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# ABSTRACT

## Media Capture by Banks*

Do media slant news in favor of the banks they borrow from? We study how lending connections affect news coverage of banks earnings reports and of the Eurozone sovereign debt crisis on major newspapers from several European countries. We find that newspapers cover announcements by their lenders - relative to those of other banks - significantly more when they report profits than when they report losses. Such pro-lender bias is stronger for more leveraged outlets and banks, and operates on the extensive margin for general-interest newspapers and on the intensive margin for financial newspapers. Regarding the Eurozone crisis we find that newspapers connected to banks more exposed to stressed sovereign bonds are more likely to promote a narrative of the crisis favorable to banks and to oppose debt-restructuring measures detrimental to creditors. Our findings support the concern that financial distress and increased dependence on creditors may undermine media companies' editorial independence.

**JEL Classification:** G21, L82

**Keywords:** media bias, banks, newspapers, earnings reports, Eurozone crisis

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## 1. Introduction

Mass media play a vital role in informing citizens and in keeping both government and corporate interests accountable (Djankov, McLiesh, Nenova, & Shleifer, 2003; Dyck, Volchkova, & Zingales, 2008; Snyder & Strömberg, 2010).[1] The ability of mass media to influence public opinion creates, however, an incentive for government and firms alike to "capture" them to promote friendly coverage and/or deter hostile reporting (Besley & Prat, 2006; Szeidl & Szucs, 2021). This can occur in various ways: through direct government control (Durante & Knight, 2012), private ownership (Gilens & Hertzman, 2000; Martin & McCrain, 2019), or advertising spending (Beattie, Durante, Knight, & Sen, 2020; Gurun & Butler, 2012; Reuter & Zitzewitz, 2006).

One aspect the literature on media capture has largely overlooked concerns the relationship between media and banks, and its possible implications for media freedom. This issue is potentially relevant for at least three reasons. First, the banking sector depends heavily on the confidence of depositors and investors (Diamond & Dybvig, 1983), but the opaqueness of the industry (Morgan, 2002) means that news coverage of bank conduct and excessive risk-taking can significantly impact the reputation of a bank, if not the industry as a whole. Second, news coverage of financial issues can greatly influence public perception and policy, especially since most readers do not have extensive knowledge or strong beliefs about these issues and are therefore more likely to trust experts' views (Admati, 2017). Third, unlike other firms, banks can also exploit their lending connections to media companies to influence editorial content. This possibility is especially relevant in recent years since, due to competition from online platforms and shrinking advertising revenues, traditional media have become less profitable and more dependent on creditors (Djourelova, Durante, & Martin, 2021; McChesney & Nichols, 2011; Seamans & Zhu, 2014).

There are indeed concerns that the increased dependence of media companies on banks may be detrimental to editorial independence. For example, a 2015 New York Times article on Spain warned of this risk, voicing the worries of some veteran Spanish journalists that "newspapers are in the hands of creditors" and that this is hurting both their reputation and their "independence when it comes to talking about big companies, especially banks".[2]

Yet beyond such anecdotes and generic concerns, no systematic evidence exists on how the connection between banks and media affects news coverage, and whether financially

[1] For example, based on the comprehensive analysis of media ownership patterns in almost 100 countries, Djankov et al. (2003) find that government ownership of media companies is detrimental to political and economic freedom.

[2] The full text of the article, published on November 5, 2015 and titled "Spain's News Media Are Squeezed by Government and Debt", is available at: https://www.nytimes.com/2015/11/06/world/europe/as-spains-media-industry-changes-rapidly-some-worry-about-objectivity.html (accessed on December 26, 2021).

distressed media are more vulnerable to the pressures of creditors. This paper aims to fill this gap by mapping the connections between banks and top newspapers in several European countries, and by examining empirically how these affect the news coverage of different financial events relevant to banks, either directly or indirectly.

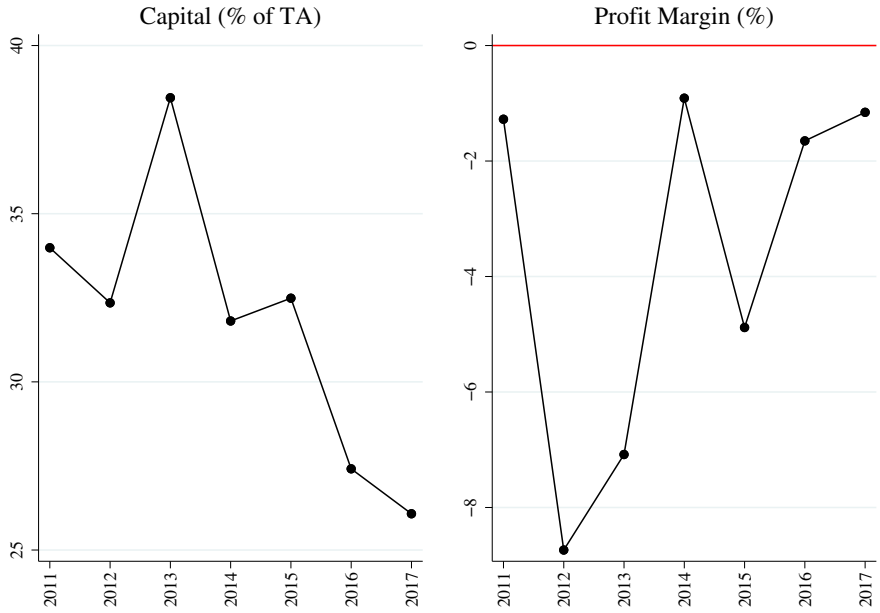
From an empirical standpoint, estimating the causal effect of banks' influence on news coverage is challenging due to the difficulty of disentangling whether media outlets bias content to conform to the interests of connected banks or to the preferences of their readers (Gentzkow & Shapiro, 2010; Mullainathan & Shleifer, 2005), which may correlate with each other. This would be the case, for example, if a bank is more likely to lend to outlets whose readers are more sympathetic to business interests in general, and to the financial sector in particular. Yet, though readers of a given outlet may be more or less sympathetic of the financial sector as a whole, they are unlikely to have a preference for a specific bank. Even if this were the case, such preferences are unlikely to change abruptly over time. Hence, one way to overcome this issue is to focus on a situation in which either the preferences of different banks are not perfectly aligned with one another, or the preferences of a single bank vary over time.

We accordingly explore situations where one of these conditions is met. First, we look at how newspapers report regular (quarterly) bank-specific events such as earnings reports, and examine whether they favor their lenders relative to other banks by highlighting positive results and/or downplaying negative ones. In this setting, our identification strategy exploits variation in lending relationships and news coverage across newspaper-bank pairs, and for the same newspaper-bank pair between quarters characterized by positive or negative earnings results. Second, we study how media-bank connections influence news coverage of key public interest and policy-relevant issues. Specifically, we consider the Eurozone Sovereign Debt Crisis (ESDC) and investigate whether newspapers connected to banks more exposed to stressed sovereign bonds promoted a narrative of the crisis more favorable to the financial sector and endorsed crisis-management strategies less detrimental to lenders. In this setting, we exploit variation across newspapers in lending relationships with banks and variation across banks in exposure to stressed sovereign bonds.

To map the connections between banks and media we identify, for each newspaper, the main banker(s) using information from several vintages of the Bureau Van Dijk's Orbis database. Though we are primarily interested in connection through lending, we also collect information on ownership relations (also from Orbis) between banks and media companies or their parent groups, which we use as control in our empirical analysis. For the analysis of earning reports, we look at twenty top general-interest and financial newspapers in four European countries (France, Germany, Spain, UK). For the analysis of the ESDC, we use a

corpus of articles published in twenty-three newspapers in seven countries (the original four plus Italy, Netherlands and Poland). As depicted in Figure 1, despite being among the largest on the continent, the newspapers in our sample have not been profitable and have become increasingly leveraged over the past decades.

FIGURE 1: NEWSPAPERS MEDIAN CAPITALIZATION AND PROFITABILITY




The figure depicts the trend for the median value of capitalization and profitability for the newspaper in our sample between 2011 and 2017. Capital is defined as shareholders' funds over total assets (i.e., the inverse of leverage). Profit Margin is computed as profits before taxes over operating revenue. Both variables are expressed in percentage terms. Source: own computations from Amadeus/Orbis data.

For the analysis of earnings announcements, we consider all quarterly earnings reports issued between 2012 and 2018 by all publicly traded banks present in the Thomson Reuters I/B/E/S database. Using keyword searches, we identify every relevant article published on a tight interval around the announcement date (i.e. the day of the announcement, as well as the day before and after). We use filters and a supervised machine learning procedure to minimize the incidence of false positives. We also distinguish articles focusing on a single bank (a more precise measure of bank-specific coverage) from those about multiple banks. Our final sample includes 6,660 articles, 2,816 of which focus on a single bank and 3,844 on multiple ones. For the news coverage of the ESDC, we use information on almost 5,000 articles published around several key junctures of the crisis occurring between 2011 and 2012, collected and hand-coded by an independent group of researchers (Picard (2015)). For each article, the data report various qualitative measures of content and tone, including the

article's position regarding the causes and responsibilities of the crisis as well as the possible solutions.

Our results indicate that newspapers tend to slant news in a way that is favorable to their lenders. First, looking at coverage of earnings announcements, we find that newspapers are significantly more likely to talk about the earnings reports issued by their lenders - relative to other banks - when they announce profits than when they announce losses. The estimated effect is sizable: on average, a newspaper is 17.6 percentage points (p.p.) more likely to cover profits by its lender(s) than by other banks. This corresponds to a doubling of the average probability for any other bank, and to a 42% increase relative to the probability for any other bank from the same country of the newspaper. Furthermore, newspapers are more likely to write longer articles about the story, and to treat it separately from stories about other banks. These findings are robust to including newspaper-bank and bank-quarter fixed effects, to controlling flexibly for newspapers' higher tendency to borrow from and report about banks from the same country. In all specifications we also control for ownership relations between banks and media companies (or groups) based on shareholding ties. We find that the effect of lending connections on news coverage always dominates the effect of ownership connections.

We find evidence of pro-lender bias for both general-interest and financial newspapers. However, while for the former lending connections affect the likelihood that an earnings announcement is covered, for the latter it affects the amount and the placement of the coverage. This is consistent with the view that, given their specialization, financial newspapers cannot ignore earning announcements altogether, though they may still favor their lender(s) when deciding how extensively and prominently to cover them.

To further investigate the credit mechanism, we analyze to which extent pro-lender bias depends on the financial leverage of both newspapers and banks. Our results reveal that highly leveraged newspapers, which are more dependent on their lenders, are more likely to slant content in favor of the latter. The influence of newspaper financial vulnerability on pro-lender bias is economically meaningful: a one standard deviation decrease in a newspaper's capitalization (i.e., shareholders' funds over total assets) is associated with an increase in the likelihood of covering gains rather than losses or 43 p.p.. This finding supports the concern that financial distress can put media companies' editorial independence at risk. Along the same lines, we also find some evidence that pro-lender bias is more likely the more leveraged the lender, arguably because more fragile banks have greater incentive to use their connections to try to reduce news coverage of their losses.

Pro-lender bias is not limited to news coverage of earnings reports, but also shapes the way newspapers talk about important financial events of more general interest such as the Euro-

zone crisis. Indeed, our analysis indicates that newspapers connected to banks more heavily exposed to the sovereign debt of troubled southern European countries are significantly less likely to portray banks as being responsible for the crisis and to support debt-restructuring measures that are costly for lenders (e.g., orderly default, haircut). This result is robust to the inclusion of different combinations of fixed effects, and is not driven by the newspapers' size or political leaning. Once again, the effect is quantitatively important: a one standard deviation increase in connected banks' exposure to GIIPS's bonds is associated with a 20 p.p. decrease in the probability of describing the banking sector as responsible for the crisis (40% of baseline), and a 14 p.p. decrease in the probability of supporting some form of debt restructuring (34% of baseline). Reassuringly, the effect does not extend to other issues for which the exposure of connected banks should not matter, such as whether a country has been favored or harmed the most by the single currency since its adoption.

Taken together, our findings provide the first systematic multi-country evidence that connections between banks and media through lending can undermine editorial independence and influence news coverage of key financial shocks, with potentially important ramifications for the formation of public opinion on such crucial and policy-relevant issues.

Our paper relates to various streams of literature. First it contributes to the growing body of work on media capture by government and corporate actors mentioned above. While previous contributions have studied the importance of direct government control, private ownership, or advertising spending, the novelty of our research is that it investigates the possible capture of media by banks and the role of lending as an additional channel of influence. The only contribution related to this issue is a blog post by Zingales (2016) which, looking at news coverage of two reforms of the Italian banking system on a handful of Italian newspapers, documents a correlation between newspapers' endorsement of the reforms and leverage.

Second, our paper relates to previous work on the link between media and bank performance. Specifically, several contributions have documented how the presence of a free and competitive press is associated with lower levels of bank corruption, less fraudulent behavior, and less incidence of preferential lending to politically connected firms (Ho, Chen, Lin, & Chi, 2016; Houston, Lin, & Ma, 2011; Yang, Lu, & Luo, 2014).[3] None of these studies, however, have considered the possibility that banks may attempt to capture the media to minimize negative news coverage, an aspect that our paper explicitly investigates.

Third, our paper contributes to the literature on the influence of lenders on firms' management (Denis & Wang, 2014; Gilson, 1990; Nini, Smith, & Sufi, 2012). While previous

[3] These findings, specific to the banking sector, dovetail nicely with previous evidence on the positive impact of media monitoring on firm behavior including work by Dyck et al. (2008) and Kuhnen and Niessen (2012).

work has looked at how creditors' pressure can affect firms' decisions related to investments, acquisitions, and even CEO appointments, our paper documents that lenders' influence can impact other key areas of a firm's activity such as media companies' editorial policy.

Finally, our paper relates to the large literature on the impact of media on financial markets (Ahern & Sosyura, 2014; Dougal, Engelberg, Garcia, & Parsons, 2012; Dyck & Zingales, 2003; Engelberg & Parsons, 2011; Fang, Peress, & Zheng, 2014; Gurun & Butler, 2012; Hillert, Jacobs, & Müller, 2014; Solomon, 2012; Solomon, Soltes, & Sosyura, 2014). While these contributions show how corporate news affect stock prices, we focus on how firms, particularly banks, may actively try to influence news content.

The remainder of the paper is organized as follows. In section 2 we describe the data used in our analysis. In section 3 and 4 we present the empirical strategy and the results for the analysis of news coverage of banks' earnings announcements and that of news coverage of the Eurozone crisis, respectively.

## 2. Data

In this section, we describe the data we employ in our empirical analysis. First, we present the data on news coverage of both banks' earnings announcements and the ESDC. We then describe the data on the connections between media and banks through both lending and shareholding, and finally the data on balance sheet variables for both banks and newspapers.

### 2.1. Media Coverage

#### 2.1.1. News Coverage of Banks' Quarterly Earnings Announcements

The analysis of quarterly earnings announcements involves 36 banks listed in European markets over the period 2012-2018, and 20 top newspapers from four European countries, namely France, Germany, Spain and the UK. Importantly, listed banks are required by law to report their balance sheet figures each quarter, including most notably earnings; hence, earnings reports constitute regular and predictable events whose calendar is set well in advance. Our sample includes all financial intermediaries listed in any European stock exchange for which earnings announcements data are available from the Thomson Reuters I/B/E/S dataset. The final list of banks is reported in Appendix Table A1.

To define the sample of newspapers, we employ the following procedure. First, for each country, we consider the four general-interest newspapers with the highest circulation, plus (at least) one top financial newspaper. We then exclude all newspapers that are not available from the Dow Jones Factiva database, our primary source of news content.[4] In the case of

[4] This is the case for three French newspapers (*Le Monde*, *Libération* and *Aujourd'Hui*) and a German one (*Frankfurter Allgemeine Zeitung*).

Spain, given the presence of two equally important financial newspapers, *Expansión* and *El Economista*, we include them both in our sample. Finally, for the UK, since the circulation metric favors tabloids disproportionately, we also consider the two main national general interest newspapers, i.e. *The Guardian* and *The Times*. Table A1 lists the 20 newspapers in our final sample.

For each earnings announcement of each bank in our sample, we download from the Factiva database all relevant articles published either on the day of the announcement or on the day before and after it. To identify the relevant articles we use the following two-step procedure. First, we consider all articles containing the bank's official name (or acronym) *and* any of a wide range of keywords associated with earnings announcements (e.g., earning, result, profit, loss, etc.).[5,6] Based on this procedure we identified over 13,000 articles. A large number of these, however, were false positive, meaning that they are either totally unrelated to banking,[7] or do indeed talk about the bank of interest but not in relation to earnings announcements.

