

Chapter 4: The BRIC(S) Acronym as a Heuristic Device in Sovereign Bond Markets

Abstract

How does media framing affect financial investors in sovereign bond markets? This chapter analyzes the performative power of investment categories, with a particular focus on the BRICS group (Brazil, Russia, India, China, and South Africa). I introduce a model of country risk evaluation based on investors' activation of the representativeness heuristic due to the media's usage of grouping acronyms such as BRICS or PIIGS. I argue that investors use categories as a heuristic shorthand which, in turn, affects their allocation decisions. While acronyms and categories can capture similarities, they can also be misleading insofar as they obscure otherwise important differences in economic fundamentals. I argue that this is due to two main behavioral tendencies on the part of investors: the representativeness bias and the availability bias. I examine the process through which these countries came to be grouped together in international media and then explore the contagion effect in sovereign bond markets during the period 2004-2020. Unlike other investment acronyms (e.g. PIIGS), the BRICS acronym contains a positive connotation. Consistent with this interpretation, I show how the number of articles containing the acronym BRICS in reference only to the other countries in the group decreases the bond spreads of a given country beyond what political conditions and economic fundamentals would predict. The results show that Brazil, Russia and, to a lesser extent, India have reaped substantial benefits from being labeled as BRICS. Consistent with the theoretical expectations, the heuristic BRICS effect is stronger when the country is more dependent on external financing, when investors face greater uncertainty and when international capital is scarce.

”First there was BRICs. Then came CIVETS. Then we were presented with BASIC, CRIM, BRICK, CE-MENT, 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

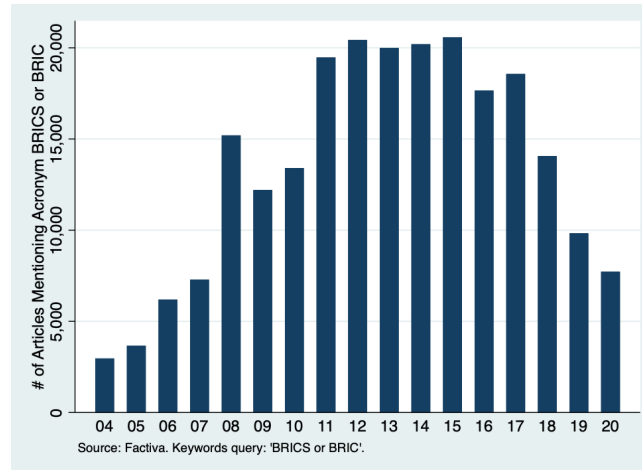
In November 2001, a team of Goldman Sachs analysts led by then-chairman Jim O’Neill published a report entitled *Building Better Global Economic BRICs*. This new category - lumping together Brazil, Russia, India, and China - soon attracted the attention of journalists, investors, and policy-makers alike. 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.”² 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. 1) 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).

Unlike other grouping acronyms, such as PIIGS (Portugal, Ireland, Italy, Greece, and Spain) or STUPID (Spain, Turkey, UK, Portugal, Italy, Dubai), BRIC(S) has an explicitly 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. For Brazil,

¹ Available at <https://www.globaldashboard.org/2010/12/06/from-brics-to-pigs-whats-in-a-name/>

² Available at <https://www.ft.com/content/112ca932-00ab-11df-ae8d-00144feabdc0>

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



BRIC membership signified the emergence of the country as a different kind of world power with a specific emphasis on South-South relationships and soft power (Sotero and Armijo, 2007). In Russia, the concept was welcomed as a sign of Russia’s return to a global status (Cooper, 2016). To India, the BRICs identity signalled its international stature vis-à-vis China (Bourne, 2015). Finally, Beijing has enjoyed its recognition as the de facto leader of the group (Roberts et al., 2018). 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.³ Tellingly, South African leaders were not alone in their aspirations to be part of the new group. As Jim O’Neill himself elaborated in his book-length treatment of the subject, “Friends from Indonesia goad me whenever I see them, suggesting that BRIC should really have been BRICI. Mexican policymakers tell me it should have been BRICM. In Turkey they wish it had been BRICT” (O’Neill (2011), p. 5).

Arguably, some of these (and other) countries could have well been part of the group. Indeed, one of the most interesting aspects of the BRICS concept is its not particularly well-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* - 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

³From now on I will spell the acronym as “BRICS” for simplicity. It is to be understood as BRIC for the pre-2010 period.

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,⁴ 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."⁵

Unsurprisingly, many have found the whole concept unconvincing. As one investment manager observed in 2007, "[i]t's a cool acronym but what it contains is four emerging markets that are large but don't have all the same prospects. Why is Bric ignoring Mexico, Turkey and Indonesia? It's a selection based on the fact that it is a cool acronym", soon followed by a colleague suggesting that "[t]o subdivide emerging markets into a verbally compelling – but not necessarily economically logical – category does a disservice to the overall growth opportunity within emerging markets."⁶ The practical effectiveness of this scattered group of countries - "dispersed around the world only to be bound by the imagination of a Goldman Sachs economist" (Roberts et al. 2018, p. 67) - was soon called into question (Kahler, 2013). Economists scoffed at the idea that the member countries could ever represent the 'pillars of the 21st century economy' (Financial Times, 2010 January 16th, cited in Bourne 2015). Investment experts dubbed the concept an artificial marketing gimmick designed to reinforce Goldman Sachs' global power (Salway, 2010). Likewise, scholars have been quick to criticize the BRIC(S) as an analytical category emphasizing how its members' internal politics and economics are simply too different. In an attempt to make sense of the concept's wide acceptance from the perspective of the three

⁴As 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>

⁵Available at <https://www.dailymaverick.co.za/article/2011-10-04-oneil-south-africas-inclusion-in-brics-smacks-of-politics/>

⁶Both available at <https://www.ft.com/content/6dceeb14-6690-11dc-a218-0000779fd2ac>

major schools in IR/IPE - liberalism, realism, and institutionalism/constructivism -, Armijo concludes that "the notion of the BRICs countries as a set thus appears forced" and that the category is "strictly speaking, a mirage" (Armijo 2007, p.40). Similarly, after a thorough analysis of similarities and differences, Glosny concludes that "BRIC commonalities and shared interests are excessively shallow" (Glosny 2010, p.126).

The largely arbitrary and partly exogenous (except for South Africa) nature of its inclusion criteria makes the BRICS acronym an ideal venue to study the performative role of language in financial markets. In particular, what are the reputational consequences of attaching a label based on largely arbitrary criteria? Is the acronym just a descriptive device or does it carry valuable information for investors? If so, under which conditions does the BRICS acronym 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? The present chapter 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-type" 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 chapter 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 developing 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 relatively straightforward measurement strategy of written texts, which can be easily employed in other contexts as well. Such a strategy allows us to minimize measurement errors in the identification of relevant texts, a problem that may have affected previous studies (Büchel, 2013; Linsi and Schaffner, 2019).

The main results can be summarized as follows. First, by association with one another via the BRICS

acronym, the member countries have gained credibility in bond markets, thus paying lower interest rates at the margin. The results by and large comport with the evidence provided in Chapter 2, with an obvious difference. The PIIGS acronym's unambiguously negative connotation led its member countries (except Greece) 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. A second set of results concerns the conditional effects of the BRICS heuristic. Drawing from the extant literature in behavioral finance and political economy, I argue that the heuristic effect is mediated by heightened uncertainty, global capital constraints, and a member country's sensitivity to financial stress. Empirically, I show this to be the case for the BRICS acronym.

The chapter is structured as follows. First, I review the literature on sovereign creditworthiness, cognitive shortcuts and the performative role of ideas. Second, I introduce a theoretical framework inspired by the behavioral finance literature. I will underline two broad mechanisms through which the continued use of grouping acronyms may affect investors' behavior - the representativeness bias and the availability bias. Moreover, I will theorize about the scope conditions of the relationship. The following section describes the research design, with a particular emphasis on the measurement strategy, the sample and variable selection, and the statistical methodology. After discussing the results, a conclusion follows.

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 on long term interest rates, 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), reputation (Tomz, 2012) and elections (Bernhard and Leblang, 2002, 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 (Pástor and Veronesi, 2013; 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 affected 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, 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 (e.g. PIGS, BRICS, CIVETS) can be seen as heuristic tools in the "classificatory regime of international finance" that may shape, and not only reflect, investment patterns (Wansleben 2013). 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 catchphrases, or awards, or lists of 'who's hot'."⁷ 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, 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

⁷<https://www.globaldashboard.org/2010/12/06/from-brics-to-pigs-whats-in-a-name/>

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 psychological mechanisms tying classifications to investors' decisions regarding the classified entity. Moreover, with the 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 heuristic devices matter the most. Finally, and notwithstanding the methodological richness of these previous studies, relevant questions pertaining the measurement of peer effects via written texts loom large.

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 (up to 50) about which there might be too little or, somehow paradoxically, too much information to make it possible to have an in-depth knowledge of about most of them ([Naqvi, 2019](#)). 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 bias and the availability bias. Originally proposed in the classic study by [Tversky and Kahneman \(1974\)](#), the representativeness and availability heuristics help us understand how people reason under conditions of uncertainty. Under these conditions, clearly connotated investment acronyms 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.⁸ 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. Mutatis mutandis, to quickly assess a country's creditworthiness, investors compare that country with a stereotypical "trustworthy" or "untrustworthy" type. On the other side, the media employs catchy grouping acronyms such as PIIGS and BRICS to attract the readers' attention. They 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 our case, since the BRICS acronym has an unambiguously positive connotation, we can think of the class as "trustworthy type" and each country as a (possible) element. The contention here is that the discursive inclusion of a country in the acronym BRICS functions as a signaling mechanism about its type. The more the BRICS 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 four (or five) countries as an increasingly homogeneous class. The more a country is discursively associated to the BRICS group (i.e. the more the BRICS acronym is being used in the media), the more quasi-rational investors will be sensitive to developments in that country to infer

⁸I use the words "boundedly rational" and "quasi-rational" interchangeably.

the future policies and performances of the remaining members of the group. In other words, 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 (and vice versa).

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 have shown, the neglect of prior baseline probabilities and insensitivity to small sample size lead agents to over-rely on representativeness in their decision making process (Tversky and Kahneman, 1974; Griffin and Tversky, 1992).

A second psychological process, also widely documented in the behavioral 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. Mutatis mutandis, the implication to the BRICS is straightforward. As element A (e.g. India) becomes more and more discursively associated to group B (the BRICS), the easiness with which - and hence the likelihood that - actors 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 (albeit probably to a lesser degree relative to their update about country A itself). In other words, as the BRICS acronym catches on, its sheer repetition in relation to the four/five countries increases the likelihood that actors would think of the "trustworthy" group type upon being prompted to think of any individual member. That "trustworthy" group type would then be translated in a favorable 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' es-

timates of perceived risk. Repeated exposure to the same brand makes the product easier to recall and does, in fact, increase the likelihood that we will purchase it (Folkes, 1988). In particular, studies have repeatedly 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 attention and disregards options that do not attract attention (Barber and Odean, 2008). In the BRICS 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 BRICS would quickly come to mind.⁹

The theory sketched above, while novel in its application to sovereign entities, is consistent with well-known formal 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.¹⁰ 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.

⁹One possible observable implication of the availability heuristic is that the relationship between the peer acronym and countries' creditworthiness may strengthen over time as the group becomes more established. In other words, the strength of relationship would be time-varying. This conjecture is left for future research to explore.

¹⁰Technically, 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.

Moreover, such psychological 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. As Griffin and Tversky (1992) succinctly summarize it: "experts who have rich models of the system in question [financial markets] are *more* likely to exhibit overconfidence than lay people who have a very limited understanding of these systems." (p. 430, emphasis mine). Building explicitly on the intuitions sketched above, Barberis et al. (2005) develop a model of the stock market where agents overreact to new information due to representativeness bias (and under-react due to conservatism bias).¹¹ Once again, assuming that a consistent series of good (or bad) earning announcements represent high-strength/low-weight information (i.e. salient information about that company's current valuation, but not necessarily informative about its valuation in the future nor the valuation of other companies), the model predicts over-reaction in the correct direction. 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) aptly 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

¹¹I focus only on the over-reaction part of the model, as it is the most relevant to the present chapter.

