the case of stereotypical thinking, a concept intimately tied to the representativeness heuristics (Chen and Bargh, 1997). After all, the notion that a rational(ly inattentive) actor would *consciously* gather information about, say, Brazil to make inferences about Russia seems far-fetched.

Overall, both models suggest that agents will rely on heuristics due to cognitive limitations, although they differ in the degree to which agents can control the process. The (unconditional) observable implications are similar and, absent a laboratory experiment, the underlying degree of human agency cannot be ascertained. Nevertheless, it is possible to exploit a broader range of predictions to test the two models. Recall that, in essence, a RI model is a signal extraction model augmented with a loss function to account for costly information under the assumption of cognitively limited agents. As such, scaling up the utility function or down the cost of information implies that agents become more responsive to the task at hand. The cost of information is mostly a function of technology and is unlikely to play a role in the short term. By contrast, the utility function can more promptly change as a function of the external environment. For that to happen, RI models explicitly refer to changes in the stakes and in the overall level of uncertainty in the environment (Sims, 2003; Maćkowiak et al., 2023). Increasing the stakes of the decision leads agents to allocate more attention to the information related to the decision, albeit at the cost of diverting attention from other issues. This effect occurs because higher stakes raise the potential cost of making a suboptimal decision, making the benefit of acquiring more precise information outweigh the ”cost” of paying attention. Likewise, increases in uncertainty lead agents to adjust their attention allocation towards resources that can reduce uncertainty most effectively, i.e. information about the task at hand. In both cases, agents will increase responsiveness, while decreasing the reliance on sub-optimal heuristics (Barberis and Thaler, 2003). In other words, investors rely on rules of thumb only in “good” times, i.e. when they can afford “to be roughly right [rather] than precisely wrong” (John Maynard Keynes, attributed). If and when the situation requires it, i.e. during “bad” times, agents may be more cautious and base their assessment on a country’s fundamentals rather than rules of thumb (Çepni et al., 2020). Thus, rationality may obtain “when it counts” (Thaler 1987, p. 156) and rational inattention models can be seen as

"two-level" models of cognition (Maćkowiak et al., 2023). Some choices are made in an intuitive and heuristic fashion (System 1), while others are slow, deliberative and more rational (System 2) (Kahneman, 2011). After all, reliance on System 1 may not matter as long as agents can shift to System 2 when it is truly needed.

By contrast, while acknowledging the heterogeneity of heuristic use, behavioral reasoning suggests the opposite conditional relationship. According to this view, individuals default towards heuristic use when they are under pressure (Goodie and Crooks, 2004; Itzkowitz and Itzkowitz, 2017). During periods of uncertainty and high stakes, rational optimization becomes more complex, stressful, and time-consuming and the opportunity cost of relying on sub-optimal decision strategies decreases (Büchel 2013). Possibly due to the physiological effects of stress, several asset pricing studies have found that behavioral biases become more, not less, important during periods of uncertainty (e.g. Stracca 2004; Rigotti and Shannon 2005).

Uncertain, high-stakes conditions may also increase reliance on availability (choosing based on what is most memorable or recent) and representativeness (judging based on perceived similarity to other cases). These heuristics can feel intuitive and cognitively less demanding, making them appealing under stressful or uncertain conditions. Rather than incentivizing a more careful assessment of fundamentals, uncertain, high-stakes conditions can generate a disjuncture between fundamentals and market movements (Brooks et al., 2021). Reliance on heuristics can feel intuitive and less demanding, making them appealing under stressful and uncertain conditions that would otherwise create cognitive overload. As such, under these circumstances, association with a "good" type group should be particularly valuable, as it provides its members an extra premium in perceived creditworthiness. By contrast, association to a "bad" type group should be avoided at all costs. The underlying logic here is consistent with recent findings in the "democratic advantage" literature. For example, Ballard-Rosa et al. (2021) find that the credibility gains from "good" institutions increase as international capital becomes more scarce (i.e. stakes are higher).

Hence, while we should bear in mind the limitations of assessing psychological arguments based on observational data, we can design a test to discriminate between the two interpretations. As such, I test the following hypotheses:

- **Hypothesis 2a (rational inattention)**: The effect of an increase in *implicit association* via the acronyms

decreases as uncertainty increases.

- **Hypothesis 2b (behavioral)**: The effect of an increase in *implicit association* via the acronyms *increases* as uncertainty increases.

- **Hypothesis 3a (rational inattention)**: The effect of an increase in *implicit association* via the acronyms *decreases* as stakes increase.

- **Hypothesis 3b (behavioral)**: The effect of an increase in *implicit association* via the acronyms *increases* as stakes increase.

3 Research Design

3.1 Measurement strategy

Scholars working at the intersection of finance and communication usually employ one of two measurement strategies - which we could label as "general" and "targeted", respectively - to retrieve information about the entity of interest (Büchel, 2013). Neither strategy is satisfying for our purposes. I will refer to the entity/country about which one aims to retrieve information as the *target*.

Some authors simply look at the frequency with which the token(s) of interest are used, without differentiating between the *target* entity and the other members of the group. For example, this is the approach in the studies of Brazys and Hardiman (2015) and Linsi and Schaffner (2019), who focus on the PIIGS and BRIC acronyms, respectively. The weakness of the "general" approach is that it results in a mix of information about the target country and the other members. It is then difficult, if not impossible, to distinguish between genuine "peer group" effects from standard informational effect of news media (i.e. the effect of articles about Spain China on Spanish bonds). Information about the target country's "good/bad" policies - rather than the "good/bad" implicit association - might be affecting perceptions of creditworthiness, thus casting doubts on the claim that *implicit* association matters.

By contrast, the second approach is to restrict the focus on the target by imposing an explicit set of

search criteria. Lacking an optimal and general strategy, different criteria to minimize the probability of misclassification have been proposed. Some scholars have opted for casting a wide net - such as Breeze (2014)'s search for one single mention of both "Spain" and "crisis" - while other scholars have used more restrictive criteria. For example, Liu (2014) requires that the headline contains the country name and that the article mentions either "sovereign" or "debt" at least five times. Similarly, Büchel (2013) searches for politicians' last names and more than one crisis-related key word (e.g. "Tsipras" and "crisis"). Other prominent works in finance also display similar variations in the search query criteria (Tetlock, 2007; Ahmad et al., 2016). This "targeted" approach is equally unsatisfying as it risks incorporating information about the other countries. Even if an article including the words "Putin" and "Russia" multiple times is *mostly* about Russia, it might not be *only* about Russia. As such, it may still be informationally relevant with respect to other countries in the group, thus still violating the assumption of *implicit* association.

Keeping the above discussion in mind, I propose an alternative strategy, which may be labeled as "negative". More specifically, I search for news articles on the Factiva database that *cannot* be about the target country, thus blocking the informational channel mentioned above. I do so by querying the following search string:

("BRICS/PIIGS" or "BRIC") not "Target Country Noun" not "Target Country Adjective" not "Target Country Population" and("Other Country 1" or "Other Country 2" or "Other Country 3" or "Other Country 4")

I undertake several additional steps. I restrict the search to articles written in English to make sure that the acronyms are correctly searched for.[19] Moreover, this avoids possible selection issues since the Factiva database contains a comparatively smaller number of non-English written newspapers, which might be systematically different from the ones left out. Initially, I do not distinguish between financial and non-financial sources as the former represents a small fraction of total papers. In the Appendix, though, I show that the results are

[19]For example, even after transliteration, BRICS in Russian is often spelled as BRIKS.

substantially stronger if I rely only on financial newspapers. Nevertheless, I select the following subject options: "Commodity/Financial Market News", "Corporate/Industrial News", "Economic News" and "Political General News". Then, I exclude duplicate texts, as identified by Factiva itself under the "similar duplicates" option. I take care to use different spellings when needed (e.g. Brazil and Brasil) and to exclude articles containing the words "brac", "bracs" and "abrac" which would retrieve extraneous articles (e.g. "bric-a-brac").[20]. I repeated the above-described strategy three times, varying the required frequency of the BRICS/PIIGS terms in each article. I request the acronym to be present at least once ("BRICS1/PIIGS1"), then twice ("BRICS2/PIIGS2"), and finally three times ("BRICS3/PIIGS3"). The volume of articles then aggregated for each unit of time (monthly for BRICS, daily and monthly for PIIGS). After the search was complete, I randomly selected 500 articles to make sure that the query was successful.[21] The series starts in January 2004 and ends in March 2020 for the BRICS and from October 2009 to the end of 2015 for the PIIGS.[22] South Africa enters the series in 2010. In the main body of the paper, I will focus on the BRICS2 and PIIGS2 measures, which offer the best balance between retrieving a sufficient number of articles and displaying the acronym prominently enough to be noticed.[23] Fig. 8 shows the BRICS2 monthly series.[24]

As mentioned above, the "general" and "targeted" strategy are not useful for capturing the concept of interest. Nevertheless, selecting articles that way may help in two ways. First, the resulting series would be a proxy for the informational channel. Second, it helps controlling for how much each country is mentioned in the media. As such, I follow a "targeted" strategy and also collect the volume of articles containing both the acronyms and the target countries at least twice. This also helps verifying that the two series (which I refer to as *NO Target* from the "negative" strategy and the *YES Target* from the "targeted" strategy, respectively) are capturing different concepts. Fig. 9 below shows the PIIGS2 daily series for each country, with the blue and red bars representing the volume of YES Target and NO Target articles, respectively.