To address this issue we apply a supervised machine learning model called BERT (Bidirectional Encoder Representations from Transformers; Devlin, Chang, Lee, and Toutanova, 2018). In practice, we select 10% of the articles in each language and have human analysts read and code them as relevant or irrelevant depending on whether they actually talk about a bank's earnings reports or not. We then select a random sub-sample of these articles (the "training set") which is used to make the algorithm "learn" how to distinguish relevant articles from irrelevant ones. We then take the remaining hand-coded articles (the "validation set"), let the algorithm classify them, and compare the outcome with that produced by coders to assess the accuracy of the automated predictions. We find that the procedure ensures an accuracy level of 90% or more in each of the four languages, and dominates other viable alternatives.[8] Our final sample consists of 6,660 articles, 2,816 of which mention just one bank (mono-bank) and 3,844 which mention more than one (multi-bank). Our analysis will

[5] Table A2 reports the list of keywords in each of the four languages of the newspapers in our sample.

[6] An alternative approach would be to first select all articles over the period of interest containing the name (or acronym) of a bank and then select only those related to earnings announcements using a topic-selection model. However, anti-data-scraping download restrictions in the Factiva database make such an option unfeasible.

[7] For instance, the UK Premier League (i.e. the main national soccer league) is sponsored by Barclays, one of the banks in our sample. As a result, the combination of filters containing the words "Barclays" and "loss" will select articles on soccer matches. Similarly, banks' analysts are often interviewed to comment on economic policies and/or developments in financial markets. Hence, the same combination of keywords may select articles whereby a Barclays' analyst comments on, say, the evolution of the British pound exchange rate against the US dollar.

[8] For example, we tried applying the Factiva built-in filters to select a specific topic, but this resulted in too many articles, including many relevant ones, being dropped. We also tried applying alternative machine-learning topic-selection models, but all performed worse than BERT.

primarily focus on mono-bank articles, since they arguably represent a more precise measure of news coverage of a bank's earnings announcement. However, we will also consider multi-bank articles both to test the hypotheses that newspaper may "conceal" negative news for their lenders by presenting it alongside information about other companies rather than in a stand-alone article. We collapse the data by newspaper*bank*year-quarter, and construct several measures of news coverage, which we describe in Table 1.[9]

For the extensive margin, we create a dummy variable for whether in a given year-quarter a given newspaper publishes at least one mono-bank article about a bank's earnings announcement, which is the case in 16.6% of our observation. For the intensive margin, we compute the number of mono-bank articles and of total articles about a bank's earnings announcement published by a newspaper in a given quarter-year, conditional on it publishing at least one article of either kind (both in logs). On average, when a newspaper covers a bank's earnings announcement it devotes to it 1.23 mono-bank articles. Both the first and second quartile of the distribution are equal to 1, which indicates that most of the action takes place on the extensive margin of news coverage. Finally, we also compute the length of mono-bank articles as well as of total articles (measured as the log of the number of words). Overall, we find that mono-bank articles account for 46.5% of all the articles about earnings announcement. However, since these articles are on average longer than the multi-bank articles, they account for 65% of total words.

#### 2.1.2. Media Coverage of the Eurozone Sovereign Debt Crisis (ESDC)

For the analysis of the news coverage of the ESDC we use data collected by a group of international media scholars led by Robert Picard (2015) who hand-coded a large number of articles published on various prominent European newspapers around key events of the crisis. We focus on eight such events, occurred between 2011 and 2012, two years for which we have comprehensive data on banks' exposure to sovereign bonds (see section 2.3). A description of the relevant events is provided in Table A3. The data cover all articles published in the 10 to 14 days after each event. The largest sample comprising 25 newspapers (listed in Table A4) from France, Germany, Italy, Netherlands, Poland, Spain and the UK, for which we also have data on lending connections from Orbis.[10] Overall, our sample includes 4,622 articles. For each article, the data report a series of qualitative variables about the content which were hand-coded by the researchers based on a questionnaire.

[9] We exclude all newspaper*bank pairs for which the newspaper never writes about the bank's earnings announcements at any point in our sample period.

[10] The sample of newspapers analyzed in the context of the ESDC varies depending on the information used for tracking lending relationships, as carefully explained in section 2.2.

TABLE 1: SUMMARY STATISTICS - ANALYSIS OF BANKS' EARNINGS ANNOUNCEMENTS

| | Level | Frequency | N | Mean | p25 | p50 | p75 | St. Dev. |
|---|---|---|---|---|---|---|---|---|
| ***Media Coverage*** | | | | | | | | |
| 1($\geq$ 1 mono-bank article) | Paper-bank | Quarterly | 12,631 | 0.166 | 0 | 0 | 0 | 0.372 |
| Ln(# of mono-bank articles) | Paper-bank | Quarterly | 1,995 | 0.208 | 0 | 0 | 0 | 0.391 |
| Ln(length of mono-bank articles) | Paper-bank | Quarterly | 1,995 | 6.692 | 5.908 | 6.758 | 7.546 | 1.170 |
| % mono-bank articles | Paper-bank | Quarterly | 3,397 | 0.465 | 0 | 0.500 | 1 | 0.437 |
| % Length mono-bank articles | Paper-bank | Quarterly | 3,397 | 0.654 | 0.347 | 0.791 | 1 | 0.386 |
| ***Paper-Bank Connections*** | | | | | | | | |
| Banker(Direct) | Paper-bank | Annual | 12,631 | 0.053 | 0 | 0 | 0 | 0.225 |
| Banker(Indirect) | Paper-bank | Annual | 12,631 | 0.041 | 0 | 0 | 0 | 0.198 |
| Banker | Paper-bank | Annual | 12,631 | 0.093 | 0 | 0 | 0 | 0.29 |
| Shareholder | Paper-bank | Annual (lagged) | 12,631 | 0.142 | 0 | 0 | 0 | 0.349 |
| ***Newspapers' Balance sheet*** | | | | | | | | |
| Capital | Paper | Annual (lagged) | 11,750 | 39.09 | 15.62 | 39.80 | 69.76 | 36.49 |
| ***Banks' Balance sheet*** | | | | | | | | |
| Gain | Bank | Quarterly | 12,631 | 0.872 | 1 | 1 | 1 | 0.334 |
| Capital | Bank | Annual (lagged) | 11,775 | 6.548 | 4.884 | 6.098 | 7.579 | 2.335 |
| Size | Bank | Annual (lagged) | 11,775 | 13.22 | 12.51 | 13.50 | 14.10 | 1.131 |
| Provisions | Bank | Annual (lagged) | 11,157 | 0.538 | 0.203 | 0.408 | 0.750 | 0.419 |

Definition of the variables. **Media-Coverage**: 1($\geq$ 1 mono-bank article) is a dummy variable equal to 1 if newspaper $p$ devotes at least one mono-bank article to bank $b$'s earnings announcement in a given year-quarter $yq$, and 0 otherwise. Ln(# of mono-bank articles) is the log of the total number of mono-bank articles published by newspaper $p$ about a bank $b$'s earning announcement in year-quarter $yq$. Ln(Length of mono-bank articles) is defined as the log of the sum of the length - i.e. number of words - of all mono-bank articles devoted by newspaper $p$ to bank $b$'s earning announcement in year-quarter $yq$. % mono-bank articles is the ratio between the number of mono-bank articles and the number of total articles by newspaper $p$ on bank $b$'s earning announcement in year-quarter $yq$. % Length of mono-bank articles is the ratio between the total number of words in mono-bank articles and the total number of words in any article by newspaper $p$ on bank $b$'s earning announcement in year-quarter $yq$. **Paper-Bank Connections**. Banker(Direct) is a dummy variable that takes value 1 if bank $b$ is the main banker of newspaper $p$, and 0 otherwise. Banker(Indirect) is a dummy variable that takes value 1 if bank $b$ is the main banker of newspaper $n$' controlling shareholders, and 0 otherwise. Banker is a dummy variable which takes value 1 either Banker(Direct) or Banker(Indirect) is equal to 1, and 0 otherwise. Shareholder is a dummy variable that takes value 1 if bank $b$ holds any share of newspaper $p$ in year $y-1$, and 0 otherwise. **Newspapers Balance sheet**. Capital is the ratio between shareholders' funds and total assets of newspaper $p$ in year $y-1$. **Banks' Balance sheet**. Gain is a dummy variable which takes value 1 if bank $b$ discloses positive profits in year-quarter $yq$, and 0 if it discloses losses. Capital is bank $b$'s equity over total assets as of year $y-1$, expressed in percentage points. Size is bank $b$'s log total assets size as of year $y-1$. Provision defines bank $b$'s provisions over total assets in year $y-1$, expressed in percentage points.

Our analysis focuses on certain dimensions of news content that most clearly relate to the activity, responsibilities, and interests of connected banks. Specifically, we look at the following three questions: 1) *what does the article indicate is the main fundamental root or cause of the crisis?*; 2) *who does the article indicate should bear the main responsibility to solve the problem?*; 3) *what does the article indicate should be the main (short-term) response to the crisis?*

For questions 1 and 2, we classify each article according to whether it mentions "Banks" as a root cause of the crisis or responsible for its solution, respectively.[11] For question 3, we classify each article according to whether it mentions as (short-term) response to the crisis "Abatement of existing loan provisions (extension, reduced rates, haircut)".[12] We collapse the article data by newspaper*period, and use them to construct various measures of news coverage (summary statistics are reported in Table 2).

First, we create three dummy variables equal to 1 if a newspaper in a given period publishes at least one article containing an answer of interest to each of the three questions mentioned above. In about 48% of the newspaper*period pairs in our sample, at least one article depicts banks as the main root of the crisis. In 19% of the newspaper*period pairs, one article or more suggests that banks should bear the main responsibility to solve the crisis; the same figure is close to 39% when considering articles supporting some kind of debt restructuring measure. Furthermore, for each question we also compute the number of relevant articles published by a newspaper in a given period, both in absolute value and as a share of the total articles about the crisis.

Finally, we exploit information on news content unrelated to the activity and interests of connected banks during the ESDC which we use to perform some placebo tests. We look in particular at the following two questions: i) country or region that receives most harm from the Euro as a currency; ii) country or region that is indicated as main beneficiary of the Euro currency.

We generate two dummy variables equal to 1 if the article lists any of the GIIPS countries

[11] Alternative answers to the question on the main root of the crisis include: starting conditions and structure of the Euro system; national industrial policies and development; national fiscal and social policies; political roots; Maastricht Treaty; the ECB and general economic roots. Alternative answers to the question on who should be held responsible for the crisis include: countries with or without sovereign debt problems; Eurozone members as a group; the European Union; the ECB; the IMF and/or the World Bank; Other. In both cases, an article may also not provide an answer at all to the question (answer: none).

[12] Other short-term solutions may be indicated as: loans from other countries with or without Troika supervision; ECB loans and bond purchases; fiscal austerity; fiscal stimulus; growth policies; other. The article may also not indicate any short-term solution (or none).

as either being most harmed by the Euro or benefitting the most from it, respectively.[13] The summary statistics indicate that roughly 12% of the articles indicate GIIPS countries as the main beneficiaries of the Euro, while 35% of them mention GIIPS countries as being harmed by the Euro.

## 2.2. Newspaper-Bank Connections

### 2.2.1. Lending

Banks and newspapers can be connected through lending or through shareholding. Though our main focus is on lending, we collect information on both types of connections. Our main source for both dimensions is the Orbis database, available from Bureau Van Dijk.

To identify lending connections, we rely on information about a newspaper's main banker(s) as reported in Orbis.[14] Crucially, each Orbis vintage only reports information on the newspaper's banker(s) in that given year. Hence, to reconstruct the time-series of a newspaper's lending connections we need to combine information from multiple vintages. Specifically, we focus on three different vintages we have access to, namely those for 2013, 2016 and 2018.

For the analysis of earnings announcements our sample includes all years between 2012 and 2018. Hence, for some years we need to impute the identity of the banker(s) based on information from neighboring years. Our baseline approach is to use, for the years not directly covered by Orbis, information from the closest vintage, imputing either backward or forward. This criterion reflects the idea that lending relations are relatively stable and that more recent entries should be more accurate. In practice, this implies imputing the banker's identity from the 2013 Orbis vintage to observations in 2012, 2013 and 2014, from the 2016 vintage to observations in 2015 and 2016, and from the 2018 vintage to observations in 2017 and 2018.

Using this approach, for each newspaper we define an indicator variable $Banker(Direct)$ which equals 1 for every bank reported as the newspaper's banker.[15] The variable captures the existence of a prominent banking/lending relationship between the media company and one or more banks. To capture indirect connections, we code an additional variable,

[13] The questionnaire also accommodates for the possibility that the article may discuss the implications of the Euro currency for broader regions within the European Union. In this respect, we attach value 1 if the article lists "Southern Countries" as either the region receiving main harm from the Euro as a currency or as the main beneficiary, respectively. The alternative regions indicated by the questionnaire are "Northern Countries" and "EU Countries in General".

[14] Specifically, we refer to the variable *Advisor* and we retain only those entries for which the *Advisor Type* is *Banker*.

[15] Out of the 20 newspapers in our sample, 10 are connected to one bank through direct lending relationships, and the remaining ones with 2 or more banks (at most 4).

*Banker*(*Indirect*), which equals 1 for every bank reported as the banker of the newspaper's parent company (but not of the newspaper itself). Finally, a third variable, *Banker*, captures the presence of either a direct or an indirect banking relationship.

For purpose of robustness, we also code the *Banker* variables using alternative approaches to impute the information from other vintages. One approach is to assign, whenever possible, information from earlier rather than later years (i.e., avoiding backward imputation). Since Orbis data reflect end-of-calendar-year information, this implies imputing lending relationships recorded in the 2013 vintage to observations in 2012 trough 2016, and information from the 2016 vintage to observation in 2017 and 2018.

A second approach is a variant of the previous one by which we assign to observations in 2016 and 2018 information from the same year's vintage (rather than from the previous one), so as to avoid excessive forward imputation.

That said, it is important to note that in our sample the identity of newspapers' bankers changes very little over time within a given newspaper*bank pair. This is indeed consistent with extensive evidence that lending relationship tend to be very persistent (e.g., Petersen & Rajan, 1995). As a consequence, the three different procedures described above produce variables that are very highly correlated with each other (i.e., pairwise correlation as high as 0.92). Since imputing lending relationships across years generates measurement error, our estimates would be biased downwards and should be interpreted as a lower bound of the true effect of lending connections on media content.

For the analysis on the ESDC, the relevant period includes the years 2011 and 2012. We identify banking relationships using data from the closest Orbis vintage among those available. For Italian newspapers, for which information is not available from Orbis, we use data from Kompass, another widely used database of company information.[16]

### 2.2.2. SHAREHOLDING

For shareholding connections, we use annual data on newspapers' ownership structure for all years between 2012 and 2018, i.e., the sample period for the analysis of the earning announcements. Understanding how these relationships changed over time is made easier by the fact that, unlike for banking relationships, for shareholding the latest Orbis vintage reports information for the previous ten years. Hence there is no need to combine multiple vintages. For each newspaper in our sample we construct a yearly ownership tree, following a standard procedure employed, for example, by Cage, Godechot, Fize, Porras, et al. (2017).

[16] Kompass is the original source from which Orbis retrieves entries for the *Adviser* variable. We are able to access the 2008 vintage, which includes information on lending relationships for a small subset of Italian and German newspapers. Reassuringly, the lending relationships of German newspapers in 2008 and 2013 perfectly overlap, further confirming the stickiness of lending relationships over time.