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.”¹²

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

- **Hypothesis 1:** An increase in the *implicit association* to the *positive* BRICS label will lead to a decrease in the country’s perceived riskiness.

While the reputational effects associated with the BRICS acronym may affect all members, there is no reason to suppose that they would all be affected the same way. Indeed, the proposed theoretical framework suggests that new evidence - in the form of increased association with a trustworthy type club - interacts with economic agents’ priors regarding each country’s reputation. For a country with a “bad” reputation, association with the BRICS group amount to “surprising” news, while for a country with “good” reputation, the association is likely to reinforce and confirm prior beliefs (Tomz, 2012). Hence, the greater gains should accrue to those members that are perceived relatively *less* trustworthy to begin with. This 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 not possible to unambiguously rank the five countries on a priori theoretical grounds, Table 1 below offers a comparison of the in-sample average of four key variables to suggest a tentative ranking. The debt and deficit ratios - averaged across the 2004-2020 sample - proxy the country’s fiscal capacity, its ability to repay its debt. 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 Fitch’s credit rating score for each country before entering the sample (2010 for South Africa and 2003 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.

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

In macroeconomic terms, Brazil and India clearly stand out relative to the rest of the group, with the 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 likely to gain from a positive reputational transfer. Russia is an interesting case insofar as it displays remarkably sound macroeconomic data, with the lowest debt ratio in the group and a public budget in surplus. Nevertheless, three reasons point at Russia as a net reputational winner. First of all, the country's relatively appealing economic situation is arguably 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 starting from the 2008 war in Georgia. 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 quite salient in investors' minds due to their recency (Shiller, 2015). The group's late-comer, South Africa, is in between Brazil/India and China in terms of fiscal capacity. Nevertheless, its relatively negative macroeconomic situation does not seem to be reflected in greater riskiness. South Africa has the second highest credit rating score and never defaulted on its debt since 1985. In contrast with all other members, China's positive macro-indicators reflect sound macroeconomic policy. With an average debt-to-GDP ratio below 40% and an average deficit at around 2% - and no default episode -, investors tend to view Chinese long term bonds as almost risk-free. Indeed, it was the country with the highest credit score in 2003.

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

	BRA	RUS	IND	CHI	SAF
Debt-to-GDP Ratio	62.6	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	0
Fitch Credit Rating Score	7.16	10.33	10	15	14

Overall, a country-by-country comparison of key factors affecting a creditworthiness offers some insights, although it does not allow us to suggest a definitive rank of the five BRICS members. All countries except China may be expected to reap the reputational gain from being associated to a trustworthy club. In purely

macroeconomic terms, Brazil and India lag behind the rest of the group and are good candidates for reaping the gains of membership. Due to its historical reputation more than macroeconomic mis-management, Russia is also likely to be a net winner. It is hard to suggest clear-cut expectations regarding South Africa. On the one side, the country's macroeconomic indicators may suggest the possibility of reputational gains. On the other hand, though, the country already enjoyed relatively good terms in capital markets even before joining the group in 2010. By contrast, Beijing stands on its own. Clearly the most economically dynamic country and a rising world power, China is the accepted leader of the group, the "colossus within the group" (Cooper (2016), p. 12). It has relatively little to gain in terms of creditworthiness from being associated with the other members (although, of course, there are other material and diplomatic benefits stemming from being the group leader). Such expectation is in line with the theoretical discussion in Chapter 3 of this dissertation. In that case, Greece - the stereotypical "bad" type - was the least likely country to be affected by the PIIGS acronym due to the already negative perceptions regarding its creditworthiness. Now, instead, Beijing 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.

The above discussion hypothesizes an unconditional effect of the BRICS heuristic on financial markets. Nevertheless, the benefits of being (implicitly) associated to "trustworthy" type via the BRIC(S) acronym are unlikely to be static.

To begin with, individuals tend to default towards heuristic use more often when they are under pressure (Goodie and Crooks, 2004; Itzkowitz and Itzkowitz, 2017). During periods of uncertainty rational optimization becomes more complex and time-consuming and the opportunity cost of relying on sub-optimal decision strategies decreases (Büchel 2013). Several asset pricing scholars, for example, suggest that behavioral biases become more, not less, important during periods of uncertainty (e.g. Stracca 2004; Rigotti and Shannon 2005). More specifically concerning the cost of borrowing, it is at times of increased uncertainty that the distributional cleavage between winners and losers is exacerbated and, as a result, preferences over debt repayment tend to be the most divided (Tomz, 2012). Uncertainty can generate a disjuncture between fundamentals and market movements (Brooks et al., 2021) and, under these circumstances, association with a "trustworthy" type group

may become particularly valuable. To be true, an alternative interpretation may suggest the opposite relationship. Indeed, scholars working in more rationalist traditions sometimes dismiss the substantive significance of behavioral research on the grounds that heuristics use may be of little importance when the stakes are high (Barberis and Thaler, 2003). In other words, rationality may obtain "when it counts" the most (Thaler 1987, p. 156). This interpretation would suggest that investors are *more* likely to scrutinize all available information, and *less* likely to rely on heuristic thinking, at time of heightened uncertainty. While plausible, this view presupposes that actors can measure and quantify uncertainty by looking at fundamentals more carefully. Under many circumstances in finance, this assumption might not hold. Indeed, as previous scholars have noted the ability to rationally assess the probability of an event is particularly low in the case of rare, high-impact events such as financial crisis, bank failures, and government defaults (Taleb, 2007; Aikman et al., 2021). In these circumstances, actors face "fundamental uncertainty" rather than quantifiable risks (Knight, 1921). Unable to assess and quantify this uncertainty, while in need to make quick decisions, market actors will be more likely to substitute other methods of decision making for rational calculation (Nelson and Katzenstein, 2014). Consistent with this view, then, I test the following hypothesis:

- **Hypothesis 2:** Investors' reliance on the BRICS acronym as heuristic device increases as global uncertainty *increases*, i.e. an increase in the discursive use of the BRICS acronym will lead to greater increases in a country's perceived creditworthiness when global uncertainty *increases*.

Second, another mediating factor that investors face when making investment decisions concerns capital availability. It is well-known that contemporary global finance generates boom and bust capital flow cycles (Bauerle Danzman et al., 2017). The effect of such cycles on the availability of international liquidity is particularly consequential to developing countries. Indeed, the notion that developing countries are constrained by developments at financial and political centers has a long intellectual history and strong empirical backing (Frieden, 1991; Maxfield, 1998; Mosley, 2003; Arias, 2017; Miranda-Agrippino and Rey, 2020). When interest rates and returns on safe assets (e.g. US long term bonds) are relatively low, international markets are liquid and investors more risk-accepting. When returns on those assets are relatively high, global liquidity is low and investors are more risk averse (Ballard-Rosa et al., 2021). In this case, the core of the financial system

(by and large the US) becomes a net importer of foreign capital, while other economies struggle to attract it (Bauerle Danzman et al., 2017). It is at this time that being associated to a "good/trustworthy" type group of country should be particularly valuable in so far as it provides its members an extra premium in perceived creditworthiness. Hence, investors may be *more* likely to rely on heuristics when capital availability decreases and the uncertainty regarding a country's future growth prospects increases. 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 capital becomes more scarce. Consistent with this view, I hypothesize the following:

- **Hypothesis 3:** Investors' reliance on the BRICS acronym as heuristic device *increases* as international capital becomes more scarce, i.e. an increase in the discursive use of the BRICS acronym will lead to greater increases in a country's perceived creditworthiness when global liquidity is *low*.

Finally, not all countries are equally exposed to financial markets (Campello, 2015). Those countries that necessitate greater inflows of foreign capital tend to be more sensitive to international financial fluctuations (Campello and Zucco Jr, 2016; Arias, 2017). Indeed, most models of international debt posit a monotonic relationship between debt service obligations and the probability of default (e.g. Eaton and Gersovitz (1981)). Unlike the previous two cases, relative *sensitivity* to financial market may not necessarily related to investors' psychological processes underlying the use of heuristic devices. Nevertheless, greater sensitivity to financial markets implies that *any* financial market development would have more pronounced consequences, thus including those processes set in motion by psychological biases. As such, I hypothesize that a country's sensitivity to international markets accentuates the benefits of being associated to a "trustworthy" type group:

- **Hypothesis 4:** The reputational effect of investors' reliance on the BRICS acronym as heuristic device *increases* as sensitivity to financial market developments' *increases*, i.e. an increase in the discursive use of the BRICS acronym will lead to greater increases in a country's perceived creditworthiness when the country's sensitivity to financial markets is *high*.

To sum it up, a behavioral model based on the BRICS acronyms suggests a negative relationship between

the discursive association of a country with the BRICS and the country's perceived riskiness among financial actors. Moreover, uncertainty, capital scarcity, and sensitivity to international finance all compound the negative relationship. By contrast, a rationalist interpretation would be partly vindicated if the effects of psychological biases was limited to low-stake situations, i.e. when uncertainty is low and when capital availability is high.

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 (for a discussion of this distinction in a similar context see [Büchel 2013](#)). In the literature on text linguistics and natural language processing, the identification of the optimal information retrieval procedure is commonly referred to as "the problem of aboutness" ([Hutchins, 1977](#)).

At times, authors have simply looked at the frequency with which the token(s) of interest (e.g. BRICS) are used, without differentiating between the *target* entity¹³ and the other members of the group. For example, this is the approach in [Brazys and Hardiman \(2015\)](#) and [Linsi and Schaffner \(2019\)](#)' studies of PIIGS and BRIC acronyms, respectively. The weakness of this "general" approach is that it results in a mix of information about the target country and the other members, thus making it difficult, if not impossible, to distinguish between genuine reputational "peer group" effects from standard informational effect of news media (i.e. the effect of articles about China on Chinese perceived creditworthiness). Information about the target country's "good/bad" policies - rather than the "good/bad company" that it keeps via the acronym - might be affecting perceptions of creditworthiness ([Gray and Hicks, 2014](#)).

The second approach - arguably more prominent - is to restrict the focus on the target entity by imposing an explicit set of search criteria. Unfortunately, scholars have struggled to find a set of generalizable criteria to perform the query. Lacking an optimal strategy, different criteria have been proposed to minimize the

¹³I will refer to the entity/country about which one aims to retrieve information as the target.

probability of mis-classification. Some scholars have opted for casting a fairly 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, in a study on the European sovereign bond crisis, [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 (e.g. [Tetlock 2007](#), [Ahmad et al. 2016](#)).

While it is certainly desirable to restrict news information to a specified and easily recognized entity, this approach also comes at a cost. In particular, while the "general" approach runs the risk of inadvertently incorporating information about the target country, the "targeted" strategy - at least as usually implemented - suffers from the opposite risk, i.e. that of incorporating information about the other countries. In other words, even if an article including the words "Putin" and "crisis" is *also* about Russia, it might not be *mostly* about Russia. The main focus of the article might be on China, while Russia is only mentioned en passim. As such, one may detect narrative contagion from Russia to China, while the effect should be attributed to new information about China itself. Whereas the two approaches could be combined to assess the effect of both "targeted" and "general" news, this would not solve the underlying uncertainty about what is being excluded and/or included and, hence, what exactly is being measured. A "general" search is prone to select articles about the target country even if that is not the result we are interested in, while the "targeted" search does not guarantee the exclusion of extraneous articles.

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

("BRICS" 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 further restrict the search to articles written in English to make sure that the acronym is correctly searched for.¹⁴ 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. I do not distinguish between financial and non-financial sources as the former represents a small fraction of total papers.¹⁵ Nevertheless, I select the following subject options: "Commodity/Financial Market News", "Corporate/Industrial News", "Economic News" and "Political General News".¹⁶ I repeated the above-described strategy three times, varying the required frequency of the BRICS terms in each article. I request the acronym to be present at least once ("BRICS1"), then twice ("BRICS2"), and finally at least three times ("BRICS3"). The volume of articles was aggregated at the monthly level. After the search was complete, I randomly selected 500 articles to make sure that the query was successful. The series starts in January 2004 and ends in March 2020.¹⁷ South Africa enters the series in 2010 since it was not part of the BRIC group before. The final result of my measurement strategy for the BRICS2 series is displayed in Fig. 2 below.¹⁸ The graphs for the remaining two variables are very similar since the three series are highly correlated (see Table 2).