[20]Notice that I made several attempts to include article about PIGS (one I only) as well, but a non trivial amount of articles about the pork market in Southern Europe remained. Hence, I elected to focus only on the final form of the acronym (with two Is)

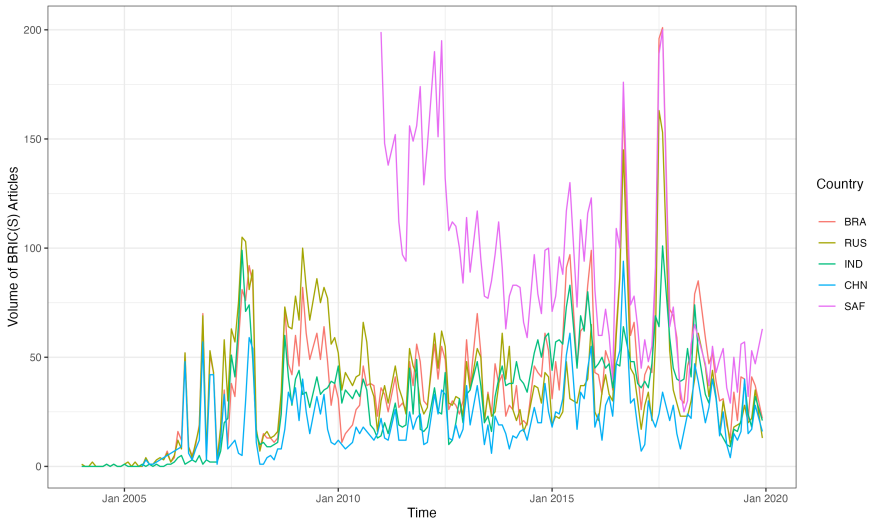
[21]The only issue was one instance where the article was classified to be not about India, although New Delhi was mentioned. I excluded it.

[22]It is only after the second Goldman Sachs report published in October 2003 that the acronym becomes truly widespread in the media (see Fig. 1). Likewise, I focus on the full Eurozone crisis period since the terms was not used before.

[23]The results are substantively the same regardless of the measure used. The average correlation between the three BRICS measure is over 0.90, and for PIIGS it is over 0.85.

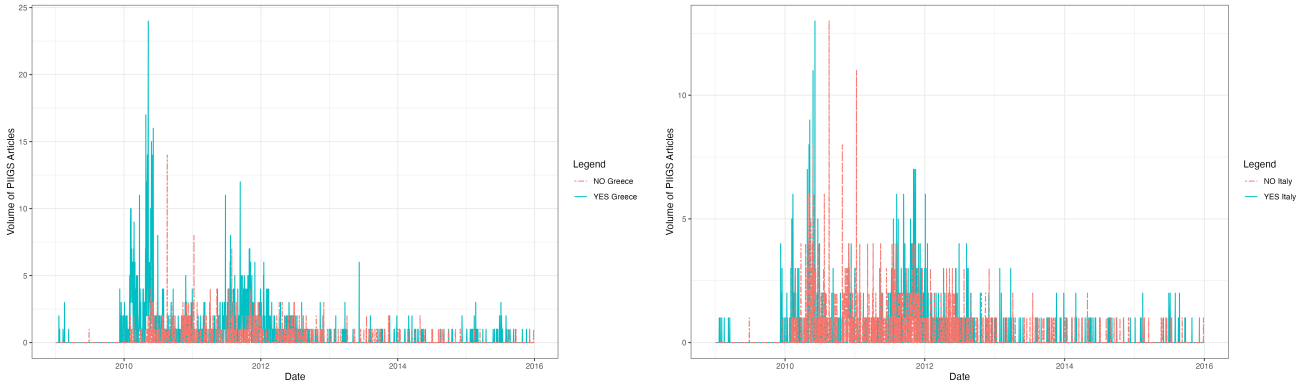
[24]To make the figure more readable I exclude the observations when the BRICS summit is taking place. The spikes in the graph would make it hard to appreciate the month-to-month variation during normal periods. I will control for the summits in the empirical models.

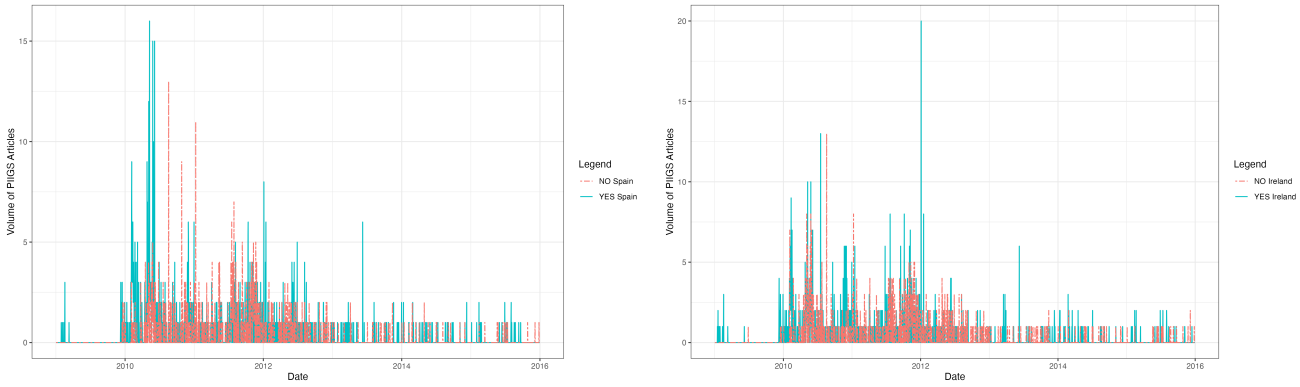
Figure 8: BRICS Article Series



Overall, my strategy greatly minimizes the possibility of measurement error. The articles retrieved are, by construction, *not* about the target country. This is arguably the most conservative search criterion one could use, as it even excludes all articles that use the acronym followed by the parenthetical *"(Brazil, Russia, India, China, South Africa)"*. While a country mentioned only once in parenthesis would be unlikely to be the main topic of the article, it would cast doubts on the assumption that the news articles contain no explicit association between the target country and the other members.

Figure 9: PIIGS Article Series





To relate this strategy to the previous theoretical discussion, this method ensures a fixed, low informativeness (weight) with respect to the target country since it is never mentioned in the text. At the same time, this strategy allows for varying degrees of strength of the signal captured by the volume of articles using the acronym per unit of time. In the case of Brazil, for example, the articles must be mentioning at least one other BRICS member country (Russia/India/China/South Africa). As such, the articles are likely to be salient to investors regarding the political-economic trajectory of Russia/India/China/South Africa, respectively. Nevertheless, since Brazil is never mentioned in the texts, the articles must have low informativeness about the prospects of the Brazilian economy.

Overall, the proposed measurement strategy allows us to investigate the acronym's "peer effect" using sources that are by construction only implicitly related to the target country. This way, the empirical results can be interpreted as evidence that the target country is viewed as "virtuous/guilty by association." One last step is needed to verify that the two acronyms do indeed have a negative or positive connotation. To do so, I exploit the *YES Target* articles and compare the tonality of the paragraphs that contain the acronyms to the tonality of the remaining paragraphs within each article, after controlling for time fixed effects. To capture tonality in written texts, I rely on a dictionary-based approach. The use of a dictionary is a classic example of a "bag-of-words" technique, where we simply tally the occurrences of words in a predetermined lexicon. The first measure of tonality relies on the Lexicoder Sentiment Dictionary (LSD), an automated content analysis tool, thoroughly explained in Young and Soroka (2012). However, as Loughran and McDonald (2011) highlighted, general

sentiment dictionaries face significant limitations in economic texts since many terms classified as positive or negative from a general or psychological standpoint may not carry the same implications in an economic context. Although initially developed to analyze financial texts in the private sector, the LM dictionary is widely recognized as a valid measure in sovereign bond markets studies (Liu, 2014; Consoli et al., 2021). In addition, commentators have often noticed how the European crisis gave rise to a "morality tale" starkly dividing virtuous Northern European countries on the one side, and spendthrift Southern European ones on the other side. A "morality tale" ensued, starkly dividing virtuous Northern European countries on the one side, and spendthrift Southern European ones on the other side (Matthijs and McNamara, 2015). Nones (2024) has recently provided empirical backing by showing how the media framing of Greece turned increasingly (negatively) moralistic after the Fall 2009. As such, in the PIIGS sample I also compare the paragraphs' moral loading based on the combined dictionary developed in Nones (2024). After estimating the positive and negative (moral) loadings of each paragraph, the sentiment score is calculated as following: 100 * (positive words – negative words) / total word count. As we can see in Table 3, it is indeed the case that the tonality of paragraphs with the acronym is systematically different relative to the paragraphs that do not mention the acronyms, controlling for article and month fixed effects. PIIGS (BRICS) paragraphs tend to have a more negative (positive) tone after accounting for article and month fixed effects.

Table 3: OLS Models - BRICS/PIIGS Pragraphs

	BRICS - LSD	BRICS - LM	PIIGS - LSD	PIIGS - LM	PIIGS - Morality
Acronym in Paragraph	0.037**	0.051**	-0.133***	-0.148**	-0.033**
	(0.015)	(0.022)	(0.042)	(0.039)	(0.015)
Article FE	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes	Yes
N	1,287,600	1,287,600	37,676	37,676	37,676

Note: Robust Standard Errors. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$}

3.2 Variables Selection

As a dependent variable, I use the 10-year government bond yield spread from the equivalent US bonds yield. Unlike short-term bonds interest rates, long term bonds are more market driven and less affected by the central bank's monetary policy, thus making them an ideal indicator of a country's creditworthiness (Mosley, 2003).

These variables capture the expected losses from default as well the risk associated with the possibility of unexpected losses (Remolona et al., 2007). Through the pricing of sovereign risk, the bond market "passes a daily judgement on the credibility of [the government]" (Ferguson (2008), p.69). Higher/lower yields indicate a higher/lower perceived likelihood of default, thus reflecting the investors' perception of a government's reputation. Both variables are widely used in the analysis of sovereign credit risk (Mosley, 2003; Grittersová, 2014). The independent variable is the volume of article containing the acronyms, as described previously. Throughout the paper, I show the results using the volume of articles that contain at least two mentions of the acronym.[25]

The vectors of control variables differ for the two acronyms, although some core control variables remain the same. First, a host of domestic political and economic variables are well-known to contribute to a country's creditworthiness and appear in both samples. The state of the economy and domestic macroeconomic factors are the principal country-specific variables affecting sovereign risk (Cantor and Packer, 1996; Grossman and Van Huyck, 1985). As such, I control for the *total level of debt as % of GDP* (to proxy for debt sustainability), the level of GDP (a proxy for *Economic size*) and of GDP per capita (to capture *Economic development*), *economic growth* (to proxy for the business cycle), *inflation*, and two variables capturing the "twin deficit", the *current account balance* (the sum of net exports of goods and services) and the *government budget balance* (the difference between a government's revenues and its spending). Finally, I include the volume of *YES Target* articles. Notwithstanding the weaknesses underlined in the measurement section, the *YES Target* allow us to block the "informational channel" of news articles. On a given day, we might have the same number of NO articles and YES articles. Excluding the latter would inflate the coefficient of the former as it would not include part of its effect. I also control for Fitch's *credit rating scores*. I follow standard practice in the literature and turn the letter grades into a numerical score (1-21) (Afonso and Martins, 2012).