TABLE 2: SUMMARY STATISTICS - ANALYSIS OF THE EUROZONE SOVEREIGN DEBT CRISIS

| | Level | Frequency | N | Mean | St.Dev. | p25 | p50 | p75 |
|---|---|---|---|---|---|---|---|---|
| ***Media Coverage*** | | | | | | | | |
| *Bear=Banks* | | | | | | | | |
| 1($\geq$ 1 article) | Paper | Period | 191 | 0.194 | 0.396 | 0 | 0 | 0 |
| % of Article | Paper | Period | 191 | 0.01 | 0.024 | 0 | 0 | 0 |
| Ln(# of Article) | Paper | Period | 37 | 0.258 | 0.390 | 0 | 0 | 0.693 |
| *Root=Banks* | | | | | | | | |
| 1($\geq$ 1 article) | Paper | Period | 191 | 0.482 | 0.501 | 0 | 0 | 1 |
| % of Article | Paper | Period | 191 | 0.053 | 0.079 | 0 | 0 | 0.087 |
| Ln(# of Article) | Paper | Period | 92 | 0.759 | 0.790 | 0 | 0.693 | 1.386 |
| *Solution=Haircut* | | | | | | | | |
| 1($\geq$ 1 article) | Paper | Period | 191 | 0.398 | 0.491 | 0 | 0 | 1 |
| % of Article | Paper | Period | 191 | 0.032 | 0.056 | 0 | 0 | 0.048 |
| Ln(# of Article) | Paper | Period | 76 | 0.543 | 0.649 | 0 | 0.347 | 0.896 |
| *Benefit Euro=GIIPS* | | | | | | | | |
| 1($\geq$ 1 article) | Paper | Period | 191 | 0.125 | 0.332 | 0 | 0 | 0 |
| *Harmed Euro=GIIPS* | | | | | | | | |
| 1($\geq$ 1 article) | Paper | Period | 191 | 0.346 | 0.477 | 0 | 0 | 1 |
| ***Newspapers' Exposures*** | | | | | | | | |
| GIIPS | Paper | Annual (lagged) | 191 | 0.057 | 0.054 | 0.016 | 0.033 | 0.082 |
| Bank Size | Paper | Annual (lagged) | 191 | 12.827 | 0.624 | 12.608 | 12.783 | 13.327 |
| Bank Tier-1 | Paper | Annual (lagged) | 191 | 0.095 | 0.019 | 0.088 | 0.096 | 0.105 |
| ***Newspapers Controls*** | | | | | | | | |
| Ideology | Paper | Constant | 96 | 3.1 | 0.31 | 2.85 | 3.05 | 3.3 |
| Circulation | Paper | Constant | 175 | 12.886 | 0.145 | 12.461 | 12.852 | 13.039 |

Definition of the variables. **Media-Coverage**. For more details on the periods, see Table A3. For constructing the variables, we retain information on five questions. i) Who does the article indicate should bear the main responsibility to solve the problem? ii) What does the article indicate is the main fundamental root or cause of the crisis? iii) What does the article indicate should be the main (short-term) response to the crisis? iv) Country or region that is indicated as main beneficiary of the Euro currency v) Country or region that receives main harm from the Euro as a currency. For questions i) and ii), the dimension of interest is whether the respondent answers "Banks" vs. any other answer (*Bear=Banks* and *Root=Banks*). For question iii), we focus on the answer: "Abatement of existing loan provisions (extension, reduced rates, haircut)" vs. any other answer (*Solution=Haircut*). For questions iv) and v), we focus on the answers indicating GIIPS countries (Greece, Ireland, Italy, Portugal, Spain) or the region "Southern Countries". For the five questions, we code whether newspaper $p$ publishes at least one article with the answer of interest in period $t$ (1($\geq$ 1 article)), the share of such articles over all articles related to the ESDB (% of Articles) and the log of their total number (Ln(# of Articles)). **Newspapers' Exposures**. The variables are computed as newspaper-level averages across the corresponding values of their Banker(Directs) banks. GIIPS is the average holding of Greek, Irish, Italian, Portuguese and Spanish sovereign bonds by the Banker(Direct) banks of newspaper $p$ as of year $y-1$; Size is the average Banker(Direct) size and Capital is the average Banker(Direct) Tier-1 capital, rescaled by total assets. **Newspapers Controls**. Ideology measures the average self-reported political leaning of the readers of a newspaper on a 0-6 scale from from far-left to far-right. Circulation is the (long) average daily print circulation of a newspaper.

In practice, we track the newspaper's shareholding companies, then their respective shareholders, and so on until we encounter a physical person or no further information is available in the database. We define a dummy variable $Shareholder_{b,n,t}$ equal to 1 for any bank $b$ that owns shares of a newspaper $n$, either directly or indirectly through shareholding companies, at the end of year $t-1$.[17] Summary statistics for all the measures of newspaper-bank connections described above are reported in Table 1.

### 2.3. Balance Sheet Data for Newspaper and Banks & Other Controls

We collect yearly balance sheet data for the newspapers in our sample from Orbis. In particular, we collect information on newspapers' own capital, defined as shareholders' funds as a share of total assets, i.e. the inverse of leverage. The summary statistics, reported in Table 1, depict a large degree of heterogeneity across newspapers. Indeed, while the average capital ratio is close to 39%, some newspapers display negative values - i.e., total liabilities exceed total assets - which reflects a situation of severe financial distress and low profitability.

We also collect information on banks' balance sheet variables from various sources. First, we get data on bank capital ratio (equity over total assets) and loan losses provisions (rescaled by total assets) and on log assets size from Fitch Connect. The information on earnings reports is, instead, from Thomson Reuters I/B/E/S (summary statistics in Table 1). About the relative frequency of positive vs. negative earning results, banks profits appear to be much more frequent than losses (reported in about 13% of the cases in our sample). As a consequence, losses are arguably more newsworthy events.

For the analysis of the ESDC we are interested in measuring the exposure of connected banks to stressed sovereign bonds, i.e. bonds issued by the governments of Greece, Ireland, Italy, Portugal and Spain (GIIPS hereafter). To this end, we use public data available from the European Banking Authority (EBA), specifically those from the 2011 Stress Tests and the 2012 Capital Exercise.[18] For each newspaper in each period we compute the variable *GIIPS* as the average exposure of all its direct lenders to GIIPS' sovereign bonds as per the year before (as a share of total assets). This measure is meant to capture how, on average, the direct lenders of a newspaper are exposed to risky sovereign bonds. Presumably, larger exposure to stressed sovereign bonds implies greater banks' discontent with a news-coverage of the crisis hostile to the banking sector and, more importantly, calling for debt restructuring

[17] Only a couple of banks in our sample directly own shares of newspapers. Hence, we do not further distinguish between direct vs. indirect shareholders. Likewise, in the vast majority of cases, banks hold small and undisclosed indirect shareholding positions, hence we do not distinguish between large vs. small shareholders as this would leave too little variation.

[18] These data can be accessed at the website: https://eba.europa.eu/risk-analysis-and-data.

measures which would entail losses proportional to the exposure itself.[19] Summary statistics for these variables are reported in Table 2. On average, newspapers' lenders invest 5.7% of their assets in GIIPS bonds. This is a relatively large number, corresponding to 60% of the mean bank Tier-1 capital. There is also substantial heterogeneity across newspapers; for instance, a one inter-quartile variation in exposure to GIIPS bonds equals 6.6 p.p.. Moreover, we collect (again from EBA publicly available information) data on the average size and Tier-1 capital ratio of all direct lenders, which we use as control. Finally, we control for other relevant newspaper characteristics, such as size and political ideology. To proxy for size, we use data on the average daily print circulation available from Statista. We use information from 2010 or, when not available, from 2011, i.e., prior to the ESDC events we focus on. To measure newspapers' political leaning, we use information from a large survey of European readers conducted by the Pew Research Center Mitchell et al. (2018). The survey asks respondents to report the daily newspaper they read most frequently, and to place themselves on a 0-6 ideological scale from far-left to far-right. We compute the political leaning of a newspaper as the average ideological score of respondents who report the newspaper as their most frequent news source.[20] Since not all newspapers in our ESBC sample were options respondents could choose from, we are only able to construct the political leaning variable for 12 out of the 24 newspapers.

## 3. Lending Connections and News Coverage of Earnings Announcements

In this section we test to what extent bank-media lending connections influence news coverage of banks' quarterly earnings announcements. We first present our empirical strategy, then describe our baseline findings and the results of a battery of robustness checks. Exploiting heterogeneity across both newspapers and banks, we then try to shed light on the possible mechanisms at work.

### 3.1. Empirical strategy

We start by looking at the extensive margin of news coverage, that is how lending connections affect whether a certain newspaper reports at all about a bank's earnings announcement depending on whether it records a profit or a loss. The following equation summarizes our empirical strategy:

[19] We use lagged exposure to GIIPS bonds because, ideally, we are interested in gauging the stakes of connected banks before newspapers start writing about the crisis. As a consequence, since data on banks' exposure to sovereign bond are not available for 2009, we cannot use the data on news coverage of the ESDC for 2010.

[20] Measuring the political leaning of a newspaper using the self-reported ideology of its readers is motivated by extensive evidence that individuals tend to sort into content that confirms their priors and avoid information that challenges them (i.e., "confirmation bias"). For models exploring different reasons for this behavior see for example Mullainathan and Shleifer (2005) and Gentzkow, Shapiro, and Stone (2015).

$$Any\_article_{n,b,yq} = \beta_1 Gain_{b,yq} + \beta_2 Banker_{n,b,yq} + \beta_3 Gain_{b,yq} * Banker_{n,b,yq} + FE + X_{n,b,yq} + \varepsilon_{n,b,yq} \quad (1)$$

$Any\_article_{n,b,yq}$ is a dummy variable for whether newspaper $n$ publishes at least one article about the earning announcement issued by bank $b$ in year-quarter $yq$. In our baseline analysis we focus on mono-bank articles published in a tight interval around the announcement (from the day before to the day after).

On the right-hand side, $Gain_{b,yq}$ is a dummy variable for whether bank $b$ announces positive profits in year-quarter $yq$; $Banker_{n,b,yq}$ captures whether bank $b$ and newspaper $n$ are connected through lending, and $Gain_{b,yq} * Banker_{n,b,yq}$ is the interaction of the two. We progressively saturate the model with a vector of fixed effects $FE$. In the most demanding specification this vector includes: i) *Newspaper*Bank* fixed effects, which capture all observable and unobservable time-invariant characteristics of the relationship between a newspaper and a bank; ii) *Bank*year-quarter* fixed effects, which absorbs any idiosyncratic factors that may generally affect the news coverage of a given bank in a given period; iii) *Newspaper*Bank-Country*year-quarter* fixed effects, which captures the fact that a given newspaper in a given period may decide to cover banks from a given country more or less.[21] To control flexibly for the effect of ownership relations on content, in all specifications we also include the vector $X_{n,b,yq}$ which represents the interaction between the variables $Shareholder_{n,b,yq}$ and $Gain_{b,yq}$. Finally, $\varepsilon_{n,b,yq}$ is an error term.

The main coefficient of interest is $\beta_3$ which captures the degree to which a newspaper covers its lenders disproportionately, relatively to other banks, when they report profits than when they report losses. Hence, a positive value of $\beta_3$ indicates the existence of a pro-lender bias through selective reporting.

We then consider the intensive margin of news coverage using an analogous specification but restricting the focus to newspaper*bank*year-quarter combinations with at least one article. This restriction reduces the sample size considerably (from 12,631 observations to 2,027 or 3,449 depending on the different exercises). In light of this, and in order to preserve estimates' power while granting reasonable identification, we employ a somewhat less demanding set of fixed effects which includes: *Newspaper*year-quarter*, *Bank*year-quarter*, and *Same-Country*year-quarter*Gain* fixed effects. The first two sets of fixed effects capture time-varying bank- and newspaper-specific shocks in news coverage of earning reports

[21] For example, around the time of the Brexit referendum the situation of UK banks may have attracted more interest from all or some newspapers. Similarly, in the key moments of the Eurozone crisis, press coverage of Spanish or Italian banks may have increased. Crucially, our granular fixed effects also control for the possibility that a country's banks may become more newsworthy for some newspapers - e.g. Italian papers, or financial newspapers - than for others.

(e.g., if in a given quarter the performance of a bank attracts more attention by all newspapers, or if a given newspaper covers the earning reports of all banks more extensively). Finally, the third set of fixed effects controls for the possibility that home-bias in news coverage of earning announcements varies over time or depending on banks' performance (e.g., if Spanish papers tend to cover Spanish banks more than other banks in a given quarter or when the banks report profits).

For the dependent variable we use different measures of the intensity of news coverage including the (log) number of articles and the (log) total length of articles. Regarding standard errors, we cluster them by newspaper*bank, since our identification exploits variation at this level. We also show that our findings are robust to alternative clustering choices.

## 3.2. Baseline Results

### 3.2.1. Extensive Margin

We first look at the extensive margin of news coverage, focusing, in particular, on the occurrence of mono-bank articles, i.e., those entirely devoted to discussing a bank and its quarterly performance.

Figure 2 plots the average probability that a newspaper publishes at least one mono-bank article about an earning announcement (with the corresponding 95% confidence interval) separately for its lenders vs. for other banks, and in case of profits vs. in case of losses. In the left panel we consider all banks and newspapers from any country in our sample. Two patterns emerge: first, newspapers are generally more likely to cover their lenders than other banks; second, while they are more likely to report about non-connected banks when they announce losses than when they announce profits, the opposite is true for lenders. In both cases the difference is statistically significant at the 5% level.

One important aspect that may partly explain this pattern is that, except for a few cases, most newspapers in our samples tend to borrow from banks from the same country. Hence, the differential coverage of lenders may simply reflect a stronger focus on domestic banks than on foreign ones (i.e., home bias), which, however, would apply to positive results but not to negative ones. To mitigate this concern, in the right panel of Figure 2 we replicate the same exercise only for bank-newspaper pairs from the same country. While the difference in the unconditional probability of covering lenders vs. other banks disappears, the differential treatment of lenders in case of profits vs. losses remains unchanged. Indeed, while the average probability that a loss is reported is close to 42% for both lenders and unconnected banks from the same country, the probability that a profit gets covered is strictly above 50% for lenders, against 37% for unconnected banks.

To test these patterns more systematically, in Table 3 we estimate various versions of

equation 1. The specification in column 1 includes no fixed effects. In column 2 we include bank, newspaper, and year-quarter fixed effects, and in column 3 newspaper*year-quarter and bank*year-quarter fixed effects. To account for home bias, in column 4 we include a same-country dummy, which equals one for all newspaper-bank pairs from the same country. When doing so, the baseline coefficient on $Banker(Direct)$ becomes negative, though not significant, indicating that losses by connected banks (within the same country) are not more likely to get covered than those by unconnected banks.[22]

Yet, the coefficient on the interaction term $Gain * Banker$ remains positive and very stable, confirming a strong tendency of newspapers to report good news for their lenders disproportionately.

Crucially, the coefficient is not only statistically significant, but also reflects an economically sizable impact of lending connections on the probability that positive earning announcement are featured in the news. Indeed, a 17.6 percentage points increase in the likelihood that a profit gets covered by a newspaper - as suggested by the most robust estimates in column 7 - implies that such likelihood is roughly twice as large for newspapers' lenders than for other banks, and 42% larger than for other banks of the same country.[23]

Finally, we find no evidence that ownership connections affects news coverage of earning announcements. Indeed, once home bias is controlled for (columns 4-8), the coefficient on the dummy *Shareholder* becomes small and statistically insignificant. This result may be due to the broad criterion we use to define the shareholder variable, which captures any link of the bank with the media company or its group. However, using a more restrictive definition of shareholder would further reduce the relevant variation, which is already limited given that very few banks appear to be involved in ownership of media companies in the countries we study.

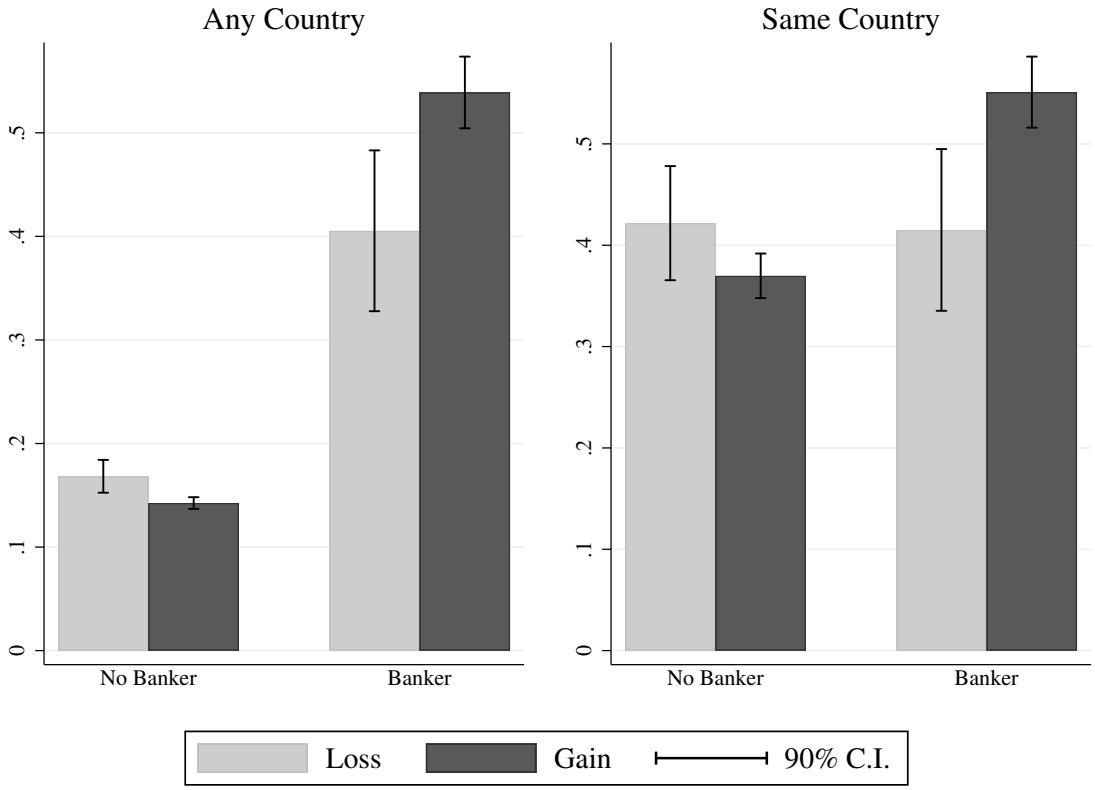
### 3.2.2. Robustness

To verify the robustness of the findings presented so far we perform a series of additional tests. First, in Table 4, we test whether our results are robust to defining lending relationships in the alternative ways described in section 2.2.