Table 2: Article Volume Series Correlations

	BRICS1	BRICS2	BRICS3
BRICS1	1.00		
BRICS2	0.92	1.00	
BRICS3	0.87	0.97	1.00

¹⁴For example, even after transliteration, the acronym in Russian is often spelled as BRIKS.

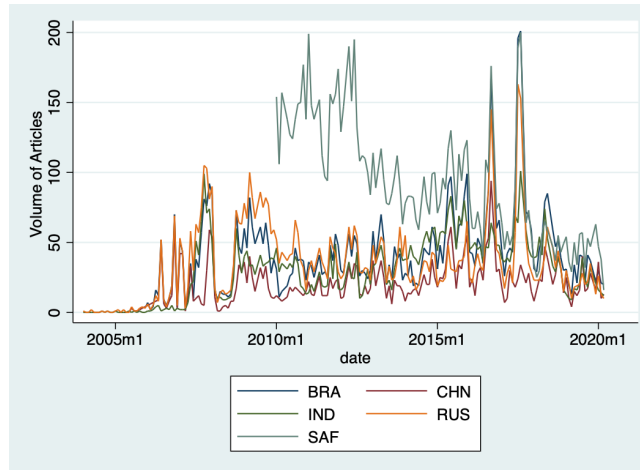
¹⁵In the Appendix, I show the results relying only on financial newspapers

¹⁶I also exclude duplicate texts, as identified by Factiva itself under the "similar duplicates" option.

¹⁷It is only after the second Goldman Sachs report published in October 2003 that the acronym becomes truly widespread in the media (see Fig. 1).

¹⁸To 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 control for the summits in the empirical models.

Figure 2: The BRICS2 Series from the 'Negative' Search Strategy



Overall, the string query described above minimize the possibility of measurement error.¹⁹ A few points are worth emphasizing. The first line guarantees that the retrieved articles mention the acronym but do not contain any direct information about the target country by construction. 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 in parenthesis (but not throughout the text) would be unlikely to be the main topic of the article, this would cast doubts on the assumption that the news articles contain no explicit association between the target country and the other members. In other words, the articles may affect investors’ perception of the target’s creditworthiness only by *implicit* association with the other members via the BRICS heuristics. Second, the bottom line of the query guarantees the exclusion of articles about the group as a whole, with no mention of any specific country. Without such restriction articles about economic growth projection for the BRICS group as a whole may contain relevant information about each individual country even if none of them is explicitly mentioned.²⁰

To relate this strategy to the previous theoretical discussion, this method guarantees a fixed, low informativeness (weight) about the target country by construction (since it is never mentioned in the text). At the same

¹⁹I 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”). For example, the complete query for Brazil is “(BRIC or BRICS) not Brazil not Brazilian not Brazilians not Brasil not Brasilian not Brasilians not brac not bracs not abrac and (Russia or India or China or South Africa)”. Upon noticing that some articles may contain metonymic references, I randomly selected 100 articles for each country and inspected the content. Only one article was mis-classified to be not about India even if New Delhi was mentioned en passim.

²⁰While quite rare, such articles tend to happen around the BRICS Ministerial meetings.

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 should have low informativeness about the prospects of the Brazilian economy.²¹

To summarize, the proposed measurement strategy is novel and different from that used in other studies (e.g. [Brazys and Hardiman 2015](#), [Linsi and Schaffner 2019](#)). It allows us to investigate the acronym's "peer effect content" using only 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 by association". This strategy also clearly differs from studies operationalizing contagion as assets' spatial correlations between the target country and the other group members ([Brooks et al. 2015](#)).

3.2 Variables Selection

As a dependent variable, I use the 10-year government bond yield and its 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](#)).

²¹The underlying assumption is that the numbers of articles using the acronym BRICS in reference to the countries other than the target is a function of the strength of the set of information being reported in the article. In other words, the publication of more (less) articles using the acronym without mentioning the target is assumed to reflect a state of the world in which economic and political developments in the other countries are of greater (lesser) interest. The assumption is justified in light of the empirical literature on media and economics. One of the most robust findings there is that economic factors affect the *volume* of news articles as much as, if not more than, the tone. Consistent with this fact, news volume tends to a better predictor of financial market returns than news tone. See, for example, [Liu \(2014\)](#) or Chapter 1 of this dissertation.

The independent variable is the volume of article containing the acronym BRICS without any direct mention of the target country, as described previously. Throughout the chapter, I show the results using the volume of articles that contain at least two mentions of the acronym.²² The Appendix contains the results using the volume of articles using the acronym at least one and at least three times. The average number of articles per month is 46, with a minimum of 0 and a maximum of 581.

A host of political and economic variables are well-known to contribute to a country's creditworthiness. 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*, *foreign currency reserves*, 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). 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.²³ Given the limited cross-sectional sample, I refrain from including other political variables that are suggested in the literature, such as a country electoral institutions (Bernhard and Leblang, 2006) and ideology (Brooks et al., 2021), which are either time-invariant or too slowly moving. The models include country fixed effects, thus subsuming much of that variation.²⁴ 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 factors that are well known determinants of sovereign bonds interest rates. First, I control for the *exchange rate* vis-à-vis the dollar to capture exchange rate risk (D'Agostino and Ehrmann, 2014). Second, I include the *VIX* - a measure of global volatility risk premium - to proxy for general risk

²²This measure offers the best balance between precision and coverage.

²³The capital account openness and democracy score end in 2019. I carry the last value on to complete the series.

²⁴The Polity2 score for the period under consideration changes only for Russia. Nevertheless, I opt to include it because the beginning of democratic reversal in Russia starts at around 2007, which also marks the end of the decreasing trend in Russian spread and the beginning of its upward trending trajectory.

aversion and global uncertainty (Longstaff et al., 2011). I also control for Fitch's *credit rating scores* (Afonso and Martins, 2012). I follow standard practice in the literature and turn the letter grades into a numerical score (1-21). Since all five countries are dependent on or 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). Finally, I construct a *financial crisis* dummy that captures currency, sovereign bond, or banking crises (Laeven and Valencia, 2018).²⁵

Importantly, interpreting the BRICS 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. I employ two measures to block this alternative path. First, 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). Second, as a robustness check, I use the first principal component of the other countries' yields. The extracted financial shocks are commonly used to investigate and/or control for the presence and size of regional spillover effects (Fukuda and Tanaka, 2020; Altınbaş et al., 2021)

Finally, I need to select the appropriate variables to capture the mediating effect of global uncertainty, global liquidity, and sensitivity to financial markets as hypothesized in hypotheses 2, 3, and 4. Regarding global uncertainty, I rely on the VIX, a measure of the implied volatility of S&P 500 index options (Longstaff, 2010; Brooks et al., 2021). Higher scores indicate an increase in uncertainty. As a robustness check, I use the global risk factor estimated by Miranda-Agrippino and Rey (2020).²⁶ The measure reflects both aggregate volatility of asset markets and the time-varying degree of risk aversion in the markets.

To capture global liquidity constraints, I rely on the interest rate of US ten-year constant maturity Treasury bonds (Bauerle Danzman et al., 2017). The US represents the core of the financial system meaning that the rate at which its government can borrow affects the interest rates of other countries as well. An increase in the US

²⁵I include them all together because the frequency of each crisis individually is very low.

²⁶I reverse-code the original variable to ease comparisons with the VIX results.

bonds interest rates attracts foreign capital and makes it harder for developing countries to do so (Ballard-Rosa et al., 2021). 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).²⁷

Finally, hypothesis 4 posits that the effect of being discursively associated with the BRICS group is greater as the target country’s sensitivity to financial markets increases. To capture sensitivity, I employ the value of *public* debt service obligations as a ratio of the total value of exports, a frequently used solvency indicator (Campello, 2015). A higher ratio indicates a greater burden of servicing the debt, with the magnitude of the burden depending also on the difference between the interest rate and the growth rate of exports. According to the International Monetary Fund, debt over export indicators are considered the best way to capture financial sensitivity in emerging markets (Fund, 2000, 2003). This measure has the advantage that it is less volatile than debt-to-GDP in the presence of over- or under-valuations of the real exchange rate, a recurrent feature in emerging markets. Previous studies used the raw values to construct a binary indicator at the 35% threshold (Campello and Zucco Jr, 2016; Arias, 2017). Given the small N in my study, I rely on the raw percentages instead. If private defaults take place on a significant scale, this too is likely to lead to a sharp reduction in financial inflows, and public default may follow (Fund, 2003). Hence, as a robustness check, I re-run the analysis using the total debt-to-service ratio (including non-public debt obligations). The Appendix shows the graphical results using the alternative three variables for uncertainty, capital availability, and financial sensitivity.

3.3 Empirical Models

To test my main hypothesis in the pooled dataset, I estimate a set of two-way linear fixed-effects models with the following single-equation form:

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

²⁷This measure is available only at a yearly frequency from the World Development Indicator, thus lowering the overall power of the statistical tests.

Unit fixed-effects (α_i) account for unobserved heterogeneity at the country level, while the inclusion of year fixed effects (γ) control for the variation in the dependent var due to global events. Unit root tests in the Appendix suggest that both the dependent and the independent variables are likely to be integrated as well as four control variables (the foreign currency reserves, the exchange rate, the energy index, and the financial contagion variable).²⁸ To preserve equation balance, these variables enter the model in first difference.²⁹ 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 financial markets should 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.³⁰ To reduce concerns about reverse causality in the control variables (e.g. the effect of spreads on inflation), I lag them by one period in all the estimations. 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.³¹ Moreover, there can be no reverse causality in this case since the meetings are regularly scheduled months ahead.

To test hypotheses 2, 3, and 4, I interact the BRICS variable ($\Delta X_{i,t-1}$) with the relevant mediating factors as described in the previous section. The moderators that capture global uncertainty and global liquidity 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 reversed causality. For the opposite reason, the debt-to-exports ratio, i.e. the proxy for a country's financial sensitivity, is lagged. Since the ratio includes a measure of a country's total outstanding debt in the numerator, short-term changes in interest rates can directly

²⁸Given 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. Unit root tests for the remaining variables are available upon request.

²⁹There is no evidence of co-integration among these variables. Unit root tests on the differenced series strongly suggest stationarity.

³⁰I 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. Hence, the variance estimates are computed using the following formulation:

$$\mathbf{X}'\hat{\Omega}\mathbf{X} = \mathbf{X}'\hat{\Omega}_0\mathbf{X} + \frac{n}{n-k} \sum_{l=1}^4 \left(1 - \frac{l}{5}\right) \sum_{t=l+1}^n \hat{\varepsilon}_t \hat{\varepsilon}_{t-l} (\mathbf{x}'_t \mathbf{x}_{t-l} + \mathbf{x}'_{t-l} \mathbf{x}_t)$$

At any rate, the results are robust to different autocorrelation lags. Available upon request.

³¹Indeed, there are clear spikes in the news article series for all countries on the same month of the BRICS meeting. Lagging the indicator would fail to account for that abnormal variation.

and immediately affect it.

4 Results

Table 3 shows the main results for hypothesis 1 in the pooled regression using the spread as the dependent variable. Table 17 in the Appendix shows the results using the 10 year government Bond yields as a robustness check. To facilitate interpretation, both variables are measured in basis points, the standard way to express interest rates in finance. One basis point equals 1/100th of 1%. To 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 time and 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 financial contagion variable). To facilitate a more meaningful interpretation of the results, the independent variable was divided by 10 prior to estimating the models. Hence, the BRICS coefficients represent the reputational effects of a 10 additional article increase.