The remaining domestic control variables differ slightly across the two samples. For the PIIGS sample, I also control for the *unemployment rate*, given its importance during the crisis (Beirne and Fratzscher, 2013). Moreover, I include a binary indicator for each *bailout* announcement. In the BRICS case, instead, I control

[25]This measure offers the best balance between precision and coverage. The Appendix contains the results using the volume of articles using the acronym at least one and at least three times.

for *foreign currency reserves*, a more informative economic indicator for emerging economies. I also include a measure of *capital account openness* (the Chinn-Ito index), which may influence expectations about pro-market governments' policies (Brooks et al., 2015). Given the voluminous literature on the "democratic advantage" (Schultz and Weingast, 2003; Beaulieu et al., 2012; DiGiuseppe and Shea, 2015; Ballard-Rosa et al., 2021), I also control for political *regime type* as measured by the Polity2 score.[26] These controls would be meaningless in the European sample as they do not vary across country. Finally, I also include a dummy for the BRICS ministerial meetings (*Summit*), which tend to generate a spike in the articles using the acronym.

Second, I control for global/regional factors that are well known determinants of sovereign bonds interest rates. In both samples, I include the *VIX* - a measure of global volatility risk premium - to proxy for general risk aversion and global uncertainty (Longstaff et al., 2011). I also include a measure of contagion, to be discussed shortly. The rest of the global/regional variables are more context-specific. In the BRICS sample, I control for the *exchange rate* via-à-vis the dollar to capture exchange rate risk (D'Agostino and Ehrmann, 2014). Since all five countries are exporter of coal, crude oil, and natural gas, I follow Brooks et al. (2015) and include an index of world prices of *energy commodities* (which includes all three). Moreover, I construct a *financial crisis* dummy that captures currency, sovereign bond, or banking crises (Laeven and Valencia, 2018).[27] In the PIIGS sample, I follow the empirical literature and also rely on the *spread between Moody's Seasoned Baa and Aaa corporate bond yield* as a risk aversion proxy (Codogno et al., 2003; Liu, 2014). Moreover, as a robustness check, I will augment the model with a measure of central bank communication. In particular, I use the *KOF measure of monetary policy*, which translates ECB President's forward-looking statements on price stability into a quantitative index that contains information about the future course of monetary policy citepde2008effect. The main reason to use the KOF measure - rather than a more standard measure of monetary policy - is that it allows for a clearer temporal ordering (more on this later). As mentioned before, I will also rely on a daily dataset in the PIIGS case. This raises an issue due the different time frequency of the variables. When needed, I follow a standard interpolation technique, i.e. carrying forward the previous observation. This choice is consistent with the assumption that economic agents update their information about a country's

[26] The capital account openness and democracy score end in 2019. I carry the last value on to complete the series.
[27] I include them all together because the frequency of each crisis individually is very low.

creditworthiness as soon as the information becomes available. Results do not change if I use a linear or spline interpolation (available upon request). Furthermore, all models using the daily dataset also include an exogenous dummy for *Friday* to account for the "Friday effect" detected in the finance literature (Shleifer, 2000). Articles published in the weekends are assigned to the last working business day (usually, Friday).

Importantly, interpreting the *implicit association* effect as financial contagion necessitates to control for alternative channels through which contagion may take place. Indeed, as noted in Kaminsky and Reinhart (2000) classic study on financial contagion, true contagion "arises when common shocks and channels of potential interconnection are either not present or have been controlled for" (p. 146). In our case, a rise in the other members' yields may increase the number of articles using the acronym, while at the same time directly affecting the target country's yields. In the main analysis, I take the standard approach of controlling for the average yield of the other member of the group (Brooks et al., 2015; Edwards, 1983; Beirne and Fratzscher, 2013). Given that confidence in my empirical results rests on how well I control for other channels of contagion, I employ several alternative measures to block this path. Section 6 and the Appendix provide a full discussion of these alternative contagion measures.

Finally, I need to select the appropriate variables to test hypotheses 2 and 3. To capture global uncertainty, I rely on the already mentioned VIX, a measure of the implied volatility of SP 500 index options (Longstaff, 2010; Brooks et al., 2021). Higher scores indicating an increase in uncertainty. As a robustness check, I use the global risk factor estimated by Miranda-Agrippino and Rey (2020).[28] The measure reflects both aggregate volatility of asset markets and the time-varying degree of risk aversion in the markets. To capture a higher stakes environment, I rely on the interest rate on US ten-year constant maturity Treasury bonds, a common measure of global liquidity constraints. It is well-known that contemporary global finance generates boom and bust capital flow cycles (Bauerle Danzman et al., 2017). Indeed, the notion that developing countries are constrained by developments at financial and political centers has a lasting empirical backing (Frieden, 1991; Maxfield, 1998; Mosley, 2003; Arias, 2017; Miranda-Agrippino and Rey, 2020). The US represents the core of the financial system. The rate at which its government can borrow affects the interest rates of other countries as well. An

[28] I reverse-code the original variable to ease comparisons with the VIX results.

increase in the US bonds interest rates attracts foreign capital and makes it harder for developing countries to do so (Ballard-Rosa et al., 2021). With less liquidity, each marginal investment becomes more valuable and the stakes of "getting it right" increase. As a robustness check, I follow Betz and Kerner (2016) and use the real US lending interest rates, which measures the US interest rates net of inflation and is an oft-cited proxy for the availability of capital to countries other than the United States (Frankel and Roubini, 2001).[29]

3.3 Empirical Models

To test my main hypothesis in the pooled datasets (both PIIGS and BRICS), I estimate a set of two-way linear fixed-effects models with the following single-equation form:

$$\Delta Y_{i,t} = \alpha_i + \beta_1 \Delta X_{i,t} + \beta_2 \mathbf{X_{i,t-1}} + \varepsilon_{i,t}$$

Unit fixed-effects (α_i) account for unobserved heterogeneity at the country level. Unit root tests that both the dependent and some independent variables are likely to be non-stationary.[30] To preserve equation balance, these variables enter the model in first difference.Substantively, the coefficient of interest is (β_1), i.e. the short term effect (impact multiplier) of being implicitly associated with the BRICS group. This is arguably the most appropriate model from a theoretical perspective as well since we expect financial markets to incorporate information quickly (Breen et al., 2021; Brooks et al., 2021). Given the structure of the dataset, serial correlation in the residuals is an issue. Thus, I employ Newey-West standard errors up to 4 lags.[31] To reduce concerns about reverse causality in the control variables. I do not lag the BRICS summit binary indicator as both the media and financial markets are likely to respond immediately to new information from a pre-scheduled meeting.[32] Moreover, there can be no reverse causality in this case since the meetings are regularly scheduled months ahead. To test the hypothesis on each individual country, I rely on the same model without the country fixed effects.

[29] This measure is available only at a yearly frequency from the World Development Indicator.

[30] Given the small cross-sectional sample (five countries) and the low power of panel unit root tests, I rely on unit root tests country-by-country. The tables in the Appendix show the Augmented Dickey Fuller and KPSS tests results for the non-stationary variables.

[31] I rely on two commonly used rules of thumb to determine the number of lags. Stock and Watson (2002) suggest to use $0.75 * T^(1/3)$, while Greene (2012) suggests the following formula $T^(1/4)$. After rounding, both formulas yield 4.

[32] Indeed, there are clear spikes in the news article series for all countries on the same month of the BRICS meeting.

In the PIIGS case, the time frame is much shorter at the monthly level ($n = 74$), thus making inference less reliable and reverse causality a bigger threat. Luckily, the high salience of the crisis means that we have enough information to fit the models at the daily frequency. Unsurprisingly, this comes at some cost. Most importantly, a daily dataset implies richer temporal dynamics to deal with. For this reason, I turn to a different modeling strategy, Vector AutoRegression. It also makes the results comparable to the study that comes closest to mine, Brazys and Hardiman (2015)'s exploration of the PIIGS acronym's effects on Ireland. It is also more in line with the literature on contagion effects during the sovereign bond crisis, where VAR tends to be the norm (e.g. Neri and Ropele 2015). The Appendix provides the complementary results (VAR for BRICS and single-equation models for PIIGS).