[22] Note that, when controlling for newspaper*bank fixed effects and for newspaper*time and bank*time fixed effects (column 5), the coefficient on $Banker(Direct)$ turns more negative, and even becomes statistically significant in columns 6 an 7, in the most saturated versions of the model. In principle, this result - that newspapers are less likely to cover losses of connected banks relative to other banks - provides further support for the media capture hypothesis. That said, we prefer not to put too much emphasis on this finding since, once we control for newspaper*bank fixed effects, the coefficient is only identified out of variation over time within newspaper-bank pairs connected through lending, which is very limited.

[23] In the summary statistics in Table 1, we just report unconditional distributions. Conditional summary statistics are available upon request.

FIGURE 2: AVERAGE LIKELIHOOD OF COVERING AN ANNOUNCEMENT




The figure reports the average of the variable 1($\geq$ 1 mono-bank article), conditional on whether a paper*bank couple is linked by a Banker(Direct) connection and on whether the bank discloses a gain or a loss in its quarterly earning announcement. In the left hand side panel, all paper*bank couples in our sample our considered. In the right hand side panel, we just include paper*bank couples from the same country.

TABLE 3: BANKS' EARNINGS ANNOUNCEMENT - EXTENSIVE MARGIN

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | Dep. variable: 1(≥ 1 mono-bank article) | | | | | | |
| Banker(Direct) | 0.238*** | 0.243*** | 0.256*** | -0.030 | -0.083 | -0.108** | -0.145** |
| | (0.057) | (0.053) | (0.053) | (0.053) | (0.053) | (0.050) | (0.059) |
| Shareholder | 0.237*** | 0.133*** | 0.124*** | 0.039 | 0.031 | 0.020 | 0.033 |
| | (0.045) | (0.039) | (0.041) | (0.038) | (0.040) | (0.035) | (0.039) |
| Gain | -0.020 | -0.035*** | | | | | |
| | (0.013) | (0.011) | | | | | |
| Gain*Banker(Direct) | 0.148*** | 0.096* | 0.083 | 0.101** | 0.163*** | 0.147*** | 0.176*** |
| | (0.053) | (0.058) | (0.055) | (0.051) | (0.053) | (0.052) | (0.050) |
| Gain*Shareholder | -0.094** | -0.048 | -0.033 | 0.001 | 0.012 | 0.003 | -0.017 |
| | (0.043) | (0.040) | (0.040) | (0.037) | (0.039) | (0.037) | (0.040) |
| Observations | 12,631 | 12,631 | 12,631 | 12,631 | 12,631 | 12,631 | 12,631 |
| R-squared | 0.073 | 0.201 | 0.304 | 0.373 | 0.382 | 0.498 | 0.630 |
| Bank FE | No | Yes | - | - | - | - | - |
| Paper FE | No | Yes | - | - | - | - | - |
| Time FE | No | Yes | - | - | - | - | - |
| Paper*Time FE | No | No | Yes | Yes | Yes | Yes | - |
| Bank*Time FE | No | No | Yes | Yes | Yes | Yes | Yes |
| Same country FE | No | No | No | Yes | - | - | - |
| Same country*Time FE | No | No | No | No | Yes | Yes | - |
| Paper*Bank FE | No | No | No | No | No | Yes | Yes |
| Paper*Bank-Country*Time FE | No | No | No | No | No | No | Yes |

In all regressions the dependent variable is a dummy variable for whether a newspaper covers a bank quarterly earnings announcement with at least one mono-bank article. *Banker*(*Direct*) is a dummy variable equal to 1 if a paper and a bank are connected through a direct lending relationship, and 0 otherwise. *Shareholder* is a dummy variable equal to 1 if a bank holds any ownership share in a given newspaper, and 0 otherwise. *Gain* is a dummy variable equal to 1 (0) if a bank discloses gains (losses) in a given year-quarter. In the legend, the symbol "-" refers to controls and/or fixed effects which are spanned out by the application of other controls and/or fixed effects. Standard errors are clustered at the Paper*Bank level. *** p<0.01, ** p<0.05, * p<0.1.

Column 1 reports the baseline results (from column 7 of Table 3) for purpose of comparison. In columns 2 and 3 we define the variable $Banker(Direct)$ by imputing lending relationships based, whenever possible, on information from previous years. Specifically, in column 2 we keep the full sample period (2012-2018), which, however implies that for some years (i.e., 2012 and most of 2013) we impute information backwards. In column 3, instead, we limit the sample to the period 2014-2018, hence defining all banking relationships based on information from previous years. Finally, in column 4, we modify this approach by using, when possible, information from the same-year vintage, so to avoid excessive forward imputation. Reassuringly, regardless of the approach used, the coefficient of interest remains largely unchanged both in terms of magnitude and of statistical significance. In particular, using predetermined data increases economic significance, if anything, despite we lose observations

Second, in Table A5 we consider indirect banking relationships - i.e., through a newspaper's parent company - alongside direct ones. Column 1 shows that the coefficient of interest remains positive and statistically significant when looking at both types of connections together. In column 2 we perform a horse-race between direct and indirect lending relationships to test which type of connections affects news coverage the most. The results suggests that both direct and indirect connections have a positive impact on the likelihood of covering lenders' gains instead of losses (as compared to other banks), though only direct lending relationships exert a statistically significant influence.

Third, to further confirm that the effect we find is driven by lending connections and not by other confounds, we perform a placebo test. Specifically, we randomly assign a number of fictitious lending connections, with the same distribution as that observed in our data, to newspaper/bank pairs that are, in reality, unconnected.[24] We then estimate our most demanding specification either using fictitious connections as the regressor of interest, or horse-racing real connections against fictitious ones. The purpose of the test is two-fold: i) assess whether fictitious connections have a significant impact on news coverage, ii) test to what extent the effect of real lending connections is robust to controlling for fictitious ones. We repeat the procedure 10,000 times and save the point estimates of interest for the $Banker(Direct) * Gain$ interaction and the corresponding t-stats which we plot in Figures 3 and 4. Two results emerge from Figure 3. The coefficients for the fictitious connections are centered around 0 and tend to have a very low t-stat. The true coefficient (i.e. from column 7 of Table 3) clearly represents an outlier in terms of both magnitude and significance. Figure 4, which reports the results of the horse-race regressions, shows that the coefficients on

[24] Specifically, we replicate the first and second moment of the distribution of the variable Banker(Direct), summarized in Table 1.

TABLE 4: BANKS' EARNINGS ANNOUNCEMENTS -
EXTENSIVE MARGIN WITH ALTERNATIVE DEFINITION OF BANKER

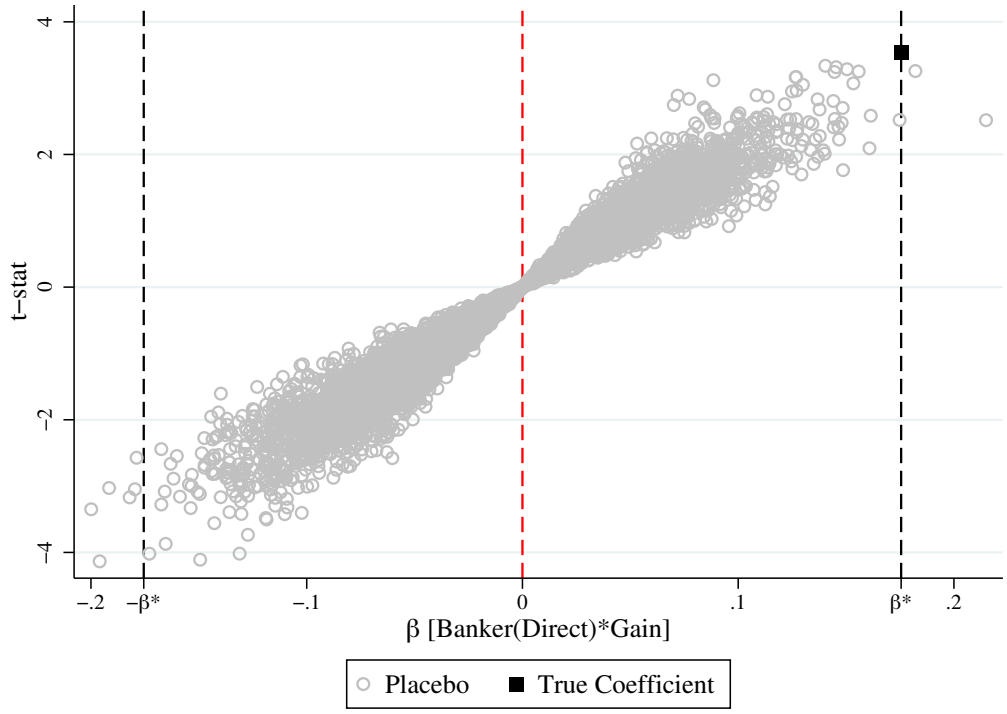
| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| *Imputation* | **Baseline** | **Predetermined** | | **Current** |
| Banker(Direct) | -0.145** | -0.086 | 0.003 | -0.120** |
| | (0.059) | (0.079) | (0.114) | (0.051) |
| Shareholder | 0.033 | 0.007 | 0.048 | 0.013 |
| | (0.039) | (0.039) | (0.053) | (0.038) |
| Gain*Banker(Direct) | 0.176*** | 0.188*** | 0.158*** | 0.185*** |
| | (0.050) | (0.046) | (0.055) | (0.050) |
| Gain*Shareholder | -0.017 | 0.007 | -0.007 | 0.000 |
| | (0.040) | (0.040) | (0.050) | (0.039) |
| Observations | 12,631 | 12,255 | 8,778 | 12,453 |
| R-squared | 0.630 | 0.627 | 0.630 | 0.630 |
| Bank*Time FE | Yes | Yes | Yes | Yes |
| Paper*Bank FE | Yes | Yes | Yes | Yes |
| Paper*Bank-Country*Time FE | Yes | Yes | Yes | Yes |
| Sample Period | 2012-2018 | 2012-2018 | 2014-2018 | 2012-2018 |

In all regressions, the dependent variable is a dummy variable for whether a newspaper covers a bank quarterly earning announcement with at least one mono-bank article. Shareholder is a dummy variable with value 1 if a bank holds any ownership share in a given newspaper, and with value 0 otherwise. Banker(Direct) is a dummy variable with value 1 if a paper and a bank are connected through direct lending connections, and with value 0 otherwise. Banker(Direct) results from imputing lending relationships from three vintages (2013,2016 and 2018) of the Bureau Van Dijk's Orbis database over the sample period, which goes from 2012 to 2018 - apart from column 3 where it ranges from 2014 to 2018. In column 1, we follow the Baseline approach of imputing information from the closest vintage. In columns 2 and 3, we impute information using Predetermined relationships, whenever possible. In column 4, predetermined lending relationships are updated with Current year information. For more details, see section 2.2. Gain is a dummy variable with value 1 (0) if a bank discloses gains (losses) in a given year-quarter. Standard errors are clustered at the Paper*Bank level. *** p<0.01, ** p<0.05, * p<0.1.

fictitious connections are again centered around zero, while those on true connections are centered around our original estimate.

As discussed above, newspapers are much more likely to borrow from banks from the

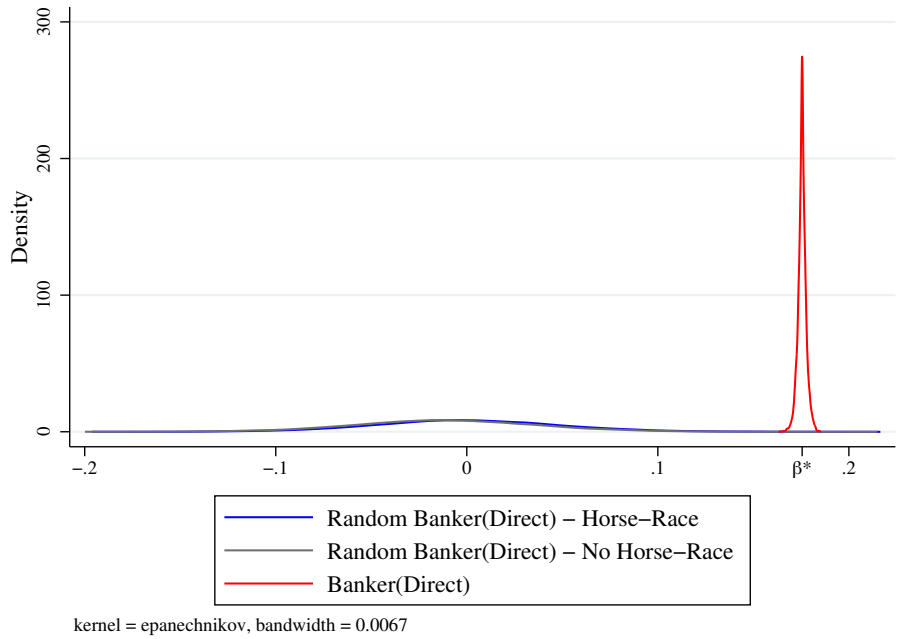
FIGURE 3: COEFFICIENTS AND T-STATS FROM PLACEBO TEST




The figure plots the coefficents (on the x-axis) and t-stats (on the x-axis) from a placebo test by which we run 10,000 regressions of 1($\geq$1 mono-bank article) against a fictitious, randomly generated Banker(Direct) variable, fully interacted with the dummy *Gain*. The model is further augmented with the full interaction of the true *Shareholder* dummy variable with *Gain* and with paper*bank, paper*bank(country)*time and bank*time fixed effects. Note: $\beta^{\star}$ is the value of the coefficient on $Banker(Direct) * Gain$ from the regression in column 7 of Table 3. Standard errors are clustered at the newspaper*bank level.

same country and to report about these banks than about foreign ones. By including the *Same country* dummy and its interaction with time fixed effects, our baseline specification controls flexibly for "home bias". Yet, another possibility is that the intensity of the home bias may depend on banks' performance. This would be the case, for example, if Spanish newspapers covered Spanish banks more than foreign banks *especially* when they record profits than when they record losses. To control for this possibility, in Table A6 in the Appendix we augment our baseline specification to include the interaction between the dummies *Same country* and *Gain* (column 2), which has no tangible effect on our coefficient of interest. In column 3 we include the triple interaction between *Same country*, *Gain* and year-quarter fixed effects, thus also allowing the relationship between home bias and banks' performance to vary over time. Again, the coefficient of interest remains virtually identical.

FIGURE 4: DISTRIBUTION OF COEFFICIENTS FROM HORSE-RACE PLACEBO TEST




The figure plots the distribution of the coefficents from a placebo test by which we run 10,000 regressions of 1($\geq$1 mono-bank article) against a fictitious, randomly generated Banker(Direct) variable - fully interacted with the dummy *Gain* - horse-raced against the true coefficient of interest. The model is further augmented with the full interaction of the true *Shareholder* dummy variable with *Gain* and with paper*bank, paper*bank(country)*time and bank*time fixed effects. Note: $\beta^{\star}$ is the value of the coefficient on $Banker(Direct) * Gain$ from the regression in column 7 of Table 3. The red line and the grey line represent respectively the kernel density of the true and of the fictitious coefficients on the interaction term $Banker * Gain$ from the horse-race specification. The blue line represents, instead, the distribution of the same coefficients for randomly generated values of the *Banker* variable, with no horse race with the true variable.

In column 4 we implement the most demanding approach including the quadruple interaction between newspaper fixed effects, country of the bank fixed effects, the *Gain* dummy, and year-quarter fixed effects. In this case, we are allowing each newspaper to have a differential bias towards banks of each country, and this bias also to vary both over time and depending on the banks' result. Even when saturating the model as much, the coefficient of interest remains economically and statistically significant and very similar to that from the baseline exercises.