Table 3: Linear Fixed Effects Models

	Model 1	Model 2	Model 3
Δ BRICS2 (t-1)	-0.576*** (0.176)	-0.540** (0.214)	-0.621*** (0.217)
Total debt % GDP (t-1)		1.921*** (0.724)	1.650** (0.658)
Current Account Balance (% GDP) (t-1)		-0.076 (1.462)	-0.564 (1.399)
Economic Size (t-1)		-0.005 (0.004)	-0.004 (0.004)
Economic Development (t-1)		-0.000 (0.008)	0.001 (0.008)
Deficit (% GDP)		2.765* (1.493)	2.604* (1.384)
Regime Type (t-1)		-16.628 (13.296)	-14.029 (12.149)
Capital Account Openness (t-1)		6.232 (35.302)	-7.269 (32.747)
Financial Crisis (t-1)		-1.594 (31.266)	-9.170 (30.293)
Economic Growth (t-1)		0.469 (1.620)	0.929 (1.281)
Credit Rating Score (t-1)		10.220** (5.022)	8.955* (4.691)
Inflation (t-1)		-0.095 (0.982)	-0.317 (0.886)
Δ Foreign Reserve Currency		-0.000 (0.000)	-0.000 (0.000)
Summit		-1.048 (4.001)	2.504 (4.426)
Δ Energy Index			-0.229 (0.334)
Δ Exchange Rate			7.934*** (2.039)
VIX (t-1)			0.363 (0.640)
Δ Financial Contagion Spread			-10.303 (7.179)
Constant	1.282	-78.525	-76.299
Country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
N	852	852	852
R^2	0.076	0.103	0.141
Adj. R^2	0.054	0.070	0.105

Note: Newey West Standard Errors in parenthesis. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

As discussed before, higher spread (or bond) yields indicate a greater perceived risk of default. The monthly changes in spreads (or bonds) are measured in basis points. As we can see, the analysis of these monthly data

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 effects to be in the neighborhood of between half and a third of a basis points.³² Focusing on Model 3, a one standard deviation increase in the number of BRICS articles (SD = 6) 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.

Which country gained the most from being discursively associated to a ”trustworthy” type group? Following the logic of the argument, the reputation gain should be greater for the members that are perceived relatively less trustworthy on their own. As suggested in the theory section, it seems reasonable to expect that all countries except China may be on the receiving end of the reputational transfer, albeit to different extents. To explore unit heterogeneity, I rerun the full model (Model 3 above) for each country.³³ As shown in Table 4, 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. For every ten instances increase of BRICS usage, Brazil and Russia gain more than 1 basis point in reputation, while India enjoys a 0.64 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. Somehow surprisingly, the coefficient for South Africa is also not statistically significant, albeit in the expected direction.

Table 4: OLS Models - Country by Country

	BRA	RUS	IND	CHI	SAF
Δ BRICS2	-1.017*** (0.360)	-1.051** (0.493)	-0.636* (0.373)	0.019 (0.389)	-0.178 (0.321)
All controls	Yes	Yes	Yes	Yes	Yes
Linear Year Trend	Yes	Yes	Yes	Yes	Yes
<i>N</i>	170	195	195	170	122
<i>R</i> ²	0.222	0.287	0.126	0.146	0.343
Adj. <i>R</i> ²	0.129	0.209	0.047	0.056	0.236

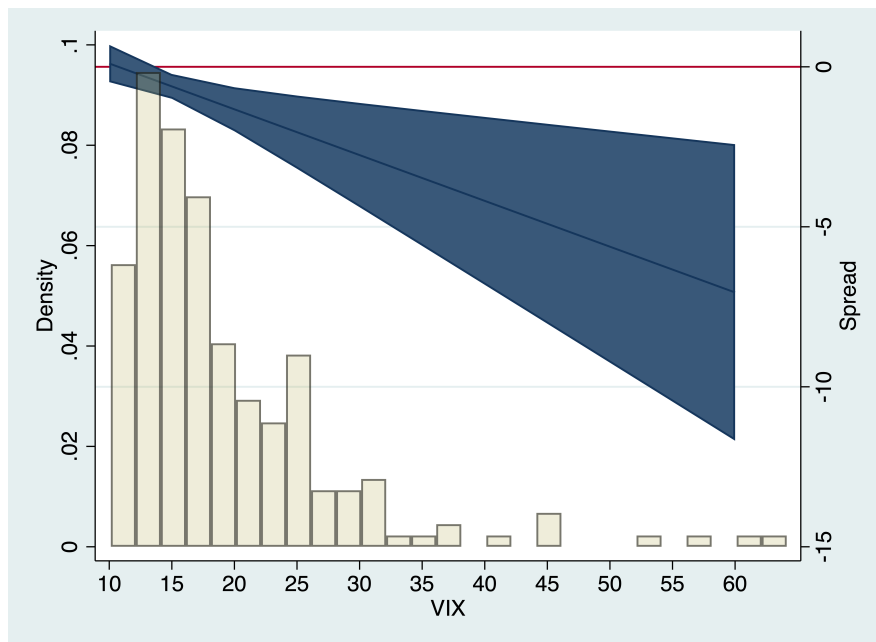
Note: Newey West Standard Errors. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

³²The authors estimate an ECM model and also calculate the long run multiplier. The appropriate comparison here, though, is between the short-term effects (the third coefficient in the authors’ Table 3).

³³Since there is no panel, I replace year fixed-effects with a linear yearly time trend.

Moving on to the conditional hypotheses, I suggested that the BRICS peer effect is mediated by global uncertainty, liquidity constraints, and sensitivity to financial markets. 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 using all controls, the full set of fixed effects, and the spread as the dependent variable (i.e. Model 3 of Table 3). As Fig. 3 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 rely more on the BRICS heuristics. During periods when uncertainty is low, 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.

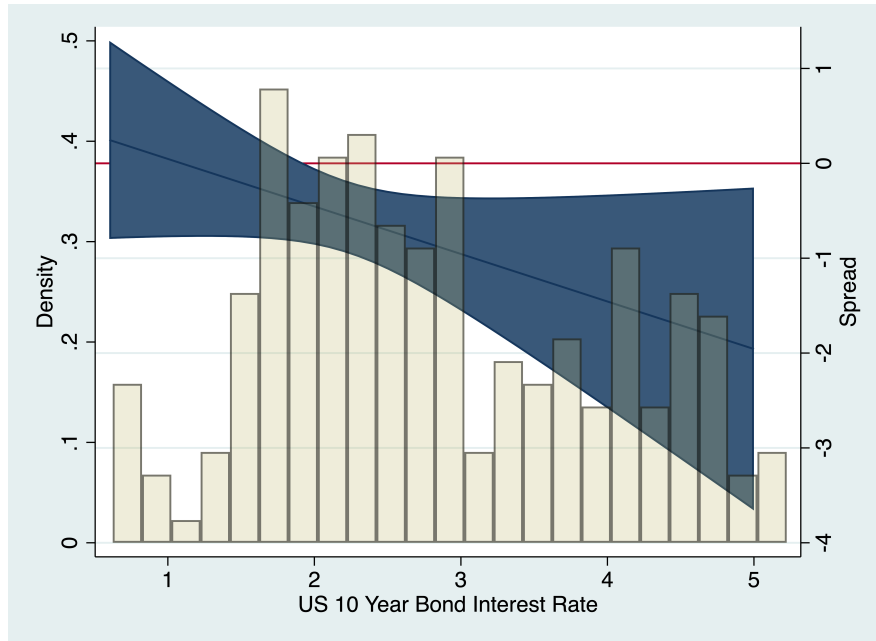
Figure 3: Average Marginal Effect of BRICS conditional on Global Uncertainty



Similarly, Fig. 4 shows the mediating role of global capital scarcity measured by the US 10 Year bond interest rates. As shown in the Appendix, the results are robust to the alternative measure of capital availability,

i.e. the US real interest rate.³⁴ Once again, the hypothesized relationship holds. 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.

Figure 4: Average Marginal Effect of BRICS conditional on International Capital Liquidity



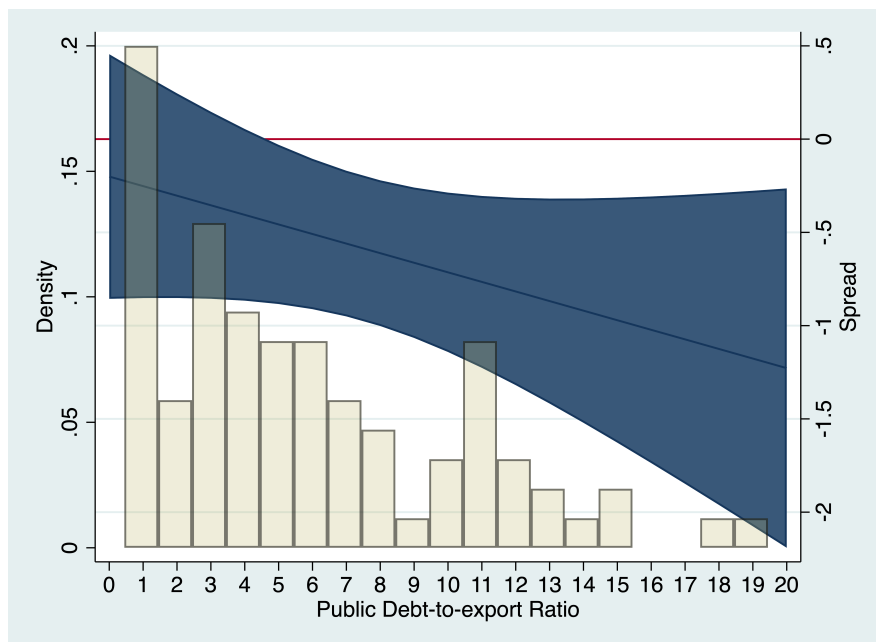
Overall, the results above vindicate a behavioral interpretation suggesting an over-reliance on heuristics during "bad" time. This conclusion comports with previous studies on the Great Financial Crisis. For example, drawing from a set of in-depth interviews with financial practitioners and a qualitative analysis of the financial press. [Naqvi \(2019\)](#) concludes that during the height of the panic phase [...] 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).

Finally, hypothesis 4 suggests that the BRICS peer effect is mediated by a country's sensitivity to financial markets. In particular, the BRICS effect should be stronger as sensitivity to international markets increase. [Fig. 5](#) shows that the marginal effect of the BRICS articles is statistically insignificant at low levels of financial

³⁴The latter measure is available at the yearly frequency, which is reflected in the larger confidence intervals.

vulnerability, but it becomes increasingly more pronounced as the debt burden increases. The implicit association to a trustworthy club results in additional benefits at higher level of financial dependence. When the public debt-to-export ratio reaches its maximum in the dataset - at around 20% - there is a 1.2 basis point reputational transfer.

Figure 5: Average Marginal Effect of BRICS conditional on Financial Sensitivity



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 group as a whole as well as for Brazil, India, and Russia individually. Substantively, the effect is small but consistent with that of previous studies on categorizations and heuristics (e.g. [Brooks et al. \(2015\)](#)). 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, but also as a result of the company it keeps in the grouping acronyms used in the media.

5 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.

First of all, 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 (Table 19, Table 20, Table 21, and Table 22 in the Appendix). 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 mention increases, the BRICS concept is more readily available in the investors' minds and the implicit association is more likely to ensue.

Second, throughout the chapter 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 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). To begin with, I summarize the information contained in the other countries' bond yields via Principal Component Analysis to capture any group-wide co-movement. Following the literature, the first PC is then included in the equation (Altınbaş et al. 2021). The extracted financial shocks are commonly used to investigate and/or control for the presence and size of regional spillover effects (Fukuda and Tanaka 2020, Altınbaş et al. 2021). The results are by and large identical (see Table 27, Table 28, and Fig 9, Fig 10, Fig 11). Second, we know that credit ratings are a likely source of contagion effects (Longstaff 2010). As such, I control for Credit Rating Agency's announcements for the other countries in the group. To avoid over-parameterizing an already rich model, I extract the first principal component of

the credit rating announcements of the other BRICS country (after excluding the target country) and include the first principal component. The announcements shocks have been used in previous investigations of group acronyms and financial markets (Brazys and Hardiman 2015). Finally, in the most conservative specification, I include both the first Principal Component of credit rating announcements as an exogenous variable as well as the first Principal Component of sovereign bond interest rates. The results - available upon request - continue to hold under both scenarios.