As such, I rely on panel VAR (pVAR henceforth) (Holtz-Eakin et al., 1988). Panel VAR is particularly well-suited for analyzing the transmission of shocks over time and across units (Tang, 2008; Canova and Ciccarelli, 2013). A pVAR approach allows the researcher to model static and dynamic inter-dependencies as well as cross sectional heterogeneity. In essence, a pVAR is a combination of single equation dynamic panels and VAR (Sigmund and Ferstl 2019). Following Abrigo and Love (2016), consider a k-variate homogeneous pVAR of order p with panel-specific fixed effects represented by the following system of linear equations (deterministic variables are suppressed for ease of notation):

$$Y_{it} = Y_{it-1}A_1 + Y_{it-2}A_2 + ... + Y_{it-p+1}A_{p-1} + Y_{it-p}A_p + X_{it}B + u_i + e_{it} \tag{1}$$

Where $i \in [1,2,...,N]$, $t \in [1,2,...,T]$, Y_{it} is the vector of endogenous variables (1 x k), X_{it} is a (1 x l) vector of (possible) exogenous variables, and u_i and e_{it} are (1 x k) vectors of panel fixed effects and idiosyncratic errors, respectively. The A_1, A_2, ..., A_{p-1}, A_p and the matrix B are parameters to be estimated. The innovations e_{it} are assumed to be stationary around zero, independent and normally distributed. While cross sectional units are assumed to share the same data generating process (i.e. the A and B matrix are common to all sections), the introduction of unit fixed effects accounts for systematic cross-sectional heterogeneity. With the presence of lagged dependent variables by construction, the usual concerns about Nickell's bias apply (Nickell,

1981) . To avoid bias in the estimates, one possibility is to estimate the variable in first difference (FD) by instrumenting lagged differences with levels and/or differences from previous periods (Anderson and Hsiao 1982). Alternatively, one can subtract the average of all available future observations instead of using deviations from past realizations. The forward orthogonal deviation (FOD) approach, first proposed by Arellano and Bover (1995), is more efficient, although the differences diminish as the time dimension increases. I will rely on the latter strategy, although the results are virtually identical. As it is the case in single series VAR, the moment conditions become irrelevant when unit roots are present. As such, integrated variables need to be transformed to ensure stationarity. Hence, as in the BRICS case, I first difference those variables that contain unit roots.

From the reduced-form pVAR models it is also possible to test for Granger non-causality. Panel Granger causality (pGC) is a common methodological tool in the sovereign bond economic literature (Gómez-Puig and Sosvilla-Rivero 2013) as well as in the broader political science literature (Hood et al. 2008). Such approach is particularly well-suited for the hypotheses under study as it provides a convenient way to formally tests the extent to which the *NO Target* articles provide information about the target country even if they do not contain any reference to it. The central notion underlying Granger causality is one of predictability. One variable Granger-causes another if, given an information set, past information about the former improves the forecast of the latter beyond its own past information (and that of other variables, in the multivariate case) (Gómez-Puig and Sosvilla-Rivero, 2013). While a number of Granger (non)-causality tests have been proposed in the pVAR literature, I choose the one recently proposed by Juodis et al. (2021) for two reasons. First, unlike other pGC tests, it is not restricted to homogeneous panels and "large N, small T" situations. Second,it allows for the inclusion of other covariates. For the single-country analysis, I rely on standard VAR and Granger causality tests. As both concepts have been well known to political scientists for some time, and their description is a simplified version of the previous equations, I do not further elaborate on them. For an introduction to a political science audience see Freeman (1983).

Finally, I need a model to test hypotheses 2a/b and 3a/b. Unfortunately, it is overtly complicated to include an interaction term in a VAR framework. Moreover, the conditional hypotheses make the most sense in a longer

time frame, which encompasses several phases of the financial business cycle. While differences of degrees in uncertainty and stakes may matter, my focus on the Sovereign Bond crisis period implies that the estimation is done on a period of high stakes and high uncertainty by definition. As such, I will test the hypotheses only on the BRICS sample. I interact the BRICS variable ($\Delta X_{i,t}$) with the relevant mediating factors. The moderators enter the equation contemporaneously. Any short-term change in an individual country's bond interest rates is unlikely to affect global economic conditions, thus easing concerns about reverse causality.

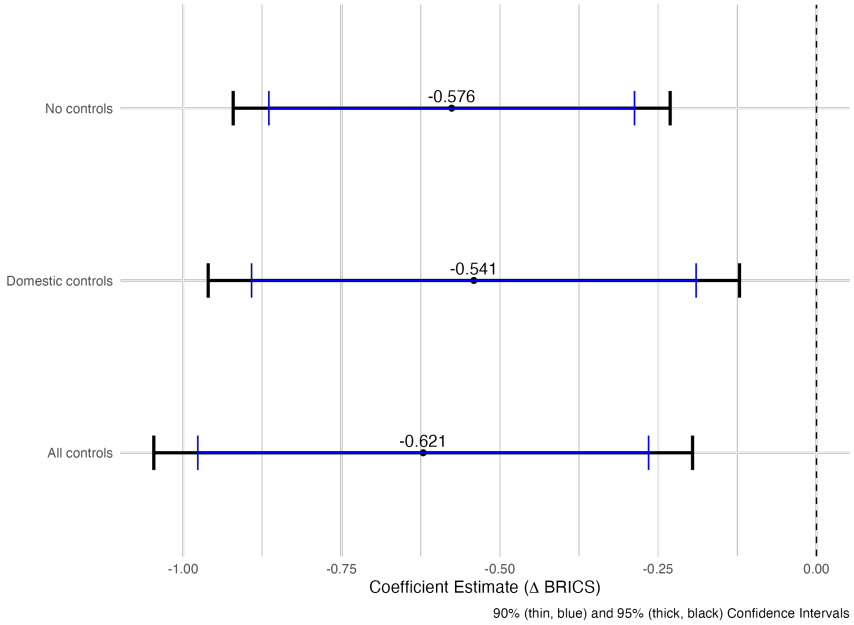
4 Implicit Association via PIIGS and BRICS Acronyms

To briefly recap, my strategy to test for media-related peer effects is based on the following steps. First, I eliminate the common risk free rate by subtracting the German/American bond yield from each country's yields to obtain the spread (Mosley 2003). Second, I augment a typical time series or panel model to study the determinants of sovereign bond interests rates by adding several measures of financial contagion (e.g. averages of the other countries' yields). The rationale is to control for as much variation as possible via standard channels of transmission. Finally, I include the *YES Target* and *NO Target* variables. The former should capture the informational content specific to the target country. Once stripped away of all these factors, the *NO Target* variable is left to explain how the discursive reference to member countries as a cohesive good/bad-type group affect investors perceptions.

The coefficient plot in Figure 10 provides the main results for Hypothesis 1 on the pooled BRICS monthly sample. The 90 and 95% confidence intervals based on Newey West standard errors are also drawn. To facilitate interpretation, the dependent variable (government bond spread) is measured in basis points (one basis point equals 1/100th of 1%) and the independent variable was divided by 10 prior to estimating the models. Hence, the BRICS coefficients represent the reputational effects of a 10 article increase. .nTo ease concerns about suppression effects of the main variable of interests due to the inclusion of control variables, I include the covariates sequentially (Lenz and Sahn, 2021). Model 1 shows the simple bivariate relationship with country fixed effects. Model 2 includes the domestic variables and in Model 3 I add the global variables (i.e. the

exchange rate, the energy index and the contagion variable).

Figure 10: Linear Fixed Effects Models - Coefficient Plot (BRICS)



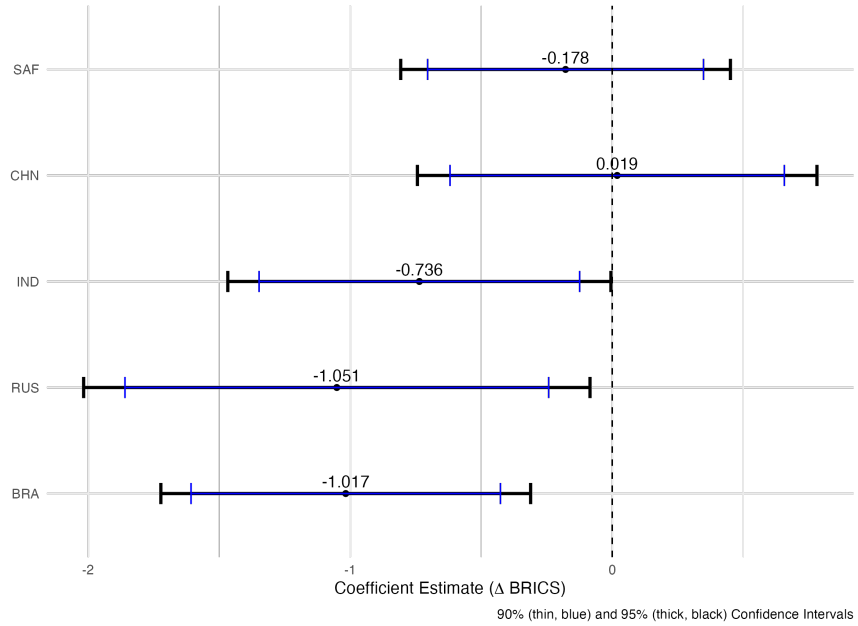
As discussed before, higher spreads indicate a greater perceived risk of default. As we can see, the analysis of the BRICS sample provides supports for Hypothesis 1. Depending on the specification, increasing the volume of articles by 10 decreases the target country's spread by between 0.54 and 0.62 basis points, depending on the specification. This is a small but precisely estimated effect. It is also in line with previous studies on peer effects in financial markets. For example, Brooks et al. (2015) find short-term peer-country effects to be in the neighborhood of between half and a third of a basis points.[33] Focusing on Model 3, a one standard deviation increase in the number of BRICS articles is associated with to a 3.74 basis point decrease in the spread. Substantively, this is roughly the same effect of a 1.4% decrease in the government deficit, an oft-cited economic determinant of bond spreads (Mosley, 2003).

Which BRICS country gained the most from being discursively associated to a "trustworthy" type group? Following the logic of my argument, the reputation gain should be greater for the members that are perceived

[33]The authors estimate an ECM model and also calculate the long-run multiplier. The appropriate comparison here, though, is between the short-term effects (i.e. the third coefficient in the authors' Table 3).

relatively less trustworthy on their own. As suggested in the theory section, it seems reasonable to except that Brazil, Russia, and India may be on the receiving end of the reputational transfer, albeit possibly to different extents. By contrast, I hypothesized that China - the stereotypical "good" type - is unlikely to be affected by the BRICS association. Finally, it was not possible to derive specific expectation regarding South Africa. To explore unit heterogeneity, I rerun the full model (the bottom model above) for each country. As shown in Figure 11, the results by and large comport with the theoretical expectations. The estimated coefficients are negative - thus implying a decrease in credit riskiness - for all BRICS members except China. Following a ten article increase in BRICS usage, Brazil and Russia gain more than 1 basis point in reputation, while India enjoys a 0.74 basis point decrease in interest rates. By contrast, as expected, the discursive association of China as a BRICS country does not affect its reputation in the investors' eyes. Finally, the coefficient for South Africa is also not statistically significant, albeit in a negative direction. This result suggests that South Africa was already considered a relatively safe investment upon becoming a BRICS member. This is consistent with the fact that South Africa had a similar credit score to that of China prior to joining the group (see Table 1).