Our main result indicates that newspapers are more likely to cover connected banks relative to others when they experience profits rather than losses. However, earning announcements may include information on other aspects of the bank's situation - e.g., financial vari-

ables - which could attract the interest of connected newspapers more than unconnected ones. To confirm that the profit-loss dimension is the most relevant one for pro-lender bias, in Table A7 we include as additional controls the interaction between the *Banker* dummy and the following variables: i) banks' total assets (in logs), ii) bank capital ratio, and iii) loan losses provision (as a share of total assets). The sample size shrinks somewhat because these variables are unavailable for some banks in certain years. However, the results remain largely unchanged relative to baseline. We also control for whether the analyst median surprise and the annual growth of net income are positive or not. Again, results are very similar after the inclusion of these controls.

We then test the robustness of our findings to alternative approaches to clustering standard errors. In particular, in Table A8, we report our results clustering standard errors by bank, bank*time, and implementing two-way clustering at the bank and newspaper level. In all cases, the significance of the coefficients of interest remains largely unchanged.

In Tables A9 and A10, we check that the results are robust to using alternative measures of news coverage. First, in Table A9, we replicate the analysis ignoring multi-bank articles, hence comparing only cases in which a newspaper devotes at least one full article to a bank's earning announcement or no article at all. Again, results are qualitatively and quantitatively similar to those in Table 3. In Table A10, we consider articles published in different time windows after an announcement, i.e., from the day before to 1-to-7 days after (always including the day of the announcement). Considering longer periods does not affect the results, arguably because most articles on earning announcements are published in the immediate vicinity of the event.

Finally, we confirm that our results are not driven by outliers. In Appendix Figures A1 and A2 we plot the coefficients of our baseline regression excluding one newspaper at the time and one bank at the time respectively. In both cases, the coefficient of interest remains largely unchanged relative to the regression with the full sample.[25] Moreover, we verify in Table A11 that our results are not sensitive to the exclusion of tabloids, which is reassuring since these outlets generally do not focus on financial news.[26]

#### 3.2.3. Intensive Margin

We then analyze whether pro-lender bias operates on the intensive margin, that is how extensively newspapers cover connected banks' earning announcements, relative to other banks', when they do. Hence, we restrict the analysis to those cases in which at least one mono-bank

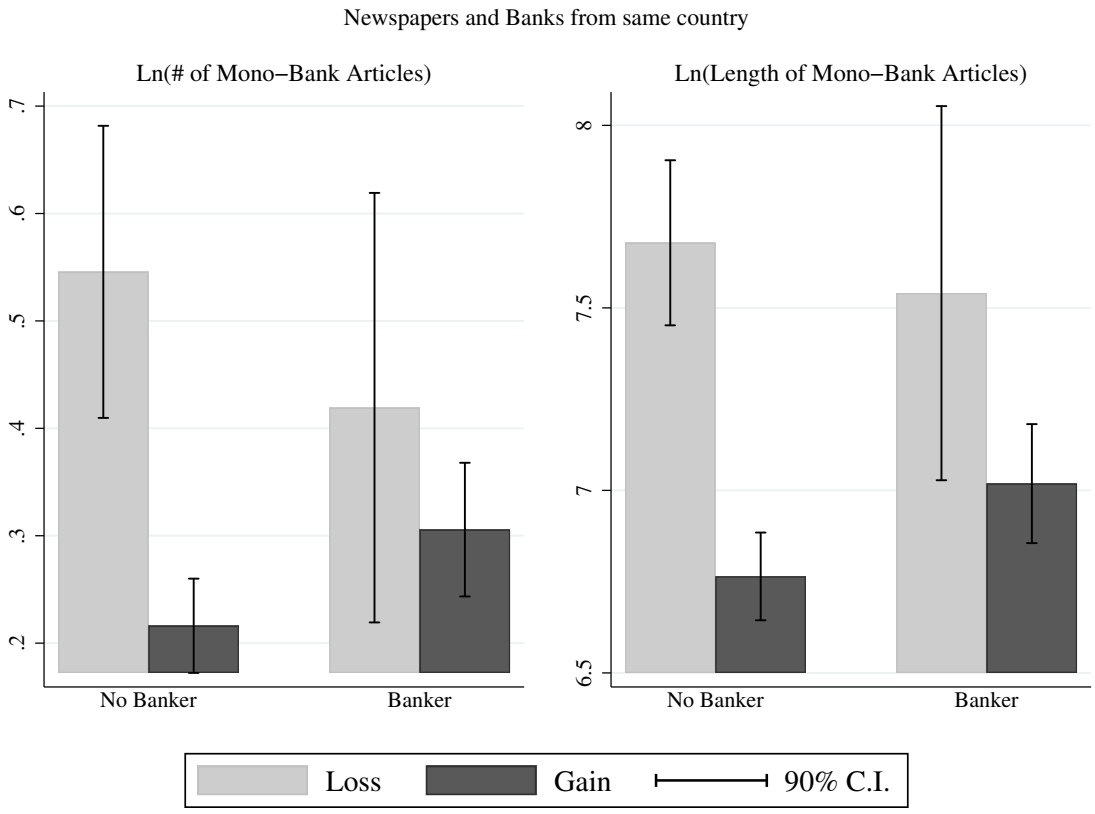
[25] Excluding individual newspaper*bank pairs does also not impact the coefficient of interest; indeed, such exclusion reduces the sample even less than dropping all pairs including a bank or a newspaper.

[26] The tabloids in our sample include: Bild, Daily Mail, Daily Mirror, Daily Star and The Sun.

article was published.

The left panel of Figure 5 reports the average (log) number of mono-bank articles devoted respectively to connected and unconnected banks separately for reports announcing profits and losses. The right panel reports, instead, the average (log) length of the articles. The graphs indicate that, on average, newspapers tend to devote more and longer articles to the losses of banks with which they have no lending connections than to their profits, and that such larger interest for losses disappears in the case of their lenders.

FIGURE 5: AVERAGE NUMBER AND LENGTH OF ARTICLES

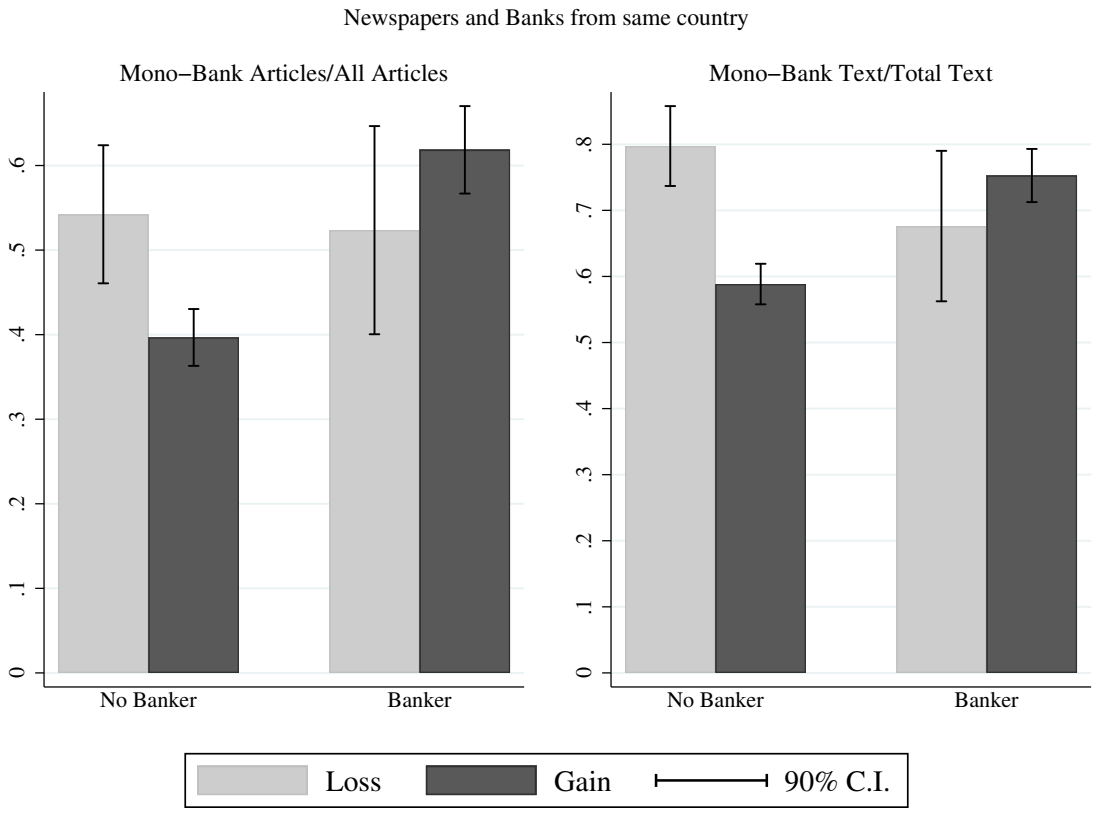



The figure reports the average (log) number of mono-bank articles (left panel) and the average (log) length of mono-bank articles (right panel) about quarterly earnings announcements of a newspaper's main banker(s) in case of profits and losses.
on the existence of direct lending connections and on banks' disclosure of profits or losses in quarterly earnings announcements. The averages are computed over newspaper*bank pairs from the same country.

We then examine whether newspapers favor their lenders by placing information about their results strategically. For example, a newspaper may devote an entire article to a positive earning announcement by their lender, but report news about negative earnings in articles which also discuss the situation of other companies, so as to make it less prominent and

salient. To this end, in Figure 6, we plot the share of mono-bank articles over total articles separately for profits vs. losses and for lenders vs. other banks. In the right panel we do the same for the length of mono-bank articles as a share of the length of all articles. The graph indicates that, conditional on covering an earnings announcement, newspapers are significantly more likely to devote a full article to non-connected banks in case of a loss than in case of a profit. The same however, does not apply to their lenders, for which the difference is insignificant and, if anything, goes in the opposite way.

FIGURE 6: AVERAGE SHARE OF MONO-BANK ARTICLES AND TEXT




This chart reports the average % of mono-bank articles and the average % of mono-bank text - respectively in the left and right panel - depending on the existence of direct lending connections and on banks' disclosure of profits or losses in the quarterly announcements. The averages are computed over paper*bank couples from the same country.

To further test this hypothesis, in Table 5 we estimate our baseline specification including the set of fixed effects described in section 3.1. In column 1, we find that the number of mono-bank articles devoted by newspapers to banks' profits - relative to losses - is about 27 p.p. higher for direct lenders than for other banks. A similar coefficient emerges from the regression on the length of mono-bank articles in column 2, though it is not statistically

significant at conventional levels. Similarly, when looking at the strategic placement of news, it comes out that the difference between the share of mono-bank articles (mono-bank text) devoted to gains as opposed to losses is 17 (11) p.p. larger for direct bankers than for other banks.

TABLE 5: BANKS' EARNINGS ANNOUNCEMENT - INTENSIVE MARGIN

| | (1) Number mono-bank articles | (2) Length mono-bank articles | (3) Share mono-bank articles | (4) Share Length mono-bank articles |
|---|---|---|---|---|
| Shareholder | -0.017 | -0.106 | -0.078 | -0.108** |
| | (0.086) | (0.177) | (0.056) | (0.054) |
| Banker(Direct) | -0.304* | 0.346 | -0.164ł | -0.087 |
| | (0.175) | (0.378) | (0.107) | (0.145) |
| Gain*Shareholder | -0.003 | 0.087 | 0.106** | 0.105** |
| | (0.070) | (0.158) | (0.051) | (0.047) |
| Gain*Banker(Direct) | 0.266* | 0.260 | 0.169** | 0.115 |
| | (0.142) | (0.213) | (0.084) | (0.084) |
| Observations | 2,027 | 2,027 | 3,449 | 3,449 |
| R-squared | 0.479 | 0.667 | 0.328 | 0.358 |
| Paper*Bank FE | Yes | Yes | Yes | Yes |
| Same country*Year-Quarter*Gain FE | Yes | Yes | Yes | Yes |
| Paper*Year FE | Yes | Yes | Yes | Yes |
| Bank*Year FE | Yes | Yes | Yes | Yes |
| Number of FE dummies | 547 | 547 | 626 | 626 |

In column 1, the dependent variable is Ln(# of Mono-Bank Articles) and in column 2 is Ln(Length of Mono-Bank Articles). Moreover, in column 3, the dependent variable is % mono-bank Articles and in column 4 is % Length mono-bank Articles. Shareholder is a dummy variable with value 1 if a bank holds any ownership share in a given newspaper, and with value 0 otherwise. Gain is a dummy variable with value 1 (0) if a bank discloses gains (losses) in a given year-quarter. Banker(Direct) is a dummy variable with value 1 if a paper and a bank are connected through direct lending connections, and with value 0 otherwise. Standard errors are clustered at the Paper*Bank level.*** p<0.01, ** p<0.05, * p<0.1, [a] p<0.15.

Finally, in Table A12 we report, for each of the intensive margin outcome variables, a table with increasingly saturated specifications, and find that all coefficients of interest remain

quite stable across them.

### 3.3. HETEROGENEITY

To shed light on the possible mechanism behind the results described above, we examine how the effect of lending connections on content varies for different types of newspapers and banks.

First, we consider the difference between general-interest newspapers, on the one hand, and financial and business-oriented ones, on the other.[27] Newspapers in the first group include, among others, *The Guardian*, *Le Figaro*, *El Mundo*, and *Sueddeutsche Zeitung*, while the second group includes the *Financial Times*, *Les Echos*, *El Economista*, *Expansión* and *Handelsblatt*. In Table 6, we estimate our baseline regressions for all newspapers and then separately for general-interest and financial newspapers. In Panel A we look at the extensive margin, while in Panels B and C we focus on the intensive margin, specifically on the number and length of the mono-bank articles, respectively.

The results clearly indicate that, for the extensive margin, the effect is primarily driven by general-interest newspapers, which display a larger and very significant effect. The coefficient of interest is still positive but smaller and imprecisely estimated for financial newspapers. One interpretation is that general-interest newspapers - which are less focused on financial issues and firms' performance - may have more discretion then financial newspapers when deciding what events and what banks to cover, and may use this discretion to favor their lenders. Given their specialization and target audience, financial newspapers may have less of a choice as to *whether* to report about earning announcements. They would, nonetheless, have some discretion as to how much space and prominence to give them. This conjecture is confirmed by the results in Panels B and C which show that, on the intensive margin, the effect is mainly driven by financial newspapers while the estimated coefficient for general-interest newspapers, though still positive, is much smaller and statistically insignificant.[28] These findings are interesting in that they suggest that the form that pro-lender bias takes depends on the specific incentives and constraints faced by each media outlet.

We then examine how pro-lender bias depends on the financial situation of both newspapers and banks. Two questions are relevant in this regard. The first is whether newspapers in financial distress are more vulnerable to the pressures of their lenders. The second is

[27] Previous findings on the influence of advertisers on news content (Reuter & Zitzewitz, 2006) suggest that more specialized outlets may be more vulnerable to outside pressures than general-interest ones. However, in that case, the relevant comparison group was personal finance publications.

[28] In Table A13 we repeat the same exercise with the share of mono-bank articles and the share of mono-bank text as dependent variables (Panel A and B, respectively). It turns out that the share of mono-bank articles devoted to gains as opposed to losses is significantly higher among financial newspapers, whereas there is no discernible difference when looking at the share of text.

whether banks that face financial difficulties are more likely to pressure connected media so as to minimize news coverage of their losses.

We first test whether pro-lenders bias is more pronounced for highly leveraged newspapers. To this end, in the first two columns of Table 7, we augment our baseline specifications to include an interaction between our regressor of interest, $Gain * Banker(Direct)$, and a measure of newspaper's capitalization given by the ratio between shareholders' funds and total assets (i.e., the inverse of leverage). In column 1, we estimate the baseline model as in column 7 of Table 3. The coefficient on the interaction is negative and significant, suggesting that financially weaker newspapers (i.e., with lower capitalization) are more likely to slant content in favor of their creditors. This finding is actually strengthened in column 2, when we further saturate the model with the interaction of time, bank profit, newspaper and bank-country fixed effects. Based on the estimates in column 1 (2), the pro-lender bias amounts to 15.9 (19.2) p.p. for a newspaper with average (39.09%) level of capitalization, whereas lowering capital by 1 s.d. below the mean boosts it to 23 (37) p.p..

In the next two columns, we look at how bank's financial situation affects our baseline effect. We replicate the same analysis as in columns 1 and 2 but interacting $Gain * Banker(Direct)$ with bank's capitalization proxied by the lagged annual capital ratio. The negative coefficient on the interaction term indicates that newspapers are more likely to bias content in favor of connected banks that are least financially solid, though the effect does not survive most demanding model specification in column 4.[29] One interpretation is that for poorly capitalized banks even temporary losses - and the news coverage they attract - may represent a serious concern since their loss-absorbing capacity is lower. As a consequence, these banks would have a bigger incentive to use their connections to minimize detrimental coverage.