Third, a similar line of reasoning might suggest 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 held 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). Unsurprisingly, there is some evidence that the five countries' financial markets have become more integrated over time, although it is hard to identify the exact time break (Bianconi et al., 2013; Matos et al., 2015; Çepni et al., 2020). 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. As Fig. 18 and Fig. 19 attest, there is 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. As Table 29 attests, the results hold also in the pre-financial crisis period, although they are significant only at the 10% level. This is unsurprising considering 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 (see Table 30).

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. 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 in both cases, but the effect size is much larger than in the main analysis on all newspapers (See Table 31 and Table 32).³⁵

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 membership's arbitrariness criteria to select five countries that are somehow similar to the BRICS 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.³⁶ As Table 5 shows,

³⁵We should notice that this analysis promises more than it delivers. First of all, even after aggregating all financial and business newspapers the BRICS series remains sparse, with several zeroes and little variation in the independent variable. The average number of articles per month is only 2.7. Once the coefficients in Model 3 Table 31 are standardized, the effect of one standard deviation increase in the number of business/financial articles is 4-basis points decrease in the spread, thus in line with the 3.74 basis points decrease in Model 3 Table 3. Second, while there are good reasons to suggest that investors may be influenced from real-time news more than by paper media, my analysis is aggregated at the monthly level. Hence, the results in columns 4-5-6 in Table 31 should not be interpreted as a "real-time" effects of news, but only as a robustness check for a specific sub-sub-sample.

³⁶I modify the search string slightly. Since the target country in this case is not part of the acronym, I query articles mentioning any of

there is no relationship between the number of BRICS articles and these five countries.

Table 5: Placebo Test - Non BRICS Countries

	Pooled	MEX	TUR	IND	VTN	NIG
Δ BRICS2	-0.063 (0.084)	-0.117 (0.074)	-0.124 (0.219)	-0.120 (0.108)	0.065 (0.125)	-0.152 (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 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) acronym. Table 6 shows the results. The effects are minuscule and either statistically insignificant or in the opposite direction across both pooled and country-by-country regression.

Table 6: Placebo 2 - Volume of Articles without BRIC(S) Acronym

	Pooled	BRA	RUS	IND	CHN	SAF
Δ No BRICS	0.001 (0.001)	-0.001 (0.002)	0.007** (0.003)	0.003* (0.001)	0.002* (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. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

the BRICS, not just the remaining four.

6 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 chapter 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. Language is not a merely descriptive tool, but can also play a performative role ([Blyth et al., 2002](#); [McNamara, 2019](#)).

In this chapter, I have proposed and tested a theory linking the discursive reference to member countries as a cohesive "good-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, capital availability, and sensitivity to financial markets - 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](#)). Relatively well-known emerging economies - such as Brazil, India, China, Russia, and South Africa - also gain 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 distinguishing 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). 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.

7 Appendix

Table 7: Augmented Dickey Fuller Tests - Brazil

	Level	FD	Level (c)	FD (c)	Level (c, t)	FD (c, t)
BRICS	-0.420	-5.156***	-1.916	-5.141***	-1.044	-5.406***
BRICS2	-0.608	-5.766***	-1.575	-5.747***	-1.097	-5.863***
BRICS3	-0.722	-5.729***	-1.630	-5.713***	-1.184	-5.817***
Spread	-0.406	-4.127***	-2.503	-4.108***	-2.901	-4.084***
Foreign Reserves	0.320	-1.993**	-2.144	-2.573*	-0.920	-2.972*
Exchange rate	0.396	-3.447***	-0.651	-3.564***	-2.645	-3.673**
Energy Index	-0.106	-3.582***	-2.231	-3.600***	-2.313	-3.540**

Note: c = constant; t = trend.

Maximum lag length for the tests is chosen according to the formula in Schwert (1989).

Asterisks denote rejection of the unit root null hypothesis at 1% (***), 5% (**), and 10% (*).

Table 8: Augmented Dickey Fuller Tests - Russia

	Level	FD	Level (c)	FD (c)	Level (c, t)	FD (c, t)
BRICS	-0.359	-5.513***	-2.239	-5.529***	-1.306	-5.937***
BRICS2	-0.765	-5.703***	-2.481	-5.697***	-2.167	-5.866***
BRICS3	-0.976	-5.796***	-2.221	-5.790***	-2.507	-5.834***
Spread	-0.343	-4.471***	-2.316	-4.471***	-2.855	-4.463***
Foreign Reserves	0.591	-2.846***	-2.239	-3.119**	-2.541	-3.138*
Exchange rate	1.376	-3.174***	0.016	-3.542***	-2.394	-3.711**

Note: c = constant; t = trend.

Maximum lag length for the tests is chosen according to the formula in Schwert (1989).

Asterisks denote rejection of the unit root null hypothesis at 1% (***), 5% (**), and 10% (*).

Table 9: Augmented Dickey Fuller Tests - India

	Level	FD	Level (c)	FD (c)	Level (c, t)	FD (c, t)
BRICS	-0.593	-5.640***	-2.078	-5.648***	-1.663	-5.886***
BRICS2	-0.796	-5.951***	-2.161	-5.947***	-2.117	-6.112***
BRICS3	-0.767	-7.035***	-2.115	-7.047***	-3.419*	-7.066***
Spread	0.327	-4.158***	-2.433	-4.198***	-1.653	-4.461***
Foreign Reserves	-1.900*	-2.414***	0.253	-3.109**	-1.765	-3.178*
Exchange rate	-2.127**	-3.392***	-0.021	-3.942***	-2.527	-3.969***

Note: c = constant; t = trend.

Maximum lag length for the tests is chosen according to the formula in Schwert (1989).

Asterisks denote rejection of the unit root null hypothesis at 1% (***), 5% (**), and 10% (*).

Table 10: Augmented Dickey Fuller Tests - China

	Level	FD	Level (c)	FD (c)	Level (c, t)	FD (c, t)
BRICS	-0.429	-5.893***	-2.252	-5.884***	-1.814	-6.048***
BRICS2	-0.532	-6.744***	-2.233	-6.735***	-2.361	-6.777***
BRICS3	-0.700	-6.949***	-1.799	-6.946***	-2.391	-6.942***
Spread	-1.580	-2.517**	-2.874*	-2.579*	-2.601	-2.683***
Foreign Reserves	0.175	-1.669*	-2.231	-1.831	-1.430	-2.385
Exchange rate	-1.529	-3.017***	-2.476	-3.277**	-1.965	-3.600**

Note: c = constant; t = trend.

Maximum lag length for the tests is chosen according to the formula in Schwert (1989).

Asterisks denote rejection of the unit root null hypothesis at 1% (***), 5% (**), and 10% (*).

Table 11: Augmented Dickey Fuller Tests - South Africa

	Level	FD	Level (c)	FD (c)	Level (c, t)	FD (c, t)
BRICS	-1.313	-5.073***	-0.637	-5.285***	-2.473	-5.325***
BRICS2	-1.319	-5.445***	-1.577	-5.556***	-2.493	-5.528***
BRICS3	-1.163	-5.679***	-2.163	-5.716***	-2.652	-5.684***
Spread	0.468	-3.454***	-1.548	-3.484***	-2.432	-3.449**
Foreign Reserves	0.858	-3.134***	-0.768	-3.253**	-1.727	-3.226*
Exchange rate	1.080	-3.121***	-1.475	-3.495***	-1.650	-3.669**

Note: c = constant; t = trend.

Maximum lag length for the tests is chosen according to the formula in Schwert (1989).

Asterisks denote rejection of the unit root null hypothesis at 1% (***), 5% (**), and 10% (*).

Table 12: KPSS Tests - Brazil

	Level	FD	Level (t)	FD (t)
BRICS	0.704**	0.047	0.210**	0.023
BRICS2	0.648**	0.027	0.105*	0.019
BRICS3	0.755***	0.022	0.098	0.019
Spread	0.335	0.047	0.143*	0.044
Foreign Reserves	1.690***	0.584**	0.485**	0.108
Exchange rate	1.460***	0.261	0.438***	0.063
Energy Index	0.245***	0.081	0.301	0.083

Note: t = trend. Null hypothesis: the series is stationary or trend stationary.

Max lag order from automatic bandwidth selection procedure in Newey and West (1994).

Asterisks denote rejection of the unit root null hypothesis at 1% (***), 5% (**), and 10% (*).

Table 13: KPSS Tests - Russia

	Level	FD	Level (t)	FD (t)
BRICS	0.976***	0.069	0.335***	0.025
BRICS2	0.545**	0.037	0.168**	0.021
BRICS3	0.898***	0.026	0.083	0.021
Spread	0.599**	0.053	0.139*	0.043
Foreign Reserves	1.030***	0.200	0.278***	0.145*
Exchange rate	1.850***	0.183	0.303***	0.045

Note: t = trend. Null hypothesis: the series is stationary or trend stationary.

Max lag order from automatic bandwidth selection procedure in Newey and West (1994).

Asterisks denote rejection of the unit root null hypothesis at 1% (***), 5% (**), and 10% (*).

Table 14: KPSS Tests - India

	Level	FD	Level (t)	FD (t)
BRICS	1.010***	0.061	0.344***	0.023
BRICS2	1.010**	0.045	0.165**	0.025
BRICS3	1.350***	0.031	0.069	0.025
Spread	1.100***	0.402*	0.444***	0.042
Foreign Reserves	1.820***	0.192	0.236***	0.118
Exchange rate	1.99***	0.120	0.228***	0.059

Note: t = trend. Null hypothesis: the series is stationary or trend stationary.

Max lag order from automatic bandwidth selection procedure in Newey and West (1994).

Asterisks denote rejection of the unit root null hypothesis at 1% (***), 5% (**), and 10% (*).

Table 15: KPSS Tests - China

	Level	FD	Level (t)	FD (t)
BRICS	0.676**	0.046	0.232***	0.022
BRICS2	0.810***	0.025	0.086	0.019
BRICS3	1.030***	0.021	0.083	0.019
Spread	0.844***	0.327	0.231***	0.052
Foreign Reserves	1.150***	0.754**	0.494***	0.131*
Exchange rate	1.850***	0.316	0.463***	0.104

Note: t = trend. Null hypothesis: the series is stationary or trend stationary.

Max lag order from automatic bandwidth selection procedure in Newey and West (1994).

Asterisks denote rejection of the unit root null hypothesis at 1% (***), 5% (**), and 10% (*).

Table 16: KPSS Tests - South Africa

	Level	FD	Level (t)	FD (t)
BRICS	1.170***	0.037	0.115*	0.025
BRICS2	0.839**	0.034	0.069	0.022
BRICS3	0.488***	0.024	0.068	0.022
Spread	1.260***	0.089	0.072	0.053
Foreign Reserves	1.960***	0.191	0.482***	0.128*
Exchange rate	1.710***	0.082	0.351***	0.051

Note: t = trend. Null hypothesis: the series is stationary or trend stationary.

Max lag order from automatic bandwidth selection procedure in Newey and West (1994).

Asterisks denote rejection of the unit root null hypothesis at 1% (***), 5% (**), and 10% (*).