Figure 11: Individual BRICS - Coefficient Plot



Regarding the PIIGS sample, I rely on panel and single-country VAR. The usual diagnostic tests were performed. As it is well known, VAR-based structural analysis can be carried out only if the VAR model is stable, i.e. if all moduli of the companion matrix are less than one, thus insuring that the panel VAR is invertible and has a infinite-order vector moving-average representation (Lütkepohl, 2005). As such, I run the stability condition diagnostic test and verify that the system is not explosive. Moreover, I test for serial correlation in the reduced form residuals and augment the lag length until the residuals show white noise behavior. In most models, residuals appeared to be non normally distributed. As such, the confidence intervals are constructed using bootstrap resampling methods. I show the results graphically with Impulse Response Functions (IRF). While the simple IRF can be estimated by rewriting the reduced-form model as an infinite Vector Moving Average (VMA), these IRFs do not have a structural interpretation due to the contemporaneous cross-correlation between innovations (the residuals in each equation). In practice, this means that I have to impose further restrictions in order to proceed with a structural interpretation. A few identification strategies are available, each with its own strength and weaknesses. To increase our confidence in the results, I rely on two identification strategies, Cholesky decomposition and sign restrictions. The assumptions underlying each strategy are a bit convoluted and can be found in the Appendix. The Cholesky decomposition is arguably the most common approach to structural analysis in a VAR framework. It amounts to ordering the variables from the most exogenous to the least exogenous to impose a recursive structure to the contemporaneous relationships. The variables ordered first can affect all the subsequent variables contemporaneously, but can be affected by the other variables only with a lag. The baseline specification has the following ordering:[34]

(VIX, ER) (i, GDP, u, cab, debt, deficit) credit rating, (contagion, target spread, NO, and YES articles)

The parentheses indicate the three main blocks of variables, i.e. global, domestic, and variables of major interest. Keeping the blocks fixed, I change the variables order within each block as a robustness check. The variables outside of the parentheses never change orders. The Appendix provides a full theory-driven

[34]Complete names: VIX, ER, inflation, GDP growth, unemployment, current account balance, debt-to-GDP, deficit, credit rating of target country, contagion variables (e.g. unweighted average of other PIIGS' spread), target country's spread, NO articles, YES articles.

justification for the above ordering and a discussion of several robsustness checks.

The recursive identification strategy mentioned above is based on contemporaneous zero restrictions. A valuable alternative is that of sign restrictions (Faust, 1998; Uhlig, 2005). Sign restrictions impose relatively weak prior beliefs on the structural responses - "x does not increase y for t periods" -, thus making the identification strategy more credible. As in zero restrictions case, the sign restrictions need to be set on theoretical grounds. The Appendix provides a full justification for the sign restrictions imposed on the models. Since sign identifications are most appropriate in a Bayesian framework (Lütkepohl, 2005), the Appendix shows the results from a Bayesian estimation.[35] In a nutshell, I follow Giannone et al. (2015) and treat prior informativeness in the spirit of hierarchical models. In other words, the priors are treated as additional parameters to be estimated, which they receive their own priors (hyper-priors) with hyper-parameters. Following Giannone et al. (2015) the hyper-priors are a combination of three widely used priors in the literature: the Minnesota (Litterman) prior, the sum-of-coefficient prior, and the single unit-root prior.

Table 4 presents the results of the panel Granger causality tests, examining both bivariate and multivariate relationships derived from the reduced-form equations. I report the p-values for each individual lag rather than for the joint test (in which the null hypothesis is that all lagged coefficients are jointly zero; therefore, any single non-zero coefficient would lead to a statistically significant result). Notice also that the lag length can differ in the two equations because - after setting the maximum length as described below the table - the algorithm chooses the optimal one. By and large, this preliminary analysis is consistent with Hypothesis 1. In both bivariate and multivariate case, the *No Target* variable contains information that helps predicting the spread beyond its own lags (and those of the other variables in the multivariate case).

[35] A Bayesian pVAR with sign restrictions is not available in the softwares I am familiar with. Hence, I run only the single-series models.

Table 4: Granger Causality in Monthly Panel Dataset

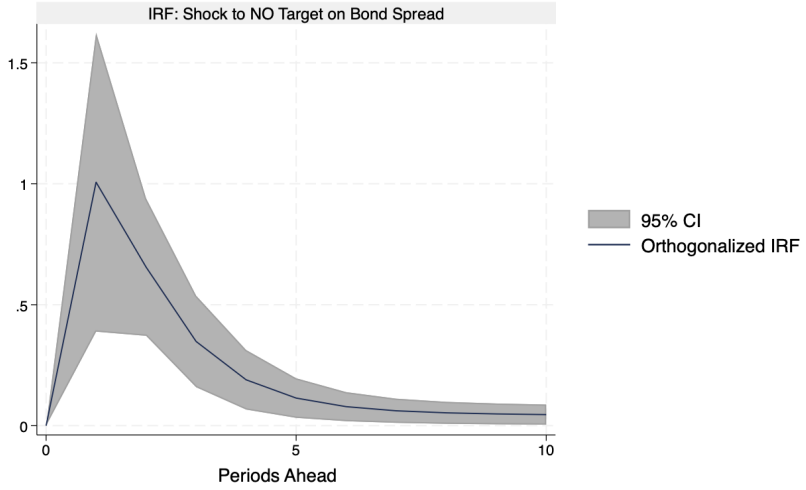
Direction of the Relationship	Controls	P-values
NO ⇒ Spread		**0.000 (t-1)**
		0.091 (t-2)
		0.045 (t-3)
	✓	**0.000 (t-1)**
	✓	0.314 (t-2)
	✓	**0.000 (t-3)**

Notes: The optimal lag length is determined independently in each equation by minimizing the Bayesian Information Criterion. The maximum length is set to 5 (one business week) for the daily dataset. All control variables - exogenous and endogenous - are included. All models allow for cross-sectional heteroskedasticity.

Granger causality is silent regarding the direction fo the relationship between the two variables. For that, I turn to structural analysis. Fig. 12 below shows the orthogonalized (via Cholesky decomposition) Impulse Response Functions (IRF) for the panel daily datasets. The figure shows the effect of a one standard deviation increase in *No Target* on the country's spread. All other figures should be interpreted in the same way.

As we can see, there is a statistically significant positive effect, implying that the spread increases in response to an increase in the independent variable. Notice that the IRF starts at zero because, by construction, *No Target* cannot affect the spread contemporaneously (see previous section). The shock pushes the spread up by almost 1 basis points on the following day. It then fades away in 5-6 days, consistent with the results based on the reduced form equation. This is a small, but precisely-estimated effect (it is significant at the 99% level as well).

Figure 12: Orthogonalized Impulse response Function (All PIIGS)



Next, I move to the country-by-country analysis to explore causal heterogeneity. Recall that the logic of the argument suggests that Ireland, Spain, and Portugal are likely to have suffered from the PIIGS implicit association due to their relatively good standing prior to the crisis. By contrast, my argument suggests that Greece should not have paid a further reputational premium. Regarding Italy, I do not have strong prior expectations (see Section 2).

I test for Granger causality in the reduced form system for each country. table 5 below shows that Spain, Italy, Portugal and Ireland are distinct from Greece. Only in the case of Greece, the *No Target* variable does not Granger cause the spread. The results are robust to temporal aggregation (see Appendix for the results using the monthly and weekly datasets). The clustering of Greece by itself is consistent with our intuition regarding the crisis and also with the descriptive dendogram in Fig. 7. The results for Italy indicate that it might be more similar to the PIS then to the G in the group, as suspected previously.

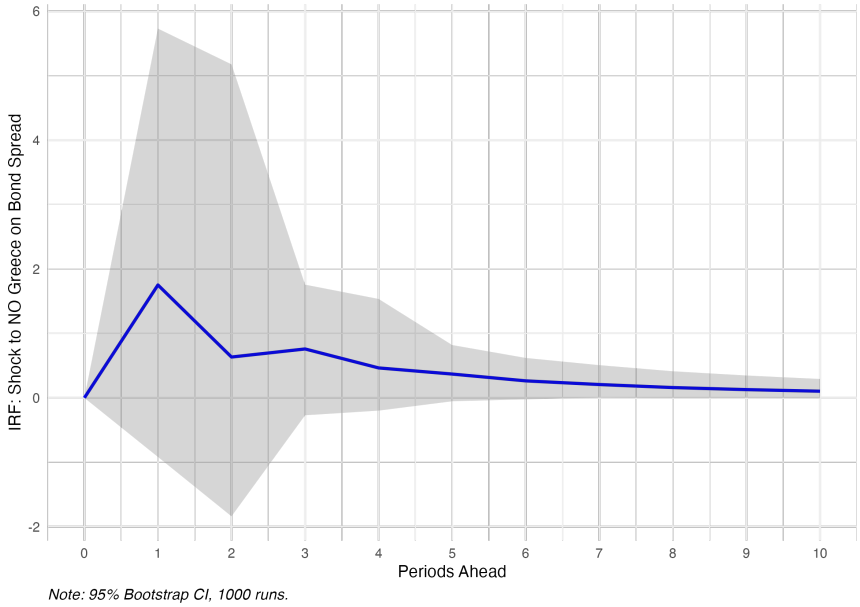
Table 5: Granger Causality

Country	Relationship	P-values
Greece	NO $\Rightarrow$ Spread	Not significant
Italy	NO $\Rightarrow$ Spread	0.000
Spain	NO $\Rightarrow$ Spread	0.000
Portugal	NO $\Rightarrow$ Spread	0.000
Ireland	NO $\Rightarrow$ Spread	0.000

Notes: The optimal lag length is determined independently in each equation by minimizing the Information Criteria. If the criteria suggest different numbers of lags, I choose the one that is favored by most criteria. Most of the time it is one or two lags. The results are invariant to the lag choice.