## 4. Lending Connections and News Coverage of the Eurozone Crisis

In this section we examine how bank-newspaper lending connections affect news coverage of an important public interest issue: the Eurozone Sovereign Debt Crisis (ESDC). We first describe the empirical strategy and then discuss the results.

### 4.1. Empirical Strategy

We look at articles published around eight salient events of the crisis occurred between 2011 and 2012, collected and coded by Picard (2015) (see Table A3 for a complete list of the events).

[29] Based on the estimates in column 3, the bias in favor of a bank with average capitalization is 11.1 p.p. and it roughly doubles when banks' capitalization decreases by one standard deviation.

TABLE 6: EARNINGS ANNOUNCEMENT - GENERAL INTEREST VS FINANCIAL NEWSPAPERS

Panel A: Extensive Margin

| | (1) General Interest | (2) Financial | (3) All Newspapers |
|---|---|---|---|
| Banker(Direct) | -0.203*** | 0.052 | -0.145** |
| | (0.058) | (0.125) | (0.059) |
| Gain*Banker(Direct) | 0.216*** | 0.101 | 0.176*** |
| | (0.051) | (0.129) | (0.050) |
| Observations | 9,216 | 3,415 | 12,631 |
| R-squared | 0.617 | 0.678 | 0.630 |
| Paper*Bank FE | Yes | Yes | Yes |
| Bank*Time FE | Yes | Yes | Yes |
| Paper*Bank-Country*Time FE | Yes | Yes | Yes |
| Gain*Shareholder | Yes | Yes | Yes |

Panel B: Intensive Margin - # of Articles

| | (1) General Interest | (2) Financial | (3) All Newspapers |
|---|---|---|---|
| Banker(Direct) | -0.236 | -0.304* | -0.414 |
| | (0.230) | (0.175) | (0.605) |
| Gain*Banker(Direct) | 0.165 | 0.432* | 0.266* |
| | (0.213) | (0.252) | (0.142) |
| Observations | 995 | 990 | 2,027 |
| R-squared | 0.554 | 0.511 | 0.479 |
| Paper*Bank FE | Yes | Yes | Yes |
| Same country*Year-Quarter*Gain FE | Yes | Yes | Yes |
| Paper*Year FE | Yes | Yes | Yes |
| Bank*Year FE | Yes | Yes | Yes |
| Gain*Shareholder | Yes | Yes | Yes |

Panel C: Intensive Margin - Length of Articles

| | (1) General Interest | (2) Financial | (3) All Newspapers |
|---|---|---|---|
| Banker(Direct) | 0.346 | -0.078 | 0.146 |
| | (0.378) | (0.186) | (0.108) |
| Gain*Banker(Direct) | 0.132 | 1.076*** | 0.260 |
| | (0.341) | (0.403) | (0.213) |
| Observations | 995 | 990 | 2,027 |
| R-squared | 0.708 | 0.678 | 0.667 |

The dependent variables are a dummy for whether a newspaper devotes at least one mono-bank article to the quarterly earning report of a bank (panel A), the (log) number of mono-bank articles (panel B), and their overall length (panel B). *Banker*(*Direct*) is a dummy variable equal to 1 if a newspaper and a bank are connected through a direct lending relationship, and 0 otherwise. *Shareholder* is a dummy variable equal to 1 if a bank holds any (direct or indirect) ownership share in a given newspaper, and 0 otherwise. *Gain* is a dummy variable equal to 1 if a bank reports gain in a given year-quarter, and 0 if it reports a loss. Standard errors are clustered at the Paper*Bank level.*** p<0.01, ** p<0.05, * p<0.1, [a] p<0.15. The regressions in Panel C include the same sequence of controls and fixed effects as those in Panel B, though we do not report them for brevity.

TABLE 7: FINANCIAL SOLIDITY & MEDIA CAPTURE

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Dummy for at least one mono-bank article | | | |
| | **Newspaper Capital** | | **Bank Capital** | |
| Banker(Direct) | -0.177* | -0.325** | -0.314 | -0.017 |
| | (0.100) | (0.133) | (0.210) | (0.396) |
| Gain*Banker(Direct) | 0.237*** | 0.388*** | 0.497*** | 0.227 |
| | (0.088) | (0.126) | (0.190) | (0.399) |
| Banker(Direct)*Capital | 0.001 | 0.004** | 0.034 | -0.008 |
| | (0.002) | (0.002) | (0.035) | (0.075) |
| Gain*Banker(Direct)*Capital | -0.002* | -0.005*** | -0.059* | -0.020 |
| | (0.001) | (0.002) | (0.035) | (0.077) |
| Observations | 11,748 | 10,633 | 11,613 | 10,374 |
| R-squared | 0.633 | 0.643 | 0.633 | 0.642 |
| Bank*Time FE | Yes | Yes | Yes | Yes |
| Paper*Bank FE | Yes | Yes | Yes | Yes |
| Paper*Bank-Country*Time FE | Yes | - | Yes | - |
| Paper*Bank-Country*Gain*Time FE | - | Yes | - | Yes |

The dependent variable is a dummy for whether a newspaper devotes at least one mono-bank article to a bank's quarterly earning announcement. $Banker(Direct)$ is a dummy variable equal to 1 if a newspaper and a bank are connected through a direct lending relationship, and 0 otherwise. *Gain* is a dummy variable equal to 1 if a bank announces a profit in a given year-quarter, and 0 otherwise. In columns 1 and 2, the term $Gain * Banker(Direct)$ is interacted with newspaper's capitalization, defined as 100*Shareholders Funds/Total Assets, which corresponds to the inverse of financial leverage. In columns 3 and 4 $Gain * Banker(Direct)$ is interacted with bank's capitalization defined as 100*Equity/Total Assets. Standard errors are clustered at the Paper*Bank level. *** p<0.01, ** p<0.05, * p<0.1.

Since news coverage of the crisis is not bank-specific, unlike for the analysis of earnings reports, the unit of observation is not a newspaper-bank pair but a newspaper. We therefore exploit differences in news coverage between newspapers, indexed by $n$, in the period around an event, indexed by $t$. The following equation summarizes our econometric strategy:

$$Y_{n,t} = \beta_1 GIIPS_{n,t-1} + \gamma X_{n,t-1} + \mu_{n(country)} + \mu_t + \varepsilon_{n,t} \quad (2)$$

$Y_{n,t}$ is one of the measures of news coverage of the crisis by newspaper $n$ in period $t$. For our baseline analysis of the extensive margin we construct three dummy variables equal to 1 if a newspaper in a given period publishes at least one article satisfying one of these conditions: i) mentioning the banking sector as one of the root causes of the crisis (*Root=Banks*), ii) claiming banks bear the main responsibility to solve the crisis (*Bear=Banks*), and iii)

supporting debt-restructuring policies, such as a haircut, as a solution to the crisis (*Solution=Haircut*). We also construct two intensive-margin measures: the (log of the) number of articles satisfying each condition, and the share these articles represent of all the crisis-related articles published by the same newspaper in the same period.

The main regressor of interest is $GIIPS_{n,t-1}$ which represents the average (1-year lagged) exposure to sovereign bonds issued by GIIPS countries across all the banks connected to the newspaper through direct lending relationships. Hence, the coefficient $\beta$ captures the extent to which a newspaper promotes a narrative of the crisis that serves the interests of its lenders, and opposes debt-restructuring measures detrimental to them.

In our baseline specification we control for other financial variables of the banks connected to a newspaper, $X_{n,t-1}$, namely the average lagged average Tier-1 capital ratio and the average asset (log)size. In addition, we include a vector of country fixed effects and period fixed effects, which capture the average news coverage of the crisis by all newspapers in a given country, and by all newspapers in the sample in a given period, respectively. Hence, we identify the effect of lenders' exposure to GIIPS bonds by comparing news coverage of the same event by different newspapers *in the same country*. For purpose of robustness, we also estimate a more demanding specification which includes country*period fixed effects, which allows controlling not only for the fact that media in certain countries may have different views about the crisis and its solutions, but also for the possibility that these views may change over time. Finally, for the subset of newspapers for which this information is available, we also control for circulation and political leaning. This allows to net out differences in news coverage of the crisis between larger vs. smaller newspapers, and between liberal vs. conservative newspapers. Regarding standard errors, in all regressions we use two-way clustering by newspaper and country*period.

### 4.2. Results

In Table 8 we report the results for the main specification with connected-banks controls, and country as well as period fixed effects.

In the first column we test whether newspapers whose lenders are more exposed to stressed sovereign bonds are less likely to mention the banking sector as one of the roots of the crisis. The results indicate a negative and statistically significant effect of lenders' exposure on the probability that a newspaper publishes any article promoting this view. The effect is sizeable: a one-standard-deviation increase in lenders' GIIPS-exposure is associated with a 20 p.p. decrease in the outcome variable (40% of the unconditional mean). In column 2 we examine whether a similar pattern applies to the probability that a newspaper publishes articles claiming that banks should bear the main responsibility to solve the crisis. In this

case, while the sign of the coefficient is consistent with the result in column 1, the effect is not statistically significant. In column 3 we investigate how the vested interests of lenders affect a newspaper's stand as to what solutions to the crisis to endorse. The results support the view that newspapers connected to banks more exposed to stressed sovereign bonds are significantly less likely to endorse debt-restructuring measures, such as a haircut, which would result in losses for the lenders. Once again, the effect is quantitatively important. A one-standard-deviation increase in lenders' GIIPS-exposure is associated with a 13.6 p.p. decline in the likelihood of publishing an article endorsing debt-restructuring measures (34% of the sample average).

TABLE 8: COVERAGE OF THE EUROZONE SOVEREIGN DEBT CRISIS

| | (1) Root=Banks | (2) Bear=Banks | (3) Solution=Haircut |
|---|---|---|---|
| GIIPS | -3.589*** | -1.535 | -2.519** |
| | (0.922) | (1.076) | (1.114) |
| Observations | 191 | 191 | 191 |
| $R^2$ | 0.250 | 0.240 | 0.238 |
| Country FE | Yes | Yes | Yes |
| Period FE | Yes | Yes | Yes |
| Bank controls | Yes | Yes | Yes |

The dependent variable is a dummy for whether a newspaper published at least one article mentioning the banking sector as one of the roots of the crisis (column 1), claiming banks should bear the main responsibility to solve the crisis (column 2), and endorsing debt-restructuring measures as a possible solution to the crisis (column 3). Bank controls include: newspaper-level average bank capital, and average bank size. Standard errors are double-clustered at the newspaper and country*period level. *** p<0.01, ** p<0.05, * p<0.1

In Table A14 we check the robustness of these findings to a series of additional tests. First, we augment the baseline specification used in Table 8 to include country*period fixed effects, hence allowing for differences in news coverage across countries to also vary over time. It is worth noting that the more saturated model explains a larger share of the overall variation in the data (as attested by the increase in the R-squared). Yet, the coefficient of interest remains largely unchanged, both in terms of magnitude and statistical significance, for all three outcome variables. In the following columns we control for two characteristics of the newspaper that may affect the editorial regarding the coverage of the crisis and may

be spuriously correlated with lenders' GIIPS-exposure. First, we control for circulation, an intuitive measure of the relevance of an outlet in a country's media market. For all three outcomes we find that circulation further improves the R-square, and displays a negative and significant coefficient. This finding is consistent with the view that larger "mainstream" newspapers are less likely to take a critical stand regarding the responsibilities of the banking sector than smaller "fringe" newspapers. The inclusion of this control does only marginally affect the effect of the regressor of interests, which remains statistically significant for the first and third outcome. Finally, in columns 3, 6, and 9, we control for newspapers' political leaning on the left-right spectrum. Since this variable is only available for half of the newspapers in our sample, the sample size shrinks considerably, making any comparison with the results of the previous columns challenging. The results on GIIPS-exposure are robust to controlling for political leaning. If anything, within this smaller sample, the coefficient of interests is generally larger and is statistically significant also for the probability of publishing articles claiming banks should bear the main responsibility to solve the crisis (column 6).

As an additional check, we test that exposure of connected banks to risky sovereign bonds does not affect a newspaper's editorial stance on Eurozone economic issues (other than the crisis) that do not affect the interests of connected banks. Specifically, as discussed in section 2.1.2, we perform two placebo exercises using information on whether an article reported a specific country (or group of countries) as benefitting or losing the most from the single currency since its adoption. Reassuringly, the results reported in Table A15 show that connected banks' exposure to GIIPS' sovereign bonds is not significantly related to the probability that a newspaper reports that the euro benefits or harms GIIPS countries (columns 1-4 and 5-8, respectively). These results are consistent regardless of the specification.

Finally, in Table A16 we report some results for the intensive margin using the baseline specification; again, given the small sample size, these results should be interpreted with caution. Though most of the estimated coefficients are not statistically significant, the results in column 6 suggests that, even when a newspaper decides to endorse debt-restructuring policies as a possible solution to the crisis, the level of exposure of its lenders influence the number of articles supporting this view.

Taken together these results support the view that the lending connections between banks and media companies impact the way news outlets report on issues relevant to the banking sector, including those that have important implications for the public interest.

## 5. CONCLUSIONS

This paper studies empirically to what extent lending connections between banks and media companies influence news coverage of financial issues. Looking at several European countries, we first map lending connections between banks and the main national newspapers. We then test whether newspapers bias content in favor of their lenders by looking at how they cover two issues: i) banks' earnings announcements, i.e., bank-specific regular and predictable events, and ii) the Eurozone Sovereign Debt crisis, a major event with broader repercussions for society.

The first analysis reveals that newspapers tend to cover earnings announcements by their lenders more extensively, relative to those by other banks, in case of profits than in case of losses. Pro-lender bias through selective coverage is sizeable and applies to both general-interest and financial newspapers, though it operates on the extensive margin, for the former, and on the intensive margin, for the latter. Moreover, pro-lender bias is relatively stronger among newspapers in financial distress, which are more dependent on their creditors.

Regarding the Eurozone crisis, our findings indicate that newspapers connected to banks more heavily exposed to stressed sovereign bonds were less likely to promote a narrative of the crisis critical of banks and to endorse debt-restructuring measures potentially costly to creditors. These results are robust to controlling for time-variant differences across countries in the coverage of the crisis, and for newspapers' size and political leaning.

Taken together, our results provide the first systematic multi-country evidence that links between media companies and the banking sector through credit can have a first-order effect on news content, and threaten media editorial independence when it comes to reporting on financial issues. As our findings indicate, the connections with banks do not merely affect the way newspapers report about bank-specific events, but can have broader ramifications for the public debate on more general and policy-relevant issues. Future research should shed light on the implications of this process for the formation of public opinion and, ultimately, for policymaking.