Table 17: Linear Fixed Effects Models - 10 Year Sovereign Bond Yield

	Model 1	Model 2	Model 3
Δ BRICS2 (t-1)	-0.537*** (0.151)	-0.714*** (0.180)	-0.673*** (0.185)
Total debt % GDP (t-1)		1.658** (0.698)	1.539** (0.629)
Current Account Balance (% GDP) (t-1)		0.024 (1.355)	-0.207 (1.280)
Economic Size (t-1)		-0.007* (0.004)	-0.007* (0.004)
Economic Development (t-1)		0.004 (0.008)	0.005 (0.007)
Deficit (% GDP)		2.559* (1.333)	2.719** (1.277)
Regime Type (t-1)		-11.097 (12.354)	-9.567 (11.716)
Capital Account Openness (t-1)		1.167 (32.218)	-9.419 (30.446)
Financial Crisis (t-1)		6.274 (28.194)	0.061 (27.002)
Economic Growth (t-1)		-0.081 (1.430)	-0.271 (1.056)
Credit Rating Score (t-1)		7.880 (4.911)	7.773* (4.535)
Inflation (t-1)		-0.154 (0.897)	-0.426 (0.821)
Δ Foreign Reserve Currency		-0.000 (0.000)	-0.000* (0.000)
Summit		9.613** (3.892)	8.387** (4.239)
Δ Energy Index			0.430 (0.322)
Δ Exchange Rate			8.021*** (1.920)
VIX (t-1)			-0.202 (0.614)
Δ Financial Contagion Spread			-15.709** (7.608)
Constant	1.043 (7.393)	-115.381 (132.950)	-111.783 (125.881)
Country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
N	852	852	852
R^2	0.047	0.080	0.130
Adj. R^2	0.023	0.042	0.089

Note: Newey West Standard Errors in parenthesis. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 18: Interaction Models - Hypotheses 2,3,4

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Δ BRICS2	1.538** (0.766)	-0.570*** (0.211)	-0.120 (0.855)	-0.261 (0.579)	-0.199 (0.335)	-0.214 (0.301)
VIX	1.809*** (0.434)					
Δ BRICS2 * VIX	-0.143*** (0.052)					
Global factor		-10.698* (6.210)				
Δ BRICS2 * Global factor		0.193 (0.269)				
US 10 Year Yield			-13.268* (6.618)			
Δ BRICS2 * US 10 Year Yield			-0.229 (0.363)			
Real US lending interest rate				-34.552*** (8.347)		
Δ BRICS2 * Real US lending interest rate				-0.148 (0.253)		
Public Debt-to-export ratio					1.202** (0.523)	
Δ BRICS2 * Public Debt-to-export ratio					-0.051 (0.036)	
Debt-to-export ratio						0.062 (0.397)
Δ BRICS2 * Debt-to-export ratio						-0.016** (0.009)
All controls	Yes	Yes	Yes	Yes	Yes	Yes
Country and Year FE	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.207	0.156	0.166	0.156	0.098	0.158
Adj. R^2	0.168	0.113	0.125	0.116	0.074	0.116
N	895	840	895	895	895	895

Newey West Standard Errors in parenthesis * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 6: Average Marginal Effect of BRICS conditional on Global Uncertainty (measured as Global Risk Factor)

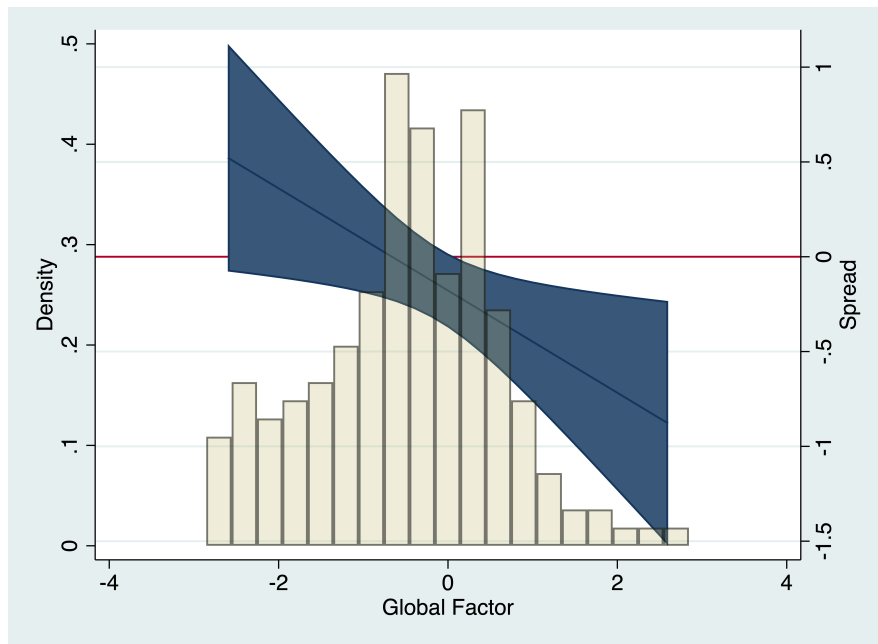


Figure 8: Average Marginal Effect of BRICS conditional on Financial Sensitivity (measured as Total Debt-to-Export ratio)

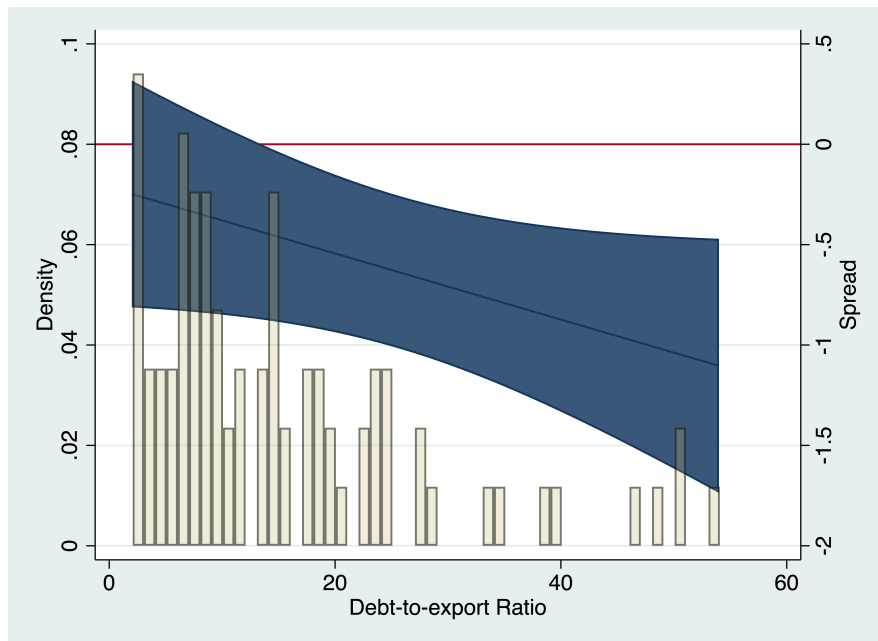


Figure 7: Average Marginal Effect of BRICS conditional on International Capital Liquidity (measured as Real US Interest Rates)

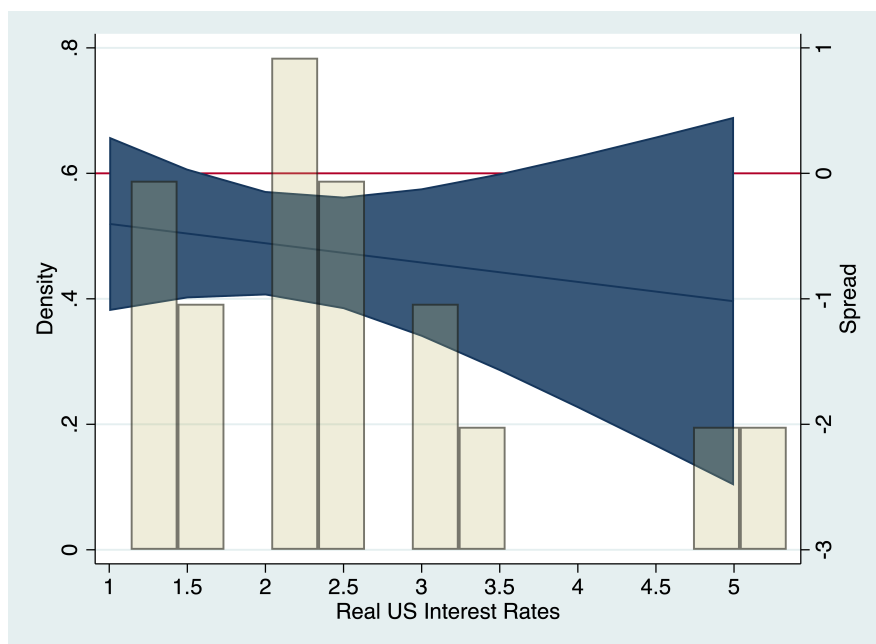


Table 19: Pooled Models using BRICS1 - Hypothesis 1

	Spread	Spread	Spread	Bond	Bond	Bond
Δ BRICS 1 mention	-0.183** (0.078)	-0.155 (0.095)	-0.177* (0.096)	-0.199*** (0.069)	-0.269*** (0.081)	-0.260*** (0.084)
Domestic controls		Yes	Yes		Yes	Yes
Global controls			Yes			Yes
Country and Year FE	Yes	Yes	Yes	Yes	Yes	Yes
<i>N</i>	852	852	852	852	852	852

Newey West Standard Errors in parenthesis

Table 20: Pooled Models using BRICS3 - Hypothesis 1

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Δ BRICS 3 mentions	-0.819*** (0.266)	-0.749** (0.319)	-0.873*** (0.327)	-0.815*** (0.228)	-1.070*** (0.271)	-1.041*** (0.279)
Domestic controls		Yes	Yes		Yes	Yes
Global controls			Yes			Yes
Country and Year FE	Yes	Yes	Yes	Yes	Yes	Yes
<i>N</i>	852	852	852	852	852	852

Newey West Standard Errors in parenthesis

Table 21: Single-Country Models using BRICS1 - Hypothesis 1

	BRA	RUS	IND	CHI	SAF
Δ BRICS1	-0.241 (0.226)	-0.582** (0.286)	-0.077 (0.161)	0.162 (0.174)	-0.036 (0.126)
All controls	Yes	Yes	Yes	Yes	Yes
Linear Year Trend	Yes	Yes	Yes	Yes	Yes
N	170	195	195	170	122
R^2	0.211	0.288	0.121	0.150	0.341
Adj. R^2	0.117	0.211	0.042	0.061	0.234

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

Table 22: Single-Country Models using BRICS3 - Hypothesis 1

	BRA	RUS	IND	CHI	SAF
Δ BRICS3	-1.601*** (0.550)	-1.481* (0.790)	-0.898* (0.531)	0.179 (0.556)	-0.248 (0.462)
All controls	Yes	Yes	Yes	Yes	Yes
Linear Year Trend	Yes	Yes	Yes	Yes	Yes
N	170	195	195	170	122
R^2	0.223	0.286	0.125	0.146	0.343
Adj. R^2	0.131	0.209	0.046	0.057	0.236

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

Table 23: Pooled Models PCA Spread - Hypothesis 1

	Model 1	Model 2	Model 3
Δ BRICS1	-0.177** (0.076)		
Δ BRICS2		-0.621*** (0.217)	
Δ BRICS3			-0.873*** (0.327)
All controls	Yes	Yes	Yes
Country and Year FE	Yes	Yes	Yes
N	852	852	852
R^2	0.152	0.149	0.152
Adj. R^2	0.113	0.110	0.112

Newey West Standard Errors in parenthesis

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 24: Single-country Models PCA Spread (BRICS2) - Hypothesis 1

	BRA	RUS	IND	CHN	SAF
Δ BRICS2	-0.988*** (0.360)	-1.055** (0.491)	-0.636* (0.372)	0.040 (0.394)	-0.172 (0.317)
All controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
N	170	195	195	170	122
R^2	0.225	0.318	0.141	0.141	0.355
Adj. R^2	0.130	0.229	0.049	0.049	0.245

Newey West Standard Errors in parenthesis

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 9: AME of BRICS2 conditional on Global Uncertainty PCA Spread - Hypothesis 2