As before, Granger causality only tells that the *No Target* variables contains relevant information to predict the outcome variable. It does not tell us *how* the relationship evolves nor it allows for a causal interpretation. For that, I move to structural analysis with zero restrictions. Once again, identification is achieved via Cholesky decomposition. The equivalent IRFs from sign restrictions are in the Appendix. Fig. 13 shows the result for Greece. As we can see, there is a positive but statistically *insignificant* effect. It peaks at approximately 2 basis points, but the estimate is very imprecise. This result is consistent with my expectations: as Greece already carried a negative reputation - Greece being, in this sense, the stereotypical PIIGS country - it does not lose by being nassociated with the other countries.

Figure 13: Orthogonalized Impulse response Function (Greece)



By contrast, a different pattern starts emerging regarding Italy. Interestingly, Italy's IRF (Fig. 14) is not too dissimilar from that of Spain (Fig. 15). The response functions are more precisely estimated and the effect of the *NO Target* shock is long lasting. It fades away completely right after 10 days, i.e. two business weeks. Interestingly, the the substantive effects are non-trivial. A shock to *NO Target* increases the spreads by roughly 0.7 basis point after one day in Italy, and after two days for Spain. Consider that the average daily change in spread is 5.8 and 6.2 basis point, for Italy and Spain respectively. Hence, the maximum one-time impact leads to roughly 12-13% increase in the two countries spread. Moreover, the effect is compounded for a much longer period.

Figure 14: Orthogonalized Impulse response Function (Italy)

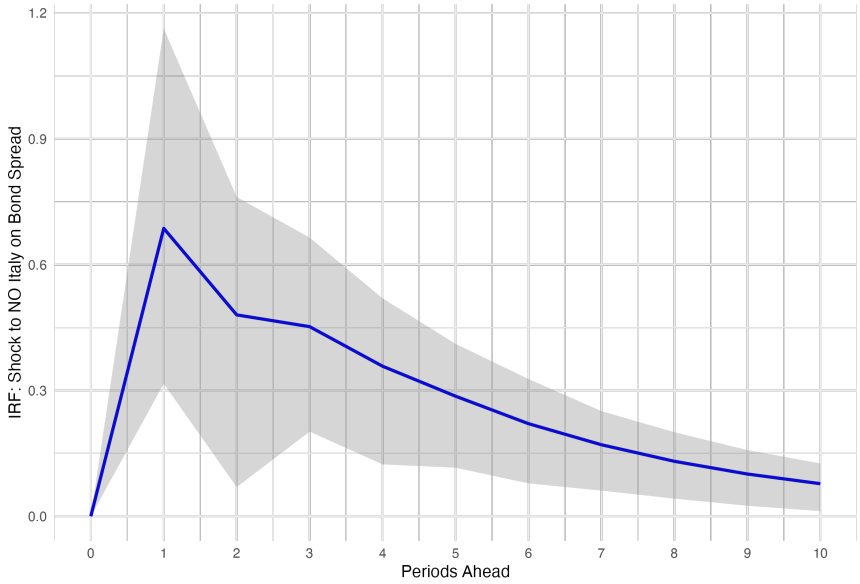
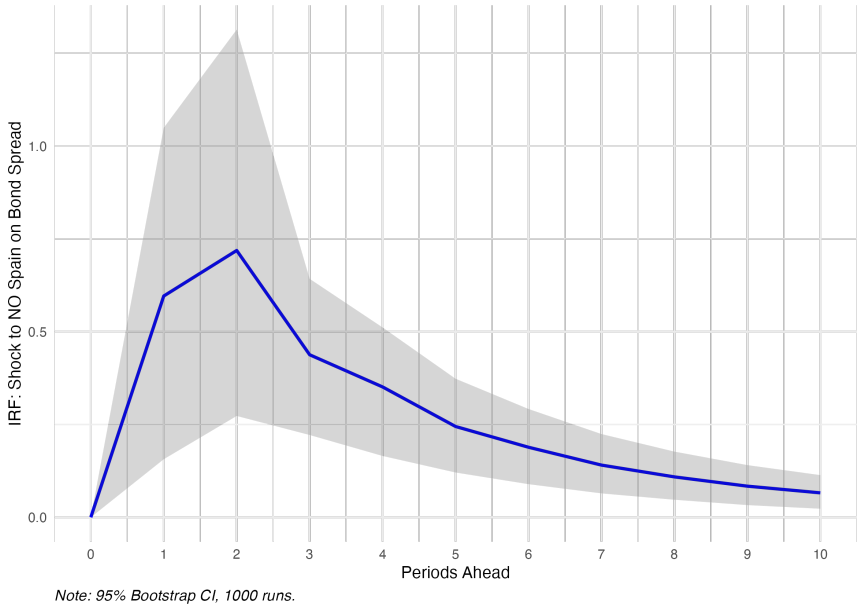


Figure 15: Orthogonalized Impulse response Function (Spain)



Finally, the results indicate that Portugal and, above all, Ireland are the biggest "losers" from being associated with the PIIGS label. Indeed, the effect is remarkable in both cases, although more transient in the case of Portugal. With a 0.9 and 1.2 basis points increase on impact, it constitutes almost 20% of the daily average spread change for both countries.

Figure 16: Orthogonalized Impulse response Function (Portugal)

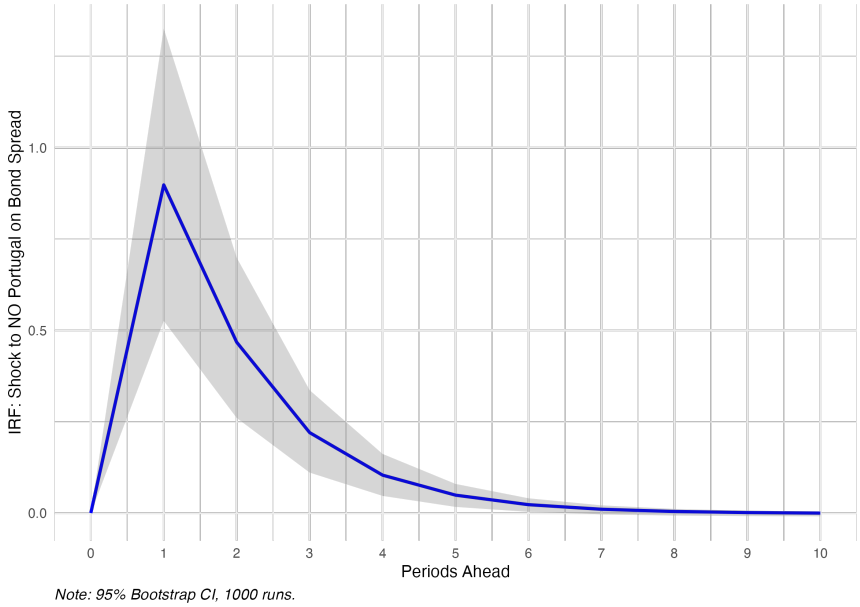
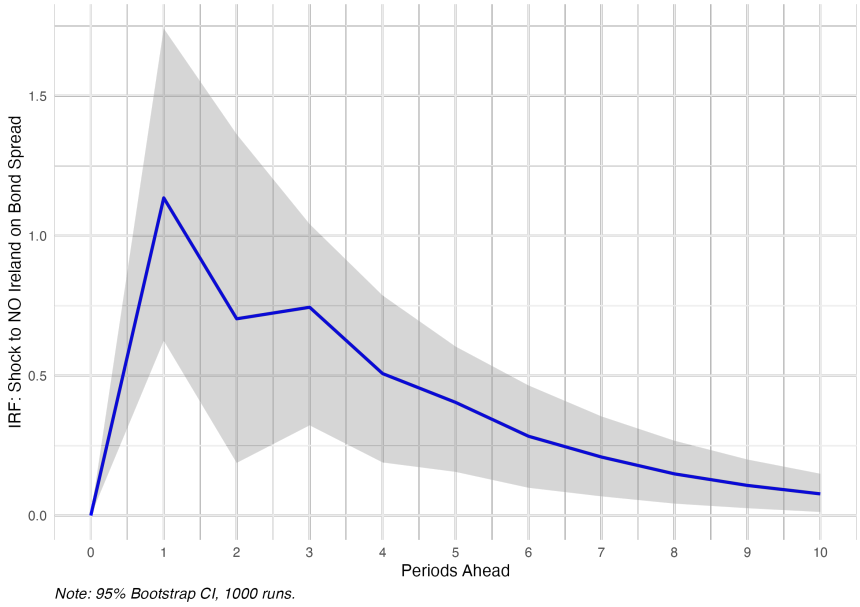


Figure 17: Orthogonalized Impulse response Function (Ireland)



Overall, the main hypothesis finds strong confirmation. Implicit association with the two acronyms affects a country's reputation. The direction of the effect is consistent with the view that the PIIGS and BRICS acronyms convey opposite information about the class type. Implicit association with the positive BRICS group leads to

an improvmeent in perceived creditworthiness, while implicit association with the negative PIIGS has the opposite effect. Furthermore, the relationship varies between countries in a manner that aligns with my model. Regarding the PIIGS, Greece is the only exception in an otherwise homogeneous pattern. Interestingly, Italy also seems to have lost by being associated with the PIIGS label. This result is not utterly surprising, although it was more uncertain a priori based on the country's reputation (see Table 2). Regarding the BRICS, China is not affected by the implicit association, as predicted. By contrast, Brazil, Russia and India are, albeit the evidence is weaker in the latter case. South Africa does not seem to be affected, consistent with the country's positive outlook in international markets prior to joining the BRICS club.