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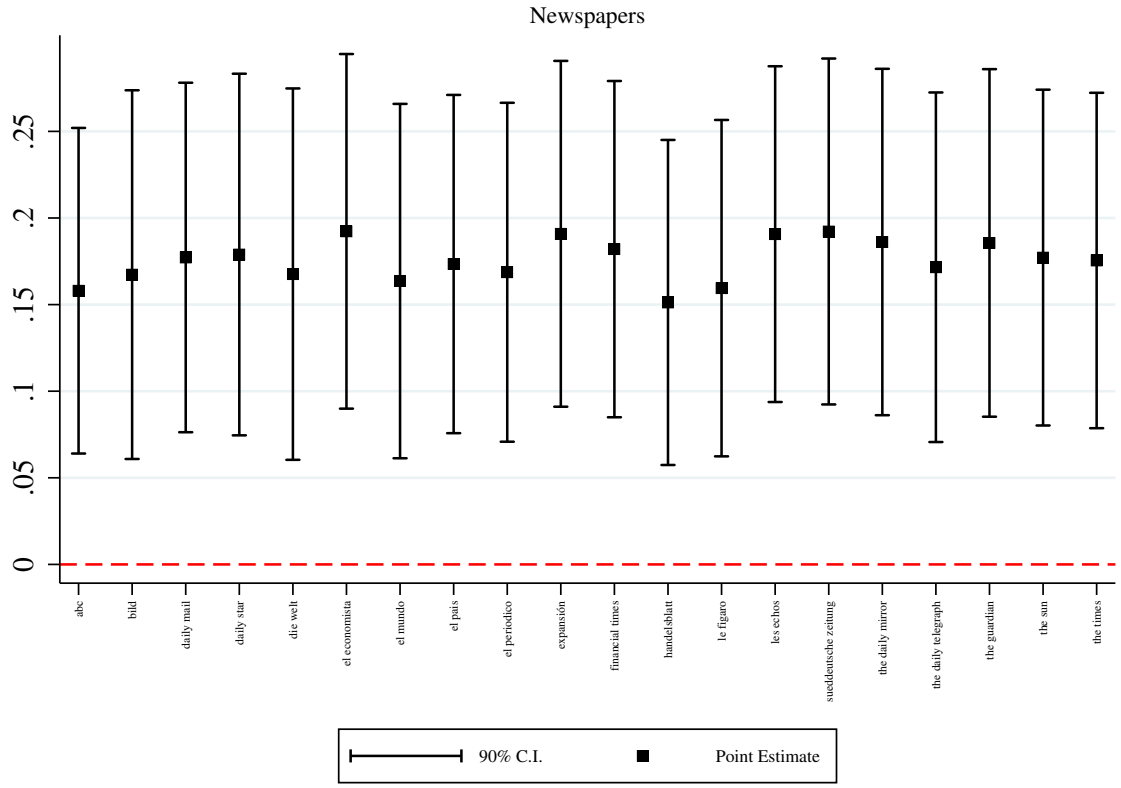
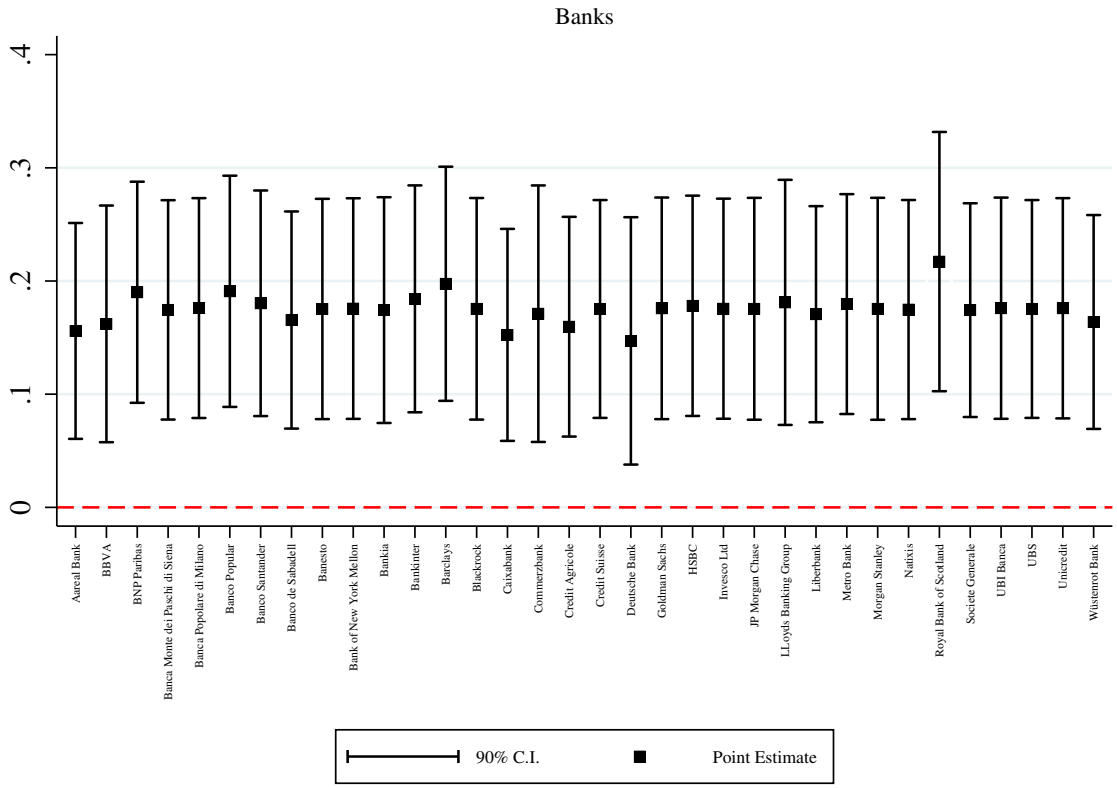
## APPENDIX

FIGURE A1: SENSITIVITY OF COEFFICIENT TO THE EXCLUSION OF ONE NEWSPAPER




This chart plots the coefficients obtained estimating the model in column 7 of Table 3 after excluding one newspaper at the time. The name of the excluded newspaper is reported on the x-axis.

FIGURE A2: SENSITIVITY OF COEFFICIENT TO THE EXCLUSION OF ONE BANK




This chart plots the coefficients obtained estimating the model in column 7 of Table 3 after excluding one bank at the time. The name of the excluded bank is reported on the x-axis.

TABLES

TABLE A1: LIST OF NEWSPAPERS & BANKS - ANALYSIS OF EARNINGS ANNOUNCEMENTS

| *Newspapers* | *Banks* |
|---|---|
| | Aareal Bank |
| | BBVA |
| | BNP Paribas |
| | Banca Monte dei Paschi di Siena |
| | Banca Popolare di Milano |
| | Banco Popular |
| | Banco Santander |
| ABC | Banco de Sabadell |
| Bild | Banesto |
| Daily Mail | Bank of New York Mellon |
| Daily Mirror | Bankia |
| Daily Star | Bankinter |
| Daily Telegraph | Barclays |
| Die Welt | Blackrock |
| El Economista | Caixabank |
| El Mundo | Commerzbank |
| El País | Credit Agricole |
| El Periódico | Credit Suisse |
| Expansión | Deutsche Bank |
| Financial Times | Goldman Sachs |
| Handelsblatt | HSBC |
| Le Figaro | Invesco Ltd |
| Les Echos | JP Morgan Chase |
| Sueddeutsche Zeitung | Lloyds Banking Group |
| The Guardian | Liberbank |
| The Sun | Metro Bank |
| The Times | Morgan Stanley |
| | Natixis |
| | Royal Bank of Scotland |
| | Societe Generale |
| | UBI Banca |
| | UBS |
| | Unicredit |
| | Wüstenrot Bank |

TABLE A2: FILTERS APPLIED IN DOW JONES FACTIVA FOR SELECTING EARNINGS-ANNOUNCEMENTS RELATED NEWS

| *Language* | *Filter* |
|---|---|
| English | Profit* or loss* or result* or earning* or net income or operating income or payout or dividend* |
| French | Revenus or benefice or résultat* |
| German | Gewinn* or Betriebs* or ergebni* or Geschäftsergebnis* or Rekordgewinn* or Quartalsbericht orQuartalsergebni* or Handelsergebnis or quartalsgewin* or Quartalsberichte or Quartalszahlen or Dividend* |
| Spanish | Beneficio* or analist* or Perdida* or resultado* or dividend* |

This table reports the filters we apply in Dow Jones Factiva to identify articles related to earnings announcements. The "*" applied at the end of a given expression means that the filter selects all articles containing words beginning with such expression. The filters are used together with a condition on a date (the day before, the day of the announcement and the day after) and the name and nicknames of the bank announcing their quarterly results in that date.

TABLE A3: SELECTED PERIODS OF ANALYSIS OF THE EUROZONE SDC

| *Period Dates* | *Description* |
|---|---|
| 25/07/11 -18/08/11 | ECB asks Italy for more austerity measures. |
| 28/09/11 - 12/10/11 | Greek general strike against austerity measures. |
| 19/10/11 - 02/11/11 | EU summit for stability fund. |
| 05/11/11 - 19/11/11 | Berlusconi resigns and Monti appointed. French austerity measures. |
| 19/11/11 - 30/11/11 | EC Green Paper on stability bonds and EC control of national budgets. |
| 16/05/12 - 05/06/12 | EU summit to boost growth and balance austerity. Attention on Spain. |
| 18/06/12 - 05/07/12 | Spain requests assistance. EU summit on the crisis. |
| 08/07/12 - 22/07/12 | Merkel affirms need for budgetary targets and European monitoring. |

This table describes the different periods we use for the analysis of the news coverage of the European Sovereign Debt Crisis (drawn from Picard (2015)

TABLE A4: LIST OF NEWSPAPERS IN THE ANALYSIS OF THE EUROZONE SOVEREIGN DEBT CRISIS

| |
|---|
| ABC |
| Bild |
| Corriere della Sera |
| De Telegraaf |
| De Volkskrant |
| El Mundo |
| El País |
| Expansión |
| Fakt |
| Financial Times |
| Frankfurter Allgemeine |
| Gazeta Wyborcza |
| Handelsblad |
| Handelsblatt |
| Het Financieele Dagblad |
| La Repubblica |
| Le Monde |
| Le Parisiene |
| Les Echos |
| Rzeczpospolita |
| Sueddeutsche Zeitung |
| The Guardian |
| The Sun |
| The Times |

The list of newspapers refers to the largest sample used for the analysis of the Eurozone Sovereign Debt Crisis. The sample results from exploiting the information on lending relationships from all the available Orbis annual vintages (2013, 2016 and 2018) and from Kompass 2008 for Italian newspapers, namely for the *Corriere della Sera* and *La Repubblica.*

TABLE A5: BANKS' EARNINGS ANNOUNCEMENTS - DIRECT VS. INDIRECT LENDING RELATIONSHIPS

| | (1) | (2) |
|---|---|---|
| | 1(≥1 mono-bank article) | |
| Gain*Banker | 0.117*** | |
| | (0.042) | |
| Gain*Banker(Direct) | | 0.149*** |
| | | (0.051) |
| Gain*Banker(Indirect) | | 0.063 |
| | | (0.075) |
| Observations | 12,631 | 12,631 |
| R-squared | 0.629 | 0.629 |
| Gain*Shareholder | Yes | Yes |
| Bank*Time FE | Yes | Yes |
| Paper*Bank FE | Yes | Yes |
| Paper*Bank-Country*Time FE | Yes | Yes |

The dependent variable is a dummy variable for whether a newspaper covers a bank quarterly earning announcement with at least one mono-bank article. Banker is a dummy variable if a newspaper and a bank are connected either through direct or indirect (i.e., through the owners) lending relationships. Banker(Direct) is a dummy variable with value 1 if a paper and a bank are connected through direct lending relationships, and with value 0 otherwise. Banker(Indirect) is a dummy variable with value 1 if a newspaper and a bank are connected only through indirect lending relationships. Shareholder is a dummy variable with value 1 if a bank holds any ownership share in a given newspaper, and with value 0 otherwise. Gain is a dummy variable with value 1 (0) if a bank discloses gains (losses) in a given year-quarter. In the legend, the symbol "-" refers to controls and/or fixed effects which are spanned out by the application of other controls and/or fixed effects. Standard errors are clustered at the newspaper*bank level. *** p<0.01, ** p<0.05, * p<0.1.

TABLE A6: BANKS' EARNINGS ANNOUNCEMENTS - HIGHER ORDER FIXED EFFECTS

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | 1(≥ mono-bank article) | | | |
| Shareholder | 0.033 | 0.032 | 0.033 | -0.008 |
| | (0.039) | (0.040) | (0.041) | (0.097) |
| Gain*Shareholder | -0.017 | -0.016 | -0.013 | 0.023 |
| | (0.040) | (0.042) | (0.043) | (0.097) |
| Banker(Direct) | -0.145** | -0.148** | -0.139** | -0.115 |
| | (0.059) | (0.063) | (0.067) | (0.072) |
| Gain*Banker(Direct) | 0.176*** | 0.180*** | 0.175*** | 0.161*** |
| | (0.050) | (0.054) | (0.057) | (0.061) |
| Observations | 12631 | 12631 | 12631 | 11434 |
| $R^2$ | 0.630 | 0.630 | 0.632 | 0.641 |
| Bank*Time FE | Yes | Yes | Yes | Yes |
| Paper*Bank FE | Yes | Yes | Yes | Yes |
| Paper*Bank-Country*Time FE | Yes | Yes | Yes | - |
| Same Country*Gain | No | Yes | - | - |
| Same Country*Gain*Time | No | No | Yes | - |
| Paper*Bank-Country*Gain*Time FE | No | No | No | Yes |

The dependent variable is a dummy variable for whether a newspaper covers a bank quarterly earning announcement with at least one mono-bank article. Banker(Direct) is a dummy variable with value 1 if a paper and a bank are connected through direct lending relationships, and with value 0 otherwise. Shareholder is a dummy variable with value 1 if a bank holds any ownership share in a given newspaper, and with value 0 otherwise. Gain is a dummy variable with value 1 (0) if a bank discloses gains (losses) in a given year-quarter. In the legend, the symbol "-" refers to controls and/or fixed effects which are spanned out by the application of other controls and/or fixed effects. Standard errors are clustered at the . *** p<0.01, ** p<0.05, * p<0.1.

TABLE A7: EXTENSIVE MARGIN - ROBUSTNESS: INCLUDING BANK CONTROLS

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | 1(≥ mono-bank article) | | | | | | |
| Gain*Banker(Direct) | 0.163*** | 0.099* | 0.078 | 0.081 | 0.141*** | 0.153*** | 0.176*** |
| | (0.057) | (0.060) | (0.055) | (0.053) | (0.054) | (0.053) | (0.051) |
| Observations | 10995 | 10995 | 10995 | 10995 | 10995 | 10995 | 10995 |
| R-squared | 0.076 | 0.211 | 0.319 | 0.385 | 0.393 | 0.502 | 0.643 |
| Bank FE | No | Yes | - | - | - | - | - |
| Paper FE | No | Yes | - | - | - | - | - |
| Time FE | No | Yes | - | - | - | - | - |
| Paper*Time FE | No | No | Yes | Yes | Yes | Yes | - |
| Bank*Time FE | No | No | Yes | Yes | Yes | Yes | Yes |
| Same country FE | No | No | No | Yes | - | - | - |
| Same country*Time FE | No | No | No | No | Yes | Yes | - |
| Paper*Bank FE | No | No | No | No | No | Yes | Yes |
| Paper*Bank-Country*Time FE | No | No | No | No | No | No | Yes |
| Bank Controls*Shareholder*Gain | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Bank Controls*Banker(Direct) | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

In all columns the dependent variable is a dummy variable for whether a newspaper covers a bank quarterly earning announcement with at least a mono-bank articles. Bank Controls include: size (i.e. log assets), capital and loan losses provisions (both rescaled by total assets). All bank controls are lagged by one year. Banker(Direct) is a dummy variable with value 1 if a paper and a bank are connected through direct lending connections, and with value 0 otherwise. Shareholder is a dummy variable with value 1 if a bank holds any ownership share in a given newspaper, and with value 0 otherwise. Gain is a dummy variable with value 1 (0) if a bank discloses gains (losses) in a given year-quarter. In the legend, the symbol "-" refers to controls and/or fixed effects which are spanned out by the application of other controls and/or fixed effects. Standard errors are clustered at the Paper*Bank level. *** p<0.01, ** p<0.05, * p<0.1.

TABLE A8: BANKS' EARNINGS ANNOUNCEMENT - DIFFERENT CLUSTERING STRATEGIES

| | (1) | (2) | (3) |
|---|---|---|---|
| | 1(≥ mono-bank article | | |
| Gain*Banker(Direct) | 0.176*** | 0.176*** | 0.176*** |
| | (0.051) | (0.058) | (0.054) |
| Observations | 12,631 | 12,631 | 12,631 |
| R-squared | 0.630 | 0.630 | 0.630 |
| Cluster-level | News & Bank | Bank*Time | Bank |
| Paper*Bank FE | Yes | Yes | Yes |
| Bank*Time FE | Yes | Yes | Yes |
| Paper*Bank-Country*Time FE | Yes | Yes | Yes |

In column 1, s.e. are double-clustered at the paper and bank level. In column 2, s.e. are clustered at the bank*year-quarter level, whereas in column 3 at the bank level. In all columns, the dependent variable is a dummy variable for whether a newspaper covers a bank quarterly earning announcement with at least one mono-bank article. Shareholder is a dummy variable with value 1 if a bank holds any ownership share in a given newspaper, and with value 0 otherwise. Gain is a dummy variable with value 1 (0) if a bank discloses gains (losses) in a given year-quarter. Banker(Direct) is a dummy variable with value 1 if a newspaper directly borrows from a given bank. In the legend, the symbol "-" refers to controls and/or fixed effects which are spanned out by the application of other controls and/or fixed effects. Standard errors are clustered at the Paper*Bank level. *** p<0.01, ** p<0.05, * p<0.1.