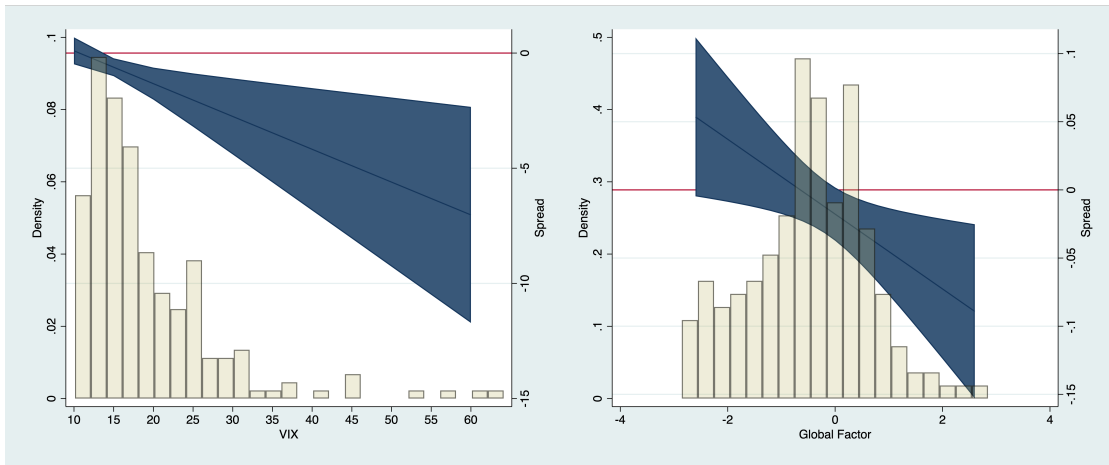


Figure 10: AME of BRICS2 conditional on Capital Liquidity PCA Spread - Hypothesis 3

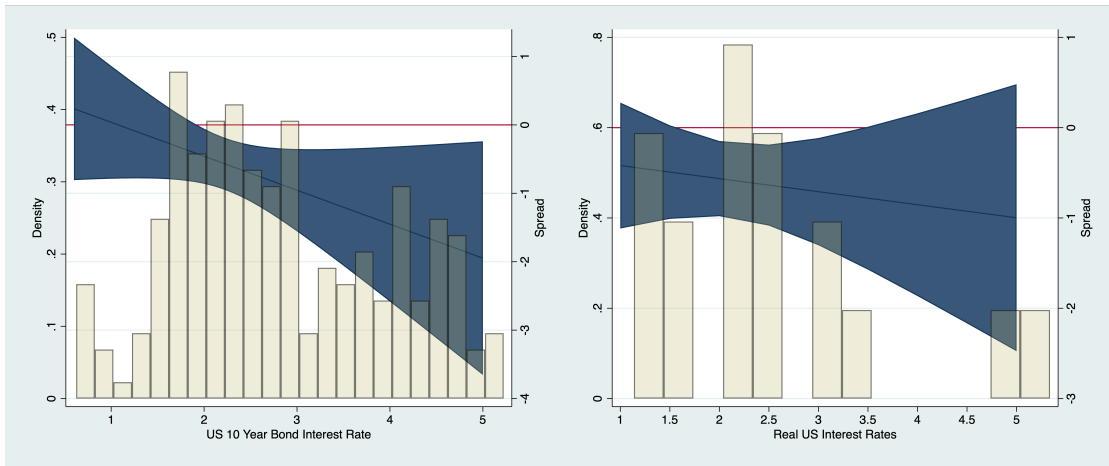


Figure 11: Average Marginal Effect of BRICS2 conditional on Financial Sensitivity PCA Spread - Hypothesis 4

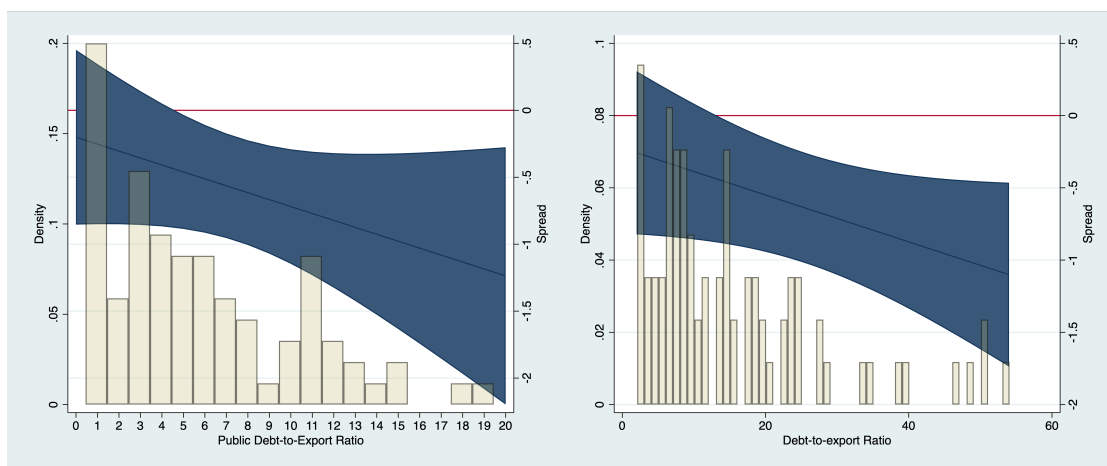


Table 25: Pooled Models PCA Credit Rating Scores - Hypothesis 1

	Model 1	Model 2	Model 3
Δ BRICS1	-0.180*		
	(0.097)		
Δ BRICS2		-0.639***	
		(0.216)	
Δ BRICS3			-0.898***
			(0.327)
All controls	Yes	Yes	Yes
Country and Year FE	Yes	Yes	Yes
<i>N</i>	852	852	852
<i>R</i> ²	0.151	0.147	0.150
Adj. <i>R</i> ²	0.111	0.107	0.110

Newey West Standard Errors in parenthesis

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 26: Single-country Models PCA Credit Rating Scores (BRICS2) - Hypothesis 1

	BRA	RUS	IND	CHN	SAF
Δ BRICS2	-1.077***	-1.075**	-0.611	0.081	-0.176
	(0.362)	(0.491)	(0.374)	(0.398)	(0.314)
All controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
<i>N</i>	170	195	195	170	122
<i>R</i> ²	0.214	0.286	0.120	0.117	0.335
Adj. <i>R</i> ²	0.120	0.209	0.041	0.024	0.227

Newey West Standard Errors in parenthesis

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 12: AME of BRICS2 conditional on Global Uncertainty PCA Credit Rating Score - Hypothesis 2

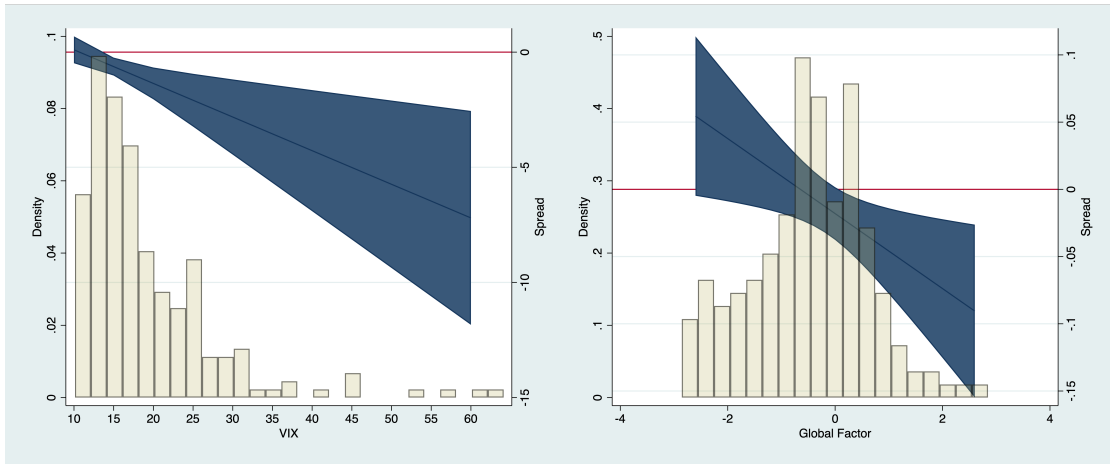


Figure 13: AME of BRICS2 conditional on Capital Liquidity PCA Credit Rating Score - Hypothesis 3

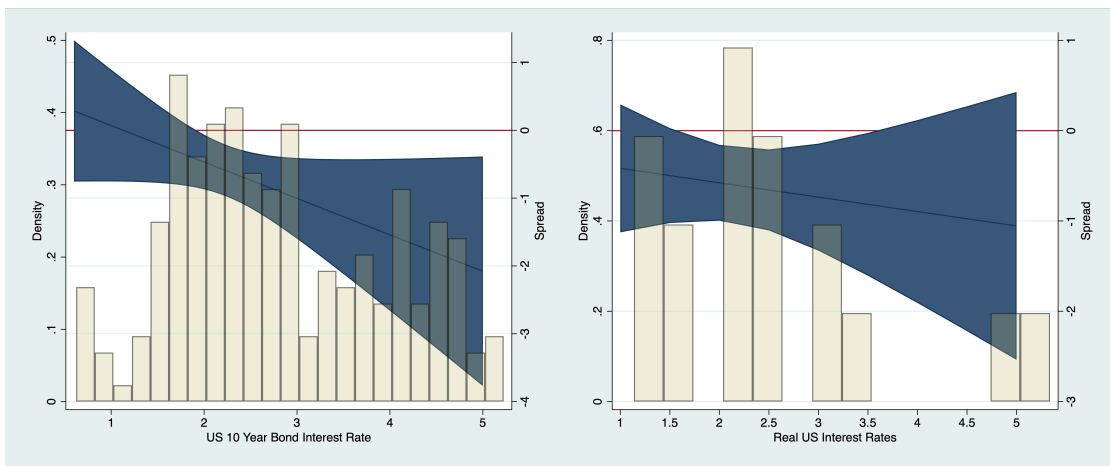


Figure 14: Average Marginal Effect of BRICS2 conditional on Financial Sensitivity PCA Credit Rating Score - Hypothesis 4

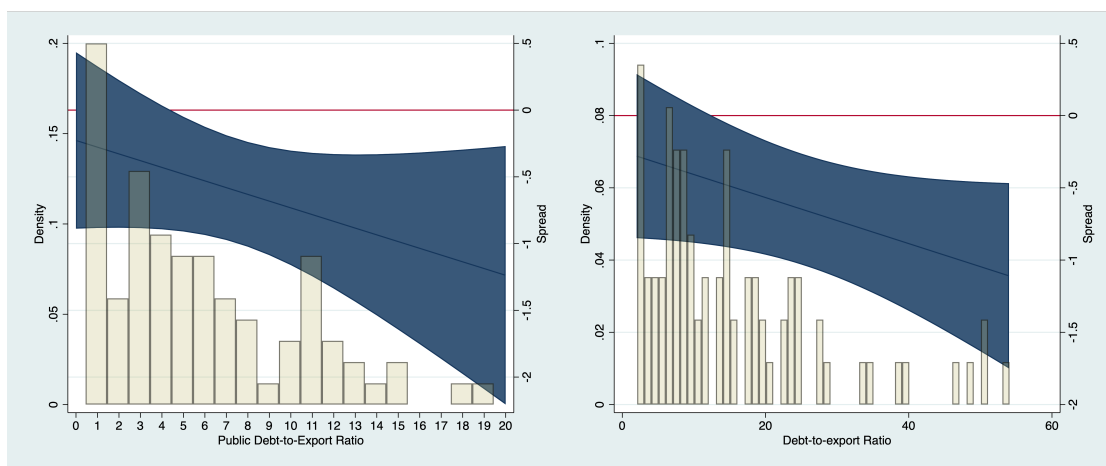


Table 27: Pooled Models PCA Spread and PCA Credit Rating Scores - Hypothesis 1

	Model 1	Model 2	Model 3
Δ BRICS1	-0.178*		
	(0.096)		
Δ BRICS2		-0.630***	
		(0.217)	
Δ BRICS3			-0.885***
			(0.327)
All controls	Yes	Yes	Yes
Country and Year FE	Yes	Yes	Yes
<i>N</i>	852	852	852
<i>R</i> ²	0.153	0.149	0.152
Adj. <i>R</i> ²	0.112	0.108	0.111

Newey West Standard Errors in parenthesis

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 28: Single-country Models PCA Spread and PCA Credit Rating Scores (BRICS2) - Hypothesis 1