5 Rational Inattention or Behavioral Quirks?

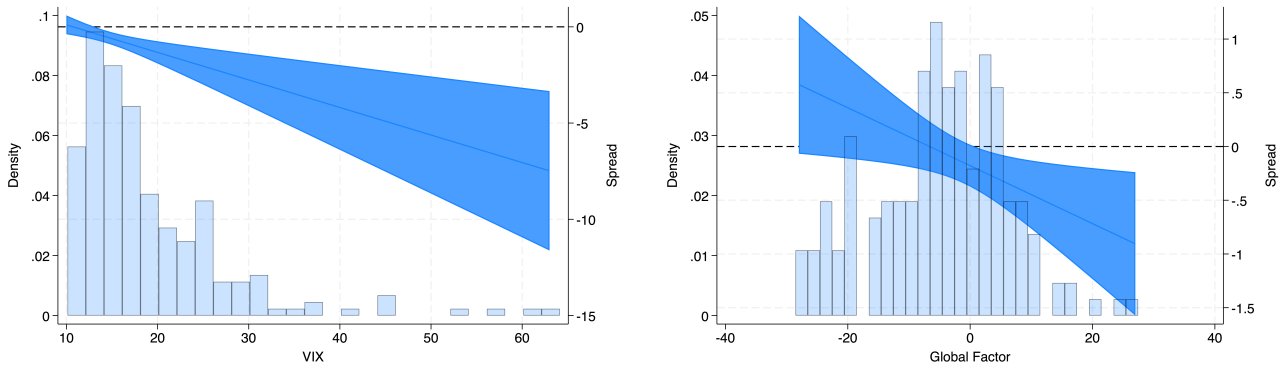
As underlined in Section 2, the model of country risk evaluation proposed here shares some important features with alternative models of rational inattention. In both cases, actors rely on heuristics due to limited cognitive resources and information overload. In other words words, the unconditional observable implications are similar. Nevertheless, expectations differ when the external environment exogenously change. In the case of rational inattention models, we would expect actors to rely less on heuristics during uncertain, high-stakes. In a behavioral setting, in contrast, actors will rely *more* on heuristic thinking. In other words, hypothesis 2a, 3a and 2b, 3b make opposite predictions regarding the reliance o heuristics as a function of the two states of the world: high uncertainty and high stakes vs low uncertainty and low stakes.

To operationalize exogenous changes to the external environment, I rely on the VIX as a measure of global uncertainty and on the US 10-year treasure bond yields to capture higher stakes in investment opportunities. When the US interest rates go up, the rest of the world suffers from capital outflows and the resulting liquidity constraints. Every unit of investment thus becomes more valuable, thus increasing the stake of every financial decision. Likewise, an increase in the VIX signals heightened global uncertainty. To further probe the robustness of the results, I rely on two alternative indicators. First, I use the global risk factors as provided in Miranda-Agrippino and Rey (2020), which is an alternative measure of global uncertainty. To make it more

comparable to the VIX, I multiply the index by 10 and reverse code it. Second, I use the US 10-year constant maturity Treasury bonds as an alternative measure of liquidity constraints. Unlike the US 10-year treasure bond yields, this measure is not market-determined. It is a theoretical yield derived by the US Treasury Department and represents a "synthetic" security and not an actual traded bond. While the US 10-year treasure bond yields determined in secondary markets is a better measure of capital liquidity as experienced by market participants, the constant maturity yield is still a reasonable proxy for capital availability in the literature (Betz and Kerner, 2016). As mentioned before, these conditional hypotheses require some meaningful variation in the moderators, something that can be more easily achieved in a long sample. As such, I restrict my empirical analysis to the BRICS case.

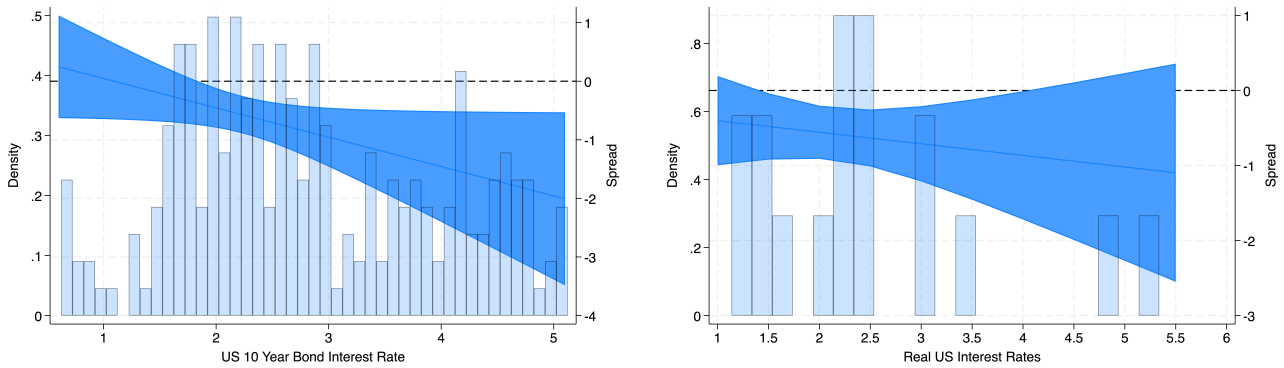
Since interaction coefficients are hard to interpret, I only show the graphs for the average marginal effect conditional on the interacting term. I show the results from the full models. As Fig. 18 shows, the marginal effect of being discursively associated to the BRICS group is greater as global uncertainty increases. The results are consistent with a behavioral interpretation. As uncertainty increases, investors do not seem to switch from the intuitive, heuristic-prone System 1 to the deliberative, slow, and more rational System 2. During periods when uncertainty is low, i.e. when rational interpretation would allow for investors to rely on heuristics, the effect is not statistically significant. Conversely, as a behavioral interpretation suggests, as uncertainty and investors' reliance on heuristics increase, so does the effect of the BRICS articles on the target country's spread. To put this in perspective, in the period around the 2008-2009 Global financial crisis, when the VIX index reached its peak, the reputational transfer amounts to roughly 7 full basis points, on average. Likewise, the right panel shows a similar story although, in this case, the marginal effect becomes statistically significant only after the moderator passes the zero benchmark.

Figure 18: Average Marginal Effect of BRICS conditional on Global Uncertainty



Similarly, Fig. 19 shows the mediating role of global capital scarcity. Once again, the behavioral interpretation holds, while a rationalist account receives little support empirically. An increase in the interest rates at the core of the international financial system makes it harder for countries in the periphery to raise international capital. It is at this time of capital scarcity that the implicit association to a trustworthy club - the BRICS - becomes particularly valuable to distinguish a given sovereign from other less trustworthy types. As a result, the marginal effect of the BRICS acronym becomes significant only after the US bonds rates reaches 2%. As shown in the second panel, the results are less convincing when I use the real constant maturity yield. Although the general direction of the relationship is as expected, the interaction coefficient does not reach statistical significance and the overall direction is flatter. This is likely due to the little variation in the moderator. Unlike market-driven interest rates, this rate does not move on a daily basis. In fact, there are only sixteen changes in the rate during the period under consideration.

Figure 19: Average Marginal Effect of BRICS conditional on International Capital Liquidity



The results above vindicate a behavioral interpretation suggesting an over-reliance on heuristics during "bad" time. In results not reported here, I also re-analyzed the PIIGS sample dividing in two periods: a period of high uncertainty between 2009 and 2012, and a period of lower uncertainty between 2013 and 2015. Rerunning the VAR analysis for the sub-periods show that the PIIGS effect was much stronger both substantively and statistically in the former period of high uncertainty and high stakes. These results further support the view that heuristics are more important during "bad" time. This conclusion also comports with previous studies on financial crises. For example, drawing from a set of in-depth interviews with financial practitioners and a qualitative analysis of the financial press, Naqvi (2019) concludes that during the height of the Great Financial Crisis] "investors stopped paying much attention to country fundamentals altogether, reflected in a lack of reporting on [Emerging Markets] domestic fundamentals in the financial press." (p. 768).

Overall, the empirical analyses provides support for a behavioral model of implicit reputational transfer via the use of grouping acronyms in the media. The analysis reveals significant short-term effects for the two groups as a whole as well as for Brazil, India, and Russia in the PIIGS case, and all countries except Greece among the PIIGS. Substantively, the effect is small but consistent with that of previous studies on categorizations and heuristics (e.g. Brooks et al. (2015)). Moreover, the effect becomes quite sizeable during periods of high uncertainty and capital constraints, at least in the BRICS case. The empirical results also comport with previous studies on international organization membership and reputational transfer (Gray, 2009, 2013; Gray and Hicks, 2014). Not only do investors assess a country's creditworthiness based on the "the company states keep" in

international organizations - to cite Gray (2013)'s well-known book in this literature -, but also as a result of the company they keep in the grouping acronyms disseminated by the media.

6 Robustness and Placebos

As it is often the case in observational studies, causality is hard to prove and inferential threats loom large. With this in mind, I run a number of robustness checks and a placebo analysis to further probe the reliability of the results. All the results in the Appendix. To avoid filling it with hundreds of images, most of the figures are left to the *R Markdown* replication package. I briefly mention the robustness checks here. All results are substantively similar.

First, the decision to count the volume of articles containing at least two mentions of the acronym is somehow arbitrary. As such, I re-run the main analysis using the alternative series, i.e. the number of articles mentioning the acronym at least once, and the volume of articles containing at least three mentions, respectively. Interestingly, the results are substantively stronger as I select the number of articles according to the more restrictive criteria. While not a rigorous test, such pattern is consistent with the view that the availability heuristic also plays a role. As the number of BRICS/PIIGS mention increases, the BRICS/PIIGS concept is more readily available in the investors' minds and the implicit association is more likely to ensue.

Second, throughout the paper I take the standard approach of controlling for the unweighted average of the sovereign yields in the other members of the group (after excluding the country of interest) (Edwards 1983, Beirne and Fratzscher 2013). Nevertheless, one may call into question my interpretation of the evidence on the grounds that the channel of financial contagion between BRICS/PIIGS has not been properly accounted for. While it is not possible to rule out this possibility completely, I explore several different specifications borrowed from the finance literature (Kaminsky and Reinhart, 2000). Appendix contain a in-depth description of all contagion measures. The measures vary from including multiple channels of contagion seperately (e.g. sovereign spreads and credit ratings of oher countries) to summarizing those channels via Principal Component Analysis and including the first principal component as an exogenous regressor, to weighting the other countries

spread by the financial and trade dependency with the target country.

