

Online Appendix

for

"Advertising Exposure and Investor Attention:
Estimates from Super Bowl Commercials"*

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*Disclaimer: Researcher(s) own analyses calculated (or derived) based in part on data from The Nielsen Company (US), LLC and marketing databases provided through the Nielsen Datasets at the Kilts Center for Marketing Data Center at The University of Chicago Booth School of Business. Nielsen Ad Intel Digital Data is powered by Pathmatics and Nielsen. The conclusions drawn from the Nielsen data are those of the researcher(s) and do not reflect the views of Nielsen or its licensors. Nielsen and its licensors are not responsible for, had no role in, and were not involved in analyzing and preparing the results reported herein.

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Construction of the local investment interest variable

For the purposes of this study, we need to measure the fraction of searches for each stock in each DMA. However, Google Trends limits the requests so that they contain at most five terms per query. Hence a single query cannot give us the DMA interest for each of the 571 stocks in the investment universe. To work around this limitation, we put aside one of the stocks and use it as a benchmark, splitting all the other stocks into groups of four. The benchmark, which we choose to be Apple, is then added to each group. As we explain below, having this benchmark allows us to make comparisons between the groups.

When we make a request to Google Trends, we send a triplet $(\mathcal{I}, \mathcal{J}, t)$ to the website, where $\mathcal{I}$ is the set of DMAs in the United States, $\mathcal{J}$ is the set of "Name of Company + Stock" - terms (each linked to a stock j), and t is the post-Super Bowl Monday (or the Monday 4 weeks before the Super Bowl, or the pre-Super Bowl Monday or Friday, or the post-Super Bowl Tuesday or Friday). Google Trends then returns to us a table with the Search Volume Index (SVI) for each DMA i in set $\mathcal{I}$ and each term j in set $\mathcal{J}$ in period t .

The index provided by Google Trends is the number of searches in location i for term j in period t ($x_{i,j,t}$) scaled by the number of searches for the all terms in $\mathcal{J}$ ($\sum_{\tilde{j} \in \mathcal{J}} x_{i,\tilde{j},t}$).¹ Therefore, if we denote by $y_{i,j,t,\mathcal{J}}$ the share of interest in location i for stock j out of the total interest for all the stocks in group $\mathcal{J}$ in period t , then the SVI that Google returns is:

$$y_{i,j,t,\mathcal{J}} = \frac{x_{i,j,t}}{\sum_{\tilde{j} \in \mathcal{J}} x_{i,\tilde{j},t}}.$$

After obtaining the SVIs for all the terms in all the groups, we calculate a relative attention index, defined as:

$$A_{i,j,t,j_{bench}} = \frac{y_{i,j,t,\mathcal{J}}}{y_{i,j_{bench},t,\mathcal{J}}} = \frac{x_{i,j,t}}{x_{i,j_{bench},t}}.$$

This index does not depend on the group each stock was arbitrarily put into, but depends on the common benchmark. Note that $A_{i,j_{bench},t,j_{bench}} = 1$, while all the other A 's are proportional to the

¹In order to lower computational costs, Google calculates the number of searches from a sample of the actual searches. As we explain below, we perform repeated searches to reduce the noise from this sampling, and to lower the bias that comes from Google returning only integer values for the SVIs.

benchmark stock. Lastly, to obtain our local investment attention measure ($Attention_{i,j,t}$), which is independent of our benchmark choice, we normalize again as follows:

$$Attention_{i,j,t} = \frac{A_{i,j,t,j_{bench}}}{\sum_{\tilde{j} \in \mathcal{U}} A_{i,\tilde{j},t,j_{bench}}} = \frac{\frac{x_{i,j,t}}{x_{i,j_{bench},t}}}{\sum_{\tilde{j} \in \mathcal{U}} \frac{x_{i,\tilde{j},t}}{x_{i,j_{bench},t}}} = \frac{x_{i,j,t}}{\sum_{\tilde{j} \in \mathcal{U}} x_{i,\tilde{j},t}},$$

where $\mathcal{U}$ is the universe of stocks in our sample. Thus, we can interpret the variable $Attention_{i,j,t}$ as a relative interest, or the fraction of searches for stock j relative to the searches for all the stocks in our sample.

We note that there are three caveats with the numbers returned by Google Trends (as pointed out by [Stephens-Davidowitz and Varian \(2014\)](#)). The first one is that the numbers are obtained from a sample of Google searches. The sample size is such that the Google Trends results for most common queries are not affected by the sampling. However, that can add noise to infrequently searched terms in small geographical areas in short periods of time, which is the case for some of our queries. Google Trends uses a new sample every few hours, so the same query made on different days may return different results.

The second caveat is that the Google Trends numbers are rounded to the nearest integer. This implies that comparisons between search terms with low SVIs may be imprecise, as rounding can have a large relative effect in the index.

Nevertheless, we can use the first caveat to solve for the second one. By performing the search 30 times, and averaging the SVIs, we lower the noise that arises from the sampling, while obtaining better approximations of the underlying, non-integer, SVIs.

The third caveat, is that when the total number of searches for a term is below a certain (unannounced) threshold the SVI is rounded down to 0. This makes it impossible to compare unpopular search terms. While this could be an issue, this feature would bias our results towards 0, and so our estimates are actually strengthened by this source of noise.

References

Stephens-Davidowitz, S., and H. Varian, 2014, “A hands-on guide to Google data,” *Tech. Rep.*

Appendix Table 1

List of stocks with recognizable advertising exposure in the Super Bowl by year

This table lists the stocks with recognizable advertising exposure in the Super Bowl by year. For every year in the sample period, the Super Bowl commercials are extracted from the USA Today Ad Meter and matched with the stock names of their companies in the Center for Research in Security Prices (CRSP). A stock is then considered to have recognizable advertising exposure in the Super Bowl if (i) a commercial is about its company, or (ii) a commercial is about a product whose name overlaps with its company name, or (iii) a commercial displays its company logo. Stocks of firms with multiple Super Bowl commercials in a single year are considered to be recognizable if they can be recognized from at least one ad.