	BRA	RUS	IND	CHN	SAF
Δ BRICS2	-0.997***	-1.065**	-0.675*	0.038	-0.168
	(0.361)	(0.490)	(0.382)	(0.395)	(0.318)
All controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
<i>N</i>	170	195	195	170	122
<i>R</i> ²	0.214	0.286	0.120	0.117	0.335
Adj. <i>R</i> ²	0.120	0.209	0.041	0.024	0.227

Newey West Standard Errors in parenthesis

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 15: AME of BRICS2 conditional on Global Uncertainty PCA Credit Rating Score and PCA Spread - Hypothesis 2

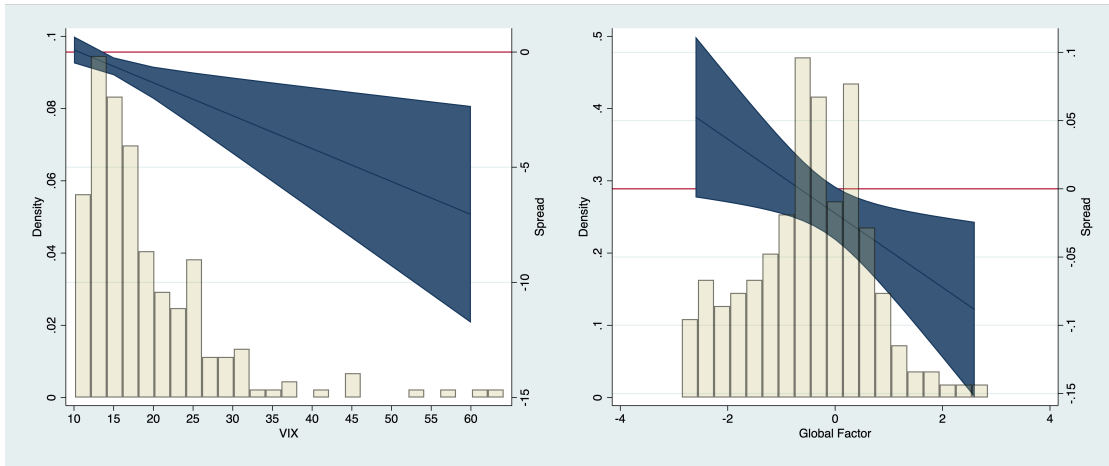


Figure 16: AME of BRICS2 conditional on Capital Liquidity PCA Credit Rating Score and PCA Spread - Hypothesis 3

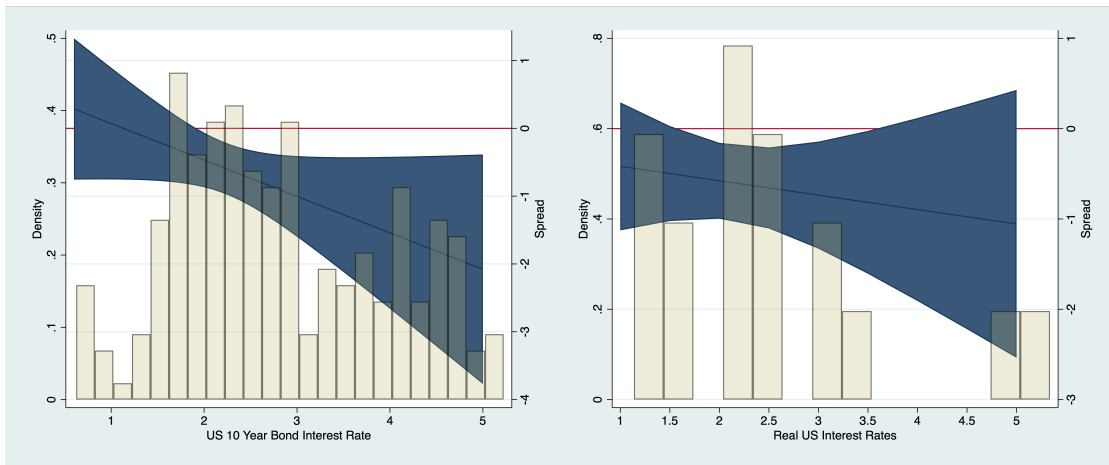


Figure 17: Average Marginal Effect of BRICS2 conditional on Financial Sensitivity PCA Credit Rating Score and PCA Spread - Hypothesis 4

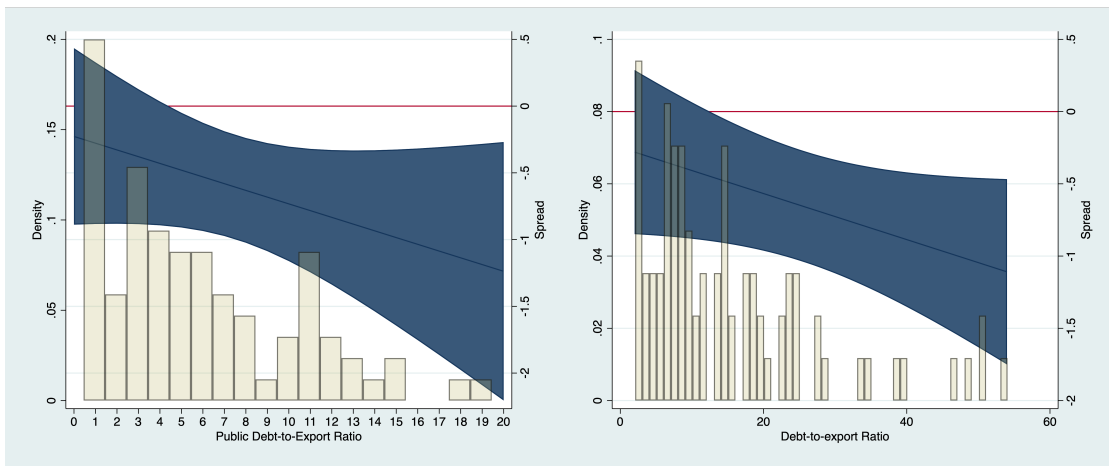


Figure 18: Rolling Regression Spreads - From BRICS to Brazil (Left) and Russia (Right)

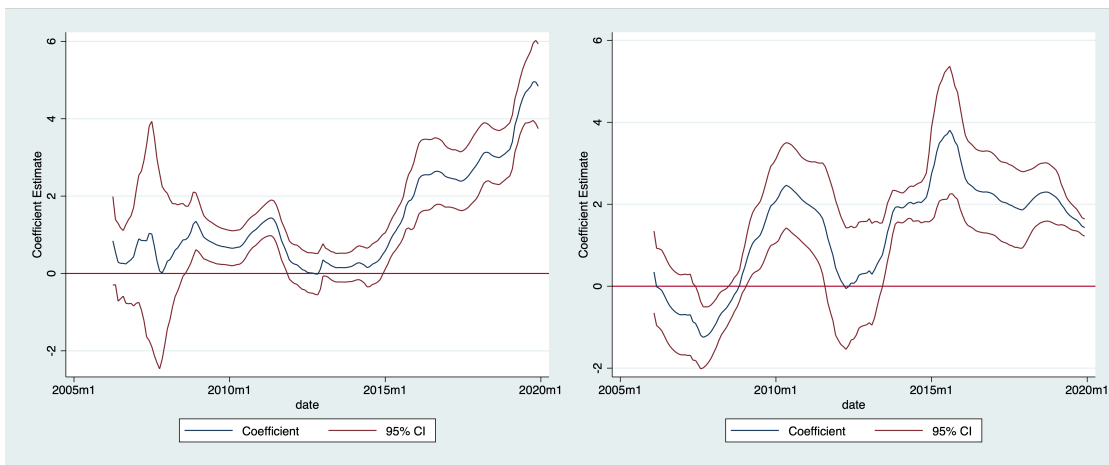


Figure 19: Rolling Regression Spreads - From BRICS to India (Left) and China (Right)

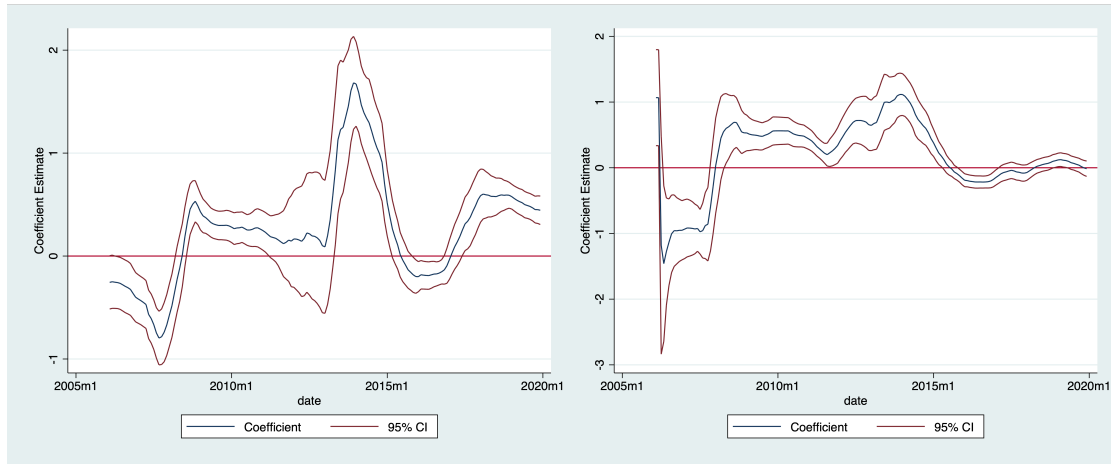


Table 29: Pooled Models Pre- and Post-2009

	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Time Frame	Pre-2009	Pre-2009	Pre-2009	Post-2009	Post-2009	Post-2009
Δ BRICS2	-0.541 (0.332)	-0.603* (0.364)	-0.626* (0.366)	-0.592*** (0.178)	-0.569*** (0.215)	-0.594*** (0.211)
Domestic controls		Yes	Yes		Yes	Yes
Global controls			Yes			Yes
Country and Year FE	Yes	Yes	Yes	Yes	Yes	Yes
<i>N</i>	307	304	304	615	615	615

Newey West Standard Errors in parenthesis - Lag order of autocorrelation is 3 for pre-2009 and 4 for post-2009

Table 30: Pooled Models Pre- and Post-2010

	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Time Frame	Pre-2010	Pre-2010	Pre-2010	Post-2010	Post-2010	Post-2010
Δ BRICS2	-0.821** (0.366)	-0.695* (0.398)	-0.767* (0.402)	-0.538*** (0.173)	-0.533** (0.213)	-0.545*** (0.207)
Domestic controls		Yes	Yes		Yes	Yes
Global controls			Yes			Yes
Country and Year FE	Yes	Yes	Yes	Yes	Yes	Yes
<i>N</i>	367	364	364	555	555	555

Newey West Standard Errors in parenthesis - Lag order of autocorrelation is 3 for pre-2010 and 4 for post-2010

Table 31: Pooled Models Financial Journals (All Combined) and Real-Time Dow Jones

	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Media Type	Financial	Financial	Financial	Dow Jones	Dow Jones	Dow Jones
Δ BRICS2	-8.630*** (1.931)	-8.261*** (2.139)	-7.867*** (2.309)	-8.066*** (1.808)	-7.836*** (2.026)	-7.542*** (2.155)
Domestic controls		Yes	Yes		Yes	Yes
Global controls			Yes			Yes
Country and Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	850	850	850	850	850	850

Newey West Standard Errors in parenthesis

Table 32: Business and Financial Media Only

	Pooled	BRA	RUS	IND	CHN	SAF
Δ BRICS2	-7.542*** (2.155)	-14.598** (6.303)	-6.566 (7.614)	-7.520*** (1.851)	-1.388 (6.329)	0.418 (5.017)
All controls	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes					
Year FE / Linear Trend	Yes	Yes	Yes	Yes	Yes	Yes
N	850	170	194	194	170	122
R^2	0.160	0.310	0.376	0.194	0.223	0.456
Adj. R^2	0.121	0.155	0.243	0.040	0.059	0.307

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

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