Third, regarding the BRICS, a similar line of reasoning might suggests that the results are driven by the past ten years or so. Indeed, scholars often suggest that the 2008-2009 Global Financial Crisis and the European Sovereign Bond crisis created a "window of opportunity" for BRICS countries (Stuenkel, 2013). Soon after, in June 2009, the first official Summit was host in Russia. In 2010, the group agreed to include South Africa. Since then, intra-BRICS cooperation increased on both economic and (geo)political matters (Brütsch and Papa, 2013). To assess the extent to which intra-BRICS sovereign bond markets have integrated over time, I run rolling regressions with a fixed 50 month window. I regress the average BRICS spread (after excluding the target country) on the target country's own spread. I find clear evidence of an increasingly positive correlation between the country's spreads after 2009-2010. While far from a rigorous test, the results comport with the common wisdom on intra-BRICS cooperation and previous econometrics tests. As such, I divide the sample in pre- and post 2009 and rerun the main analysis. The results hold also in the pre-financial crisis period, although they are significant only at the 10% level. This is unsurprising considering that that the pre-2009 contains half of the observations relative to the post-2009 period. The results are virtually identical if I break the sample at the 2010 mark.

Fourth, one may question the importance of mainstream news media to professional and institutional investors who are likely to weight information from the financial press more heavily relative to business-related news on more generalist media (Davis, 2006a). Moreover, while at the turn of the century a majority of investors still indicated newspapers as a major source of information (Mori, 2000), that figure has been declining ever since due to the rise of electronic real-time sources of information (Davis, 2018). As such, the media - both generalist and the financial press - may lag behind real world developments, thus suggesting a merely reactive role. To ease both concerns, I re-run the analysis on two sub-samples of article volumes. First, I use the count of articles identified by the same criteria described before but only in the financial press. In particular, I search for articles in the following outlets (the selection is driven by availability in the Factiva dataset): The Financial Times, The Economist, the Wall Street Journal, the Economic Times, Barron's, Kiplinger, Forbes, the Investors' Business Daily, and the Dow Jones. To that, I manually collected articles from the Bloomberg (which

is not available in Factiva). Second, I rely solely on the volume of articles from the Dow Jones Newswire, the only real-time financial source available on Factiva. Reassuringly, not only the results are confirmed, but the effect size is much larger than in the main analysis.[36]

Beside the above-mentioned sensitivity analysis, I assess the viability of my argument relative to alternative explanations by designing two placebo tests. These tests identify contexts in which my theory would *not* suggest a relationship between article volumes and sovereign bond spreads. If we observe the same pattern in these other contexts, my interpretation would be called into question.

To design the first test, I leverage the BRICS/PIIGS membership's arbitrariness criteria to select five countries that are somehow similar to the BRICS/PIIGS but, by definition, they are not included in the acronym. In lieu of Brazil, I select Mexico, which O'Neill himself singled out as the natural alternative. For the same reason, I replace South Africa with Nigeria. Given geographic proximity, political regime and economic development similarity, I use Turkey in place of Russia. It is harder to select neat counter-examples for the remaining two countries. I opt to replace China with Vietnam and India with Indonesia. Using Pakistan and South Korea does not alter the results (available upon request). Notice that four of these five countries are also grouped together in another, somehow rival, investment acronym, i.e. the MINT (Mexico, Indonesia, Nigeria, Turkey). I retrieve the volume of articles following the same procedure described in the Measurement Strategy section.[37] As Table 6 shows, there is no relationship between the number of BRICS articles and these five countries. I repeat the exercise on a "fake" PIIGS sample in the Appendix. Guided by Fig. 7, I select Cyprus, Malta, Slovakia, Slovenia, and Belgium (the fifth element, Belgium, is added for the sake of symmetry).

[36] We should notice that this analysis promises more than it delivers. First, even after aggregating all financial and business newspapers both series remains sparse, with far too many zeroes and little variation in the independent variable. The average number of articles per month in the BRICS sample is only 2.7! In the PIIGS case, the reduction in size is such that any estimation becomes meaningless at the daily level. Second, while there are good reasons to suggest that investors may be influenced by real-time news more than by paper media, I can run these analysis only at the monthly level. Hence, the results should not be interpreted as a "real-time" effects of news, but only as a robustness check for a meaningful sub-sample of media outlets.

[37] I modify the search string slightly. Since the target country in this case is not part of the acronym, I query articles mentioning any of the BRICS, not just the remaining four.

Table 6: Placebo Test - Non BRICS Countries

	Pooled	MEX	TUR	IND	VTN	NIG
Δ BRICS2	-0.063	-0.117	-0.124	-0.120	0.065	-0.152
	(0.084)	(0.074)	(0.219)	(0.108)	(0.125)	(0.359)
All controls	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes					
Year FE / Linear Trend	Yes	Yes	Yes	Yes	Yes	Yes
N	798	181	121	193	156	147
R^2	0.106	0.094	0.473	0.123	0.220	0.112
Adj.R^2	0.061	0.006	0.388	0.033	0.123	-0.012

Note: Newey West Standard Errors. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01\}$

To design the second placebo test, I rely on the underlying logic of the argument. In the proposed theoretical framework, the volume of news in reference to some BRICS/PIIGS members is not, in and of itself, sufficient to engender the reputational transfer. It is the acronym that links the news about A^{C} to the investors' perception of country A's creditworthiness. Hence, I modify the original strategy to retrieve the volume of articles according to the following criteria: no mention of A; at least two mentions of any country in A^{C}; no mention of the BRIC(S)/PIIGS acronym. Table 7 shows the results for the BRICS. The effects are minuscule and either statistically insignificant or in the opposite direction across both pooled and country-by-country regression. The Appendix shows the same analysis for the PIIGS. Once again, either null or, more infrequently, opposite minuscule effects.

Table 7: Placebo 2 - Volume of Articles without BRIC(S) Acronym

	Pooled	BRA	RUS	IND	CHN	SAF
Δ No BRICS	0.001	-0.001	0.007**	0.003*	0.002*	0.001
	(0.001)	(0.002)	(0.003)	(0.001)	(0.001)	(0.002)
All controls	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes					
Year FE / Linear Trend	Yes	Yes	Yes	Yes	Yes	Yes
N	838	170	194	194	170	110
R^2	0.148	0.208	0.296	0.134	0.154	0.388
Adj.R^2	0.107	0.113	0.219	0.056	0.065	0.275

Note: Newey West Standard Errors. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01\}$

7 Conclusion

In the concluding remarks of their study on "peer effects", Brooks et al. (2015) mention that investors may have assessed Brazil quite differently as "it came to be known as one of the high-growth BRICS countries" relative to when it was grouped alongside other Latin American economies and their legacy of sovereign defaults, runaway inflation, and unstable political institutions. As this paper arguably demonstrates, this might have indeed been the case, and not only for Brazil. Language matters as it structures the way we think about countries within the international economy. Describing a country as a BRICS carries different connotations than depicting it as a Latin American country or an emerging economy. Likewise, framing a country as a PIIGS also carries different connotations that describing it a Southern European. Language is not a merely descriptive tool, but can also play a performative role (Blyth et al., 2002; McNamara, 2019).

In this paper, I have proposed and tested a theory linking the discursive reference to member countries as a cohesive "good/bad-type" group to investors' inference about each individual member's future economic prospects. Moreover, I have shown how a set of scope conditions - global uncertainty and capital availability - magnify investors' reliance on heuristics and, as a consequence, the reputational gains from being associated with a trustworthy group. In so doing, this study complements previous work suggesting that relatively unknown countries reap reputational gains (or suffer reputational losses) from joining organization with trustworthy (or untrustworthy) types (Gray and Hicks, 2014). Well-known emerging economies as well as Western countries are also affected from being associated with one another within a positive-sounding acronym. This is an important finding, since a country's reputation can influence its vulnerability across several dimensions, including military threats (Huth, 1997), trade relations (Jans et al., 1995), and access to capital (Tomz, 2012). Moreover, I show how countries continuously absorb reputation from their peers over time and as a function of media's activity. While categories/classifications might be fixed or slow moving, their relevance for financial markets vary as their frequency in the media ebbs and flows, a point often overlooked in the literature. Methodologically, I employed a novel measurement strategy that allows us to minimize measurement errors in the identification of relevant texts. As a result, we can overcome the limitations of previous studies by distinguish-

ing more neatly between informational effects (the effect of articles about Brazil on Brazil's creditworthiness) from peer effects.

Finally, this study also has implications for scholars of business leadership and strategy as it shows how Goldman Sachs successfully helped building trust in the BRICS as stable, rational investment places, thus contesting the common discourses of emerging markets as volatile and risky (Bourne, 2015). Likewise, it also has implications for scholars of the European financial crisis more broadly. As Bourdieu (1977) suggested decades ago: "the specifically symbolic power to impose the principles of construction of reality - in particular social reality - is a major dimension of political power" (p. 165). Whether consciously or not, Goldman Sachs exerted such power in its crafting, developing, and branding of the group acronym. Similarly, while not necessarily attuned to Bourdieu's work, Southern EU countries' representatives arguably felt this "symbolic power" at an intuitive level. Indeed, during the European Sovereign Bond crisis, several Southern EU officials spoke out rather strenuously against the pejorative acronym PIIGS, with one Portuguese politician even calling it a "racist plot fired up by the British media."[38] More often, though, the attempt was to pull one's own country away from the association with the members of the group. Indeed, Southern EU governments put a non trivial effort in differentiating their countries from their neighbors in the eyes of investors (Brooks et al., 2015). Most famously, the Irish Finance Minister Michael Noonan first downplayed the economic interdependence between Ireland and Greece ("Ireland's only economic link with Greece was Feta cheese")[39] and then suggested he was considering ordering t-shirts with "Ireland is not Greece" printed on them.[40] Likewise, in early 2010, Italian bankers were already publicly arguing that their country should not be included in the PIIGS group. [41] To some extent, the results presented in this paper vindicate this rhetorical strategy.

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