TABLE A9: EXTENSIVE MARGIN - ROBUSTNESS: EXCLUDING MULTI-BANK ARTICLES

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | 1(≥ mono-bank article) | | | | | | |
| Shareholder | 0.301*** | 0.178*** | 0.175*** | 0.071* | 0.066 | 0.044 | 0.075* |
| | (0.059) | (0.048) | (0.048) | (0.042) | (0.043) | (0.039) | (0.042) |
| Banker(Direct) | 0.292*** | 0.307*** | 0.314*** | -0.070 | -0.116* | -0.069 | -0.118** |
| | (0.071) | (0.062) | (0.062) | (0.063) | (0.064) | (0.062) | (0.050) |
| Gain | -0.021 | -0.042*** | | | | | |
| | (0.015) | (0.012) | | | | | |
| Gain*Shareholder | -0.126** | -0.073 | -0.061 | -0.020 | -0.013 | -0.031 | -0.068* |
| | (0.054) | (0.046) | (0.044) | (0.038) | (0.039) | (0.037) | (0.040) |
| Gain*Banker(Direct) | 0.191*** | 0.103 | 0.088 | 0.110* | 0.167*** | 0.111** | 0.116*** |
| | (0.063) | (0.066) | (0.063) | (0.059) | (0.060) | (0.054) | (0.042) |
| Observations | 11,242 | 11,242 | 11,242 | 11,242 | 11,242 | 11,241 | 11,044 |
| R-squared | 0.097 | 0.277 | 0.380 | 0.477 | 0.485 | 0.664 | 0.773 |
| Bank FE | No | Yes | - | - | - | - | - |
| Paper FE | No | Yes | - | - | - | - | - |
| Time FE | No | Yes | - | - | - | - | - |
| Paper*Time FE | No | No | Yes | Yes | Yes | Yes | - |
| Bank*Time FE | No | No | Yes | Yes | Yes | Yes | Yes |
| Same country FE | No | No | No | Yes | - | - | - |
| Same country*Time FE | No | No | No | No | Yes | Yes | - |
| Paper*Bank FE | No | No | No | No | No | Yes | Yes |
| Paper*Bank-Country*Time FE | No | No | No | No | No | No | Yes |

In all columns, the dependent variable is a dummy variable for whether a newspaper covers a bank quarterly earning announcement with at least a mono-bank articles. Articles about multiple banks are excluded from the sample. Shareholder is a dummy variable with value 1 if a bank holds any ownership share in a given newspaper, and with value 0 otherwise. Gain is a dummy variable with value 1 (0) if a bank discloses gains (losses) in a given year-quarter. Banker(Direct) is a dummy variable with value 1 if a newspaper directly borrows from a given bank, and 0 otherwise. In the legend, the symbol "-" refers to controls and/or fixed effects which are spanned out by the application of other controls and/or fixed effects. Standard errors are clustered at the Paper*Bank level. *** p<0.01, ** p<0.05, * p<0.1.

TABLE A10: EXTENSIVE MARGIN - ROBUSTNESS: EXPANDING TIME-WINDOW FOR ARTICLES COLLECTION (FROM -1 TO J DAYS AFTER EARNINGS REPORT)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | 1($\geq$ 1 mono-bank article) | | | | | | |
| Gain*Banker(Direct) | 0.142*** | 0.140*** | 0.132*** | 0.131*** | 0.131*** | 0.131*** | 0.130*** |
| | (0.044) | (0.044) | (0.044) | (0.044) | (0.044) | (0.044) | (0.044) |
| Observations | 18,960 | 18,960 | 18,960 | 18,960 | 18,960 | 18,960 | 18,960 |
| R-squared | 0.611 | 0.611 | 0.611 | 0.611 | 0.611 | 0.612 | 0.613 |
| Bank FE | No | Yes | - | - | - | - | - |
| Paper FE | No | Yes | - | - | - | - | - |
| Time FE | No | Yes | - | - | - | - | - |
| Paper*Time FE | No | No | Yes | Yes | Yes | Yes | - |
| Bank*Time FE | No | No | Yes | Yes | Yes | Yes | Yes |
| Same country FE | No | No | No | Yes | - | - | - |
| Same country*Time FE | No | No | No | No | Yes | Yes | - |
| Paper*Bank FE | No | No | No | No | No | Yes | Yes |
| Paper*Bank-Country*Time FE | No | No | No | No | No | No | Yes |

In column j, the dependent variable is a dummy variable for whether a newspaper covers a bank quarterly earning announcement with at least a mono-bank articles in a time-window starting from the day before the announcement to j days after, j=1,2,3,4,5,6,7. Articles about multiple banks are excluded from the sample. Gain is a dummy variable with value 1 (0) if a bank discloses gains (losses) in a given year-quarter. Banker(Direct) is a dummy variable with value 1 if a newspaper directly borrows from a given bank. In the legend, the symbol "-" refers to controls and/or fixed effects which are spanned out by the application of other controls and/or fixed effects. Standard errors are clustered at the Paper*Bank level. *** p<0.01, ** p<0.05, * p<0.1.

TABLE A11: EXTENSIVE MARGIN - ROBUSTNESS: EXCLUDING TABLOIDS

| | (1)<br>1(≥ 1 mono-bank article) |
|---|---|
| Shareholder | 0.016 |
| | (0.047) |
| Banker(Direct) | -0.141* |
| | (0.079) |
| Gain*Shareholder | 0.006 |
| | (0.049) |
| Gain*Banker(Direct) | 0.189*** |
| | (0.064) |
| Observations | 9,708 |
| R-squared | 0.626 |
| Paper*Bank FE | Yes |
| Bank*Time FE | Yes |
| Paper*Bank-Country*Time FE | Yes |

Relatively to the baseline estimation sample in Table 3 we exclude newspapers labelled as tabloids, namely Bild, Daily Mail, Daily Mirror, Daily Star and The Sun. In all columns, the dependent variable is a dummy variable for whether a newspaper covers a bank quarterly earning announcement with at least a mono-bank articles. Banker(Direct) is a dummy variable with value 1 if a newspaper directly borrows from a given bank, and with value 0 otherwise. Shareholder is a dummy variable with value 1 if a bank holds any ownership share in a given newspaper, and with value 0 otherwise. Gain is a dummy variable with value 1 (0) if a bank discloses gains (losses) in a given year-quarter. In the legend, the symbol "-" refers to controls and/or fixed effects which are spanned out by the application of other controls and/or fixed effects. Standard errors are clustered at the Paper*Bank level. *** p<0.01, ** p<0.05, * p<0.1.

TABLE A12: INTENSIVE MARGIN - ROBUSTNESS: PROGRESSIVELY SATURATED MODELS

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | Dep. Variable: Number of articles | | | | | | |
| Gain*Banker(Direct) | 0.092 | 0.154 | 0.200* | 0.286*** | 0.309*** | 0.288** | 0.266* |
| | (0.124) | (0.111) | (0.102) | (0.106) | (0.109) | (0.120) | (0.142) |
| Observations | 2,027 | 2,027 | 2,027 | 2,027 | 2,027 | 2,027 | 2,027 |
| R-squared | 0.053 | 0.181 | 0.241 | 0.349 | 0.367 | 0.382 | 0.479 |
| | Dep. Variable: Length of articles | | | | | | |
| Gain*Banker(Direct) | 0.190 | 0.130 | 0.311* | 0.477*** | 0.462*** | 0.115 | 0.260 |
| | (0.246) | (0.193) | (0.170) | (0.145) | (0.141) | (0.207) | (0.213) |
| Observations | 2,027 | 2,027 | 2,027 | 2,027 | 2,027 | 2,027 | 2,027 |
| R-squared | 0.060 | 0.345 | 0.448 | 0.548 | 0.557 | 0.564 | 0.667 |
| | Dep. Variable: % of mono-bank articles | | | | | | |
| Gain*Banker(Direct) | 0.112** | 0.170*** | 0.170*** | 0.182*** | 0.225*** | 0.222*** | 0.169** |
| | (0.054) | (0.053) | (0.053) | (0.063) | (0.065) | (0.079) | (0.084) |
| Observations | 3,449 | 3,449 | 3,449 | 3,449 | 3,449 | 3,449 | 3,449 |
| R-squared | 0.010 | 0.143 | 0.143 | 0.227 | 0.239 | 0.253 | 0.328 |
| | Dep. Variable: % length of mono-bank articles | | | | | | |
| Gain*Banker(Direct) | 0.090 | 0.127** | 0.132** | 0.139** | 0.157** | 0.165** | 0.115 |
| | (0.055) | (0.051) | (0.052) | (0.061) | (0.064) | (0.080) | (0.084) |
| Observations | 3,449 | 3,449 | 3,449 | 3,449 | 3,449 | 3,449 | 3,449 |
| R-squared | 0.014 | 0.153 | 0.156 | 0.255 | 0.266 | 0.281 | 0.358 |
| Bank FE | No | Yes | Yes | - | - | - | - |
| Paper FE | No | Yes | Yes | - | - | - | - |
| Year-Quarter FE | No | Yes | Yes | Yes | - | - | - |
| Same country FE | No | No | Yes | - | - | - | - |
| Paper*Bank FE | No | No | No | Yes | Yes | Yes | Yes |
| Same country*Year-Quarter FE | No | No | No | No | Yes | - | - |
| Same country*Year-Quarter*Gain FE | No | No | No | No | No | Yes | Yes |
| Paper*Year FE | No | No | No | No | No | No | Yes |
| Bank*Year FE | No | No | No | No | No | No | Yes |
| Shareholder*Gain | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

The dependent variable is indicated on top of the regression output. The set of employed fixed effects indicated in the bottom of the table applies to all the four groups of regressions. Gain is a dummy variable with value 1 (0) if a bank discloses gains (losses) in a given year-quarter. Banker(Direct) is a dummy variable with value 1 if a newspaper directly borrows from a given bank, and with value 0 otherwise. Shareholder is a dummy variable with value 1 if a bank holds any (direct or indirect) ownership share in a given newspaper, and with value 0 otherwise. In the legend, the symbol "-" refers to controls and/or fixed effects which are spanned out by the application of other controls and/or fixed effects. Standard errors are clustered at the Paper*Bank level. *** p<0.01, ** p<0.05, * p<0.1. Standard errors are clustered at the Paper*Bank level. *** p<0.01, ** p<0.05, * p<0.1.

TABLE A13: EARNINGS ANNOUNCEMENT - OTHER INTENSIVE MARGIN VARIABLES: GENERAL INTEREST VS FINANCIAL NEWSPAPERS

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | % of mono-bank Articles | | | % Length of Mono-Bank Articles | | |
| | General interest | Financial | All newspapers | General interest | Financial | All newspapers |
| Shareholder | -0.063 | -0.065 | -0.078 | -0.152* | -0.052 | -0.108** |
| | (0.078) | (0.095) | (0.056) | (0.077) | (0.085) | (0.054) |
| Banker(Direct) | -0.078 | 0.146 | -0.164ł | 0.093 | 0.202* | -0.087 |
| | (0.186) | (0.108) | (0.107) | (0.178) | (0.113) | (0.145) |
| Gain*Shareholder | 0.157* | 0.044 | 0.106** | 0.189*** | 0.019 | 0.105** |
| | (0.083) | (0.076) | (0.051) | (0.061) | (0.077) | (0.047) |
| Gain*Banker(Direct) | 0.119 | 0.179 | 0.169** | 0.081 | 0.145 | 0.115 |
| | (0.137) | (0.136) | (0.084) | (0.112) | (0.141) | (0.084) |
| Observations | 1,707 | 1,710 | 3,449 | 1,707 | 1,710 | 3,449 |
| R-squared | 0.391 | 0.339 | 0.328 | 0.421 | 0.371 | 0.358 |
| Paper*Bank FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Same country*Year-Quarter*Gain FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Paper*Year FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Bank*Year FE | Yes | Yes | Yes | Yes | Yes | Yes |

In columns 1-3 the dependent variable is the % of mono-bank articles over the total number of articles that a newspaper devotes to a bank's earnings announcements. In columbs 4-6, the dependent variable is the % length of mono-bank articles. Shareholder is a dummy variable with value 1 if a bank holds any (direct or indirect) ownership share in a given newspaper, and with value 0 otherwise. Gain is a dummy variable with value 1 (0) if a bank discloses gains (losses) in a given year-quarter. Banker(Direct) is a dummy variable with value 1 if a newspaper directly borrows from a given bank and value 0 otherwise. *** p<0.01, ** p<0.05, * p<0.1.

TABLE A14: COVERAGE OF THE EUROZONE SOVEREIGN DEBT CRISIS - ROBUSTNESS

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| | Root=Banks | | | Bear=Banks | | | Solution=Haircut | | |
| GIIPS | -3.588** | -3.059* | -3.442* | -1.723 | -1.590 | -3.188** | -2.783* | -2.900* | -4.511* |
| | (1.327) | (1.480) | (1.812) | (1.093) | (1.251) | (1.248) | (1.481) | (1.555) | (2.316) |
| Circulation | | -0.208*** | -0.265*** | | -0.084** | -0.274*** | | -0.147*** | -0.151** |
| | | (0.042) | (0.070) | | (0.039) | (0.047) | | (0.040) | (0.058) |
| Political leaning | | | -0.260 | | | 0.022 | | | -0.150 |
| | | | (0.181) | | | (0.101) | | | (0.107) |
| Observations | 191 | 175 | 96 | 191 | 175 | 96 | 191 | 175 | 96 |
| $R^2$ | 0.469 | 0.585 | 0.634 | 0.476 | 0.517 | 0.652 | 0.423 | 0.543 | 0.651 |
| News Country * Period FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Bank Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

The dependent variable is a dummy for whether a newspaper published at least one article mentioning the banking sector as one of the roots of the crisis (columns 1-3), claiming banks should bear the main responsibility to solve the crisis (column 4-6), and endorsing debt-restructuring measures as a possible solution to the crisis (column 7-9). Bank Controls include newspaper-level average bank capital and average bank size. Circulation is the average daily print circulation of a given newspapers, expressed in logs. Ideology is a proxy of newspapers readers ideological leaning, measured on a 0-6 scale; more positive (negative) values denote more right-wing (left-wing) oriented readers, with 3 indicating political center. Standard errors are double-clustered at the newspaper and news-country*period level. *** p<0.01, ** p<0.05, * p<0.1.

TABLE A15: COVERAGE OF THE EUROZONE SOVEREIGN DEBT CRISIS - PLACEBO

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| VARIABLES | Benefit from Euro = GIIPS | | | | Harmed from Euro = GIIPS | | | |
| GIIPS | -0.871 | -0.255 | -0.954 | 0.154 | -1.624 | -0.685 | -1.165 | -0.948 |
| | (1.355) | (1.498) | (1.512) | (1.710) | (0.995) | (1.608) | (1.707) | (2.444) |
| Circulation | | | -0.011 | -0.004 | | | -0.076 | -0.063 |
| | | | (0.025) | (0.054) | | | (0.045) | (0.092) |
| Political leaning | | | | -0.078 | | | | -0.288 |
| | | | | (0.120) | | | | (0.177) |
| Observations | 191 | 191 | 175 | 96 | 191 | 191 | 175 | 96 |
| $R^2$ | 0.091 | 0.278 | 0.289 | 0.379 | 0.149 | 0.377 | 0.407 | 0.473 |
| News Country | Yes | - | - | - | Yes | - | - | - |
| Period | Yes | - | - | - | Yes | - | - | - |
| News Country * Period FE | No | Yes | Yes | Yes | No | Yes | Yes | Yes |
| Bank Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

In columns 1-4, the dependent variable is a dummy for whether a newspaper published at least one article mentioning GIIPS countries as benefiting from the Euro currency. In columns 5-4, the dependent variable is a dummy for whether a newspaper published at least one article claiming that GIIPS countries have been harmed by the Euro currency. Bank Controls include newspaper-level average bank capital and average bank size. Circulation is the average daily print circulation of a given newspapers, expressed in logs. Ideology is a proxy of newspapers readers ideological leaning, measured on a 0-6 scale; more positive (negative) values denote more right-wing (left-wing) oriented readers, with 3 indicating political center. Standard errors are double-clustered at the newspaper and news-country*period level. *** p<0.01, ** p<0.05, * p<0.1.

TABLE A16: COVERAGE OF THE EUROZONE SOVERIEGN DEBT CRISIS - INTENSIVE MARGIN

| | (1) %Root=Banks | (2) %Bear=Banks | (3) %Solution=Haircut | (4) Ln(Root=Banks) | (5) Ln(Bear=Banks) | (6) Ln(Solution=Haircut) |
|---|---|---|---|---|---|---|
| GIIPS | -0.064 | 0.469 | -0.161 | -6.090 | 0.599 | -7.461*** |
| | (0.364) | (0.411) | (0.158) | (3.711) | (3.589) | (2.236) |
| Observations | 92 | 36 | 76 | 92 | 36 | 76 |
| $R^2$ | 0.251 | 0.213 | 0.446 | 0.346 | 0.309 | 0.398 |
| News Country | Yes | Yes | Yes | Yes | Yes | Yes |
| Period | Yes | Yes | Yes | Yes | Yes | Yes |
| Bank Controls | Yes | Yes | Yes | Yes | Yes | Yes |

The dependent variable is the % of articles: mentioning the banking sector as one of the roots of the crisis (column 1); claiming banks should bear the main responsibility to solve the crisis (column 2); endorsing debt-restructuring measures as a possible solution to the crisis (column 3). In columns 4, 5 and 6, along the same dimensions, the dependent variable measures the (log) number of articles. Bank Controls include newspaper-level average bank capital and average bank size. Standard errors are double-clustered at the newspaper and news-country*period level. *** p<0.01, ** p<0.05, * p<0.1.