Company name	Year							
	2011	2012	2013	2014	2015	2016	2017	2018
GOOGLE INC (ALPHABET INC)							✓	
AMAZON COM INC						✓	✓	✓
ANHEUSER BUSCH INBEV SA NV	✓	✓	✓	✓	✓	✓	✓	✓
BANK OF AMERICA CORP				✓				
BEST BUY COMPANY INC	✓	✓	✓					
BLOCK H & R INC							✓	
CARMAX INC	✓			✓				
COCA COLA CO	✓	✓	✓	✓	✓	✓	✓	✓
COLGATE PALMOLIVE CO						✓		
COMCAST CORP NEW		✓	✓		✓	✓	✓	✓
DISCOVER FINANCIAL SERVICES					✓			
DISNEY WALT CO	✓	✓	✓		✓	✓	✓	✓
E TRADE FINANCIAL CORP	✓	✓	✓					✓
FIAT CHRYSLER AUTOMOBILES NV					✓		✓	
FITBIT INC						✓		
FORD MOTOR CO DEL				✓			✓	
GENERAL ELECTRIC CO		✓						
GENERAL MILLS INC				✓				
GODADDY INC							✓	
GROUPON INC								✓
INTEL CORP							✓	
INTUIT INC				✓	✓	✓	✓	✓
KRAFT HEINZ CO						✓		✓
MCDONALDS CORP					✓			
METLIFE INC		✓						
MICROSOFT CORP				✓	✓			
MONSTER BEVERAGE CORP NEW								✓
MOTOROLA SOLUTIONS INC	✓							
NETFLIX INC							✓	✓
PAYPAL HOLDINGS INC						✓		
PEPSICO INC	✓	✓	✓	✓	✓	✓	✓	✓
RADIOSHACK CORP				✓				
SKECHERS U S A INC	✓	✓	✓		✓			✓
SPRINT CORP NEW				✓	✓		✓	✓
SUNTRUST BANKS INC						✓		
T MOBILE U S INC				✓	✓	✓	✓	✓
TWENTY FIRST CENTURY FOX INC						✓	✓	
VERIZON COMMUNICATIONS INC	✓							✓
VIACOM INC NEW	✓	✓	✓	✓	✓	✓	✓	✓
WEIGHT WATCHERS INTL INC NEW					✓			
WENDYS CO							✓	✓

Appendix Table 2

Summary statistics of the Super Bowl viewership by local market for the years 2011-2018

This table presents the summary statistics of the Super Bowl viewership for each of Nielsen's top 56 metered markets during the years 2011-2018. The number of times that a DMA's local team appears in the Super Bowl is presented next to its name [in brackets].

DMA [Super Bowl appearances of local team]	Mean	S.D.	Min	Max
Albuquerque-Santa Fe NM	48.1	4	44.7	56.9
Atlanta GA [1]	50.9	2.9	47.1	57
Austin TX	47.1	2.6	43.1	50.6
Baltimore MD [1]	50.8	3.8	47.4	59.6
Birmingham AL	49.8	3.5	43.2	54.5
Boston MA-Manchester NH [4]	53.4	4.4	48	61
Buffalo NY	54.6	1.8	52.7	57.3
Charlotte NC [1]	50.9	2.7	46.7	55.7
Chicago IL	48	3.6	44.2	54.9
Cincinnati OH	49.5	2.2	45.6	51.6
Cleveland-Akron (Canton) OH	50.7	1.2	48.9	52.3
Columbus OH	52.7	2.7	48.8	56.2
Dallas-Ft. Worth TX	49.2	3	43.4	53.7
Dayton OH	51.2	2.7	46.3	54.6
Denver CO [2]	51.6	2.2	48	54.1
Detroit MI	49.2	2.8	46.5	55
Ft. Myers-Naples FL	49.5	2.8	44	52.7
Greensboro-High Point-Winston Salem NC	50.4	2.8	47.7	56.4
Greenville-Spartanburg SC-Asheville NC-Anderson SC	51.5	2.7	47.9	56.3
Hartford & New Haven CT	48.3	2.7	45.8	54
Houston TX	45.6	1.5	43.5	47.6
Indianapolis IN	53.3	2.4	49.3	56.4
Jacksonville FL	52.6	2.3	48	55.3
Kansas City MO	53.9	2	52.1	58.1
Knoxville TN	50.4	3	46.9	56.4
Las Vegas NV	50.7	3.7	42.6	54.2
Los Angeles CA	41.3	1.1	40	43.4
Louisville KY	48.3	1.8	44.9	50.2
Memphis TN	49.3	3.6	42.4	53.8
Miami-Ft. Lauderdale FL	39.7	2.2	37.8	43
Milwaukee WI [1]	53.9	2.5	52	59.7
Minneapolis-St. Paul MN	52.1	3.1	46.4	54.9
Nashville TN	52.9	3.3	46.2	57.9
New Orleans LA	52.3	4.7	42.6	57.1
New York NY [1]	47	3.6	41.6	52.2
Norfolk-Portsmouth-Newport News VA	55	1	53.9	56.6
Oklahoma City OK	49.2	3.2	42.8	52.6
Orlando-Daytona Beach-Melbourne FL	50	2.8	44.4	53
Philadelphia PA [1]	50.2	2.7	47.9	56.2
Phoenix AZ	48.6	3.8	43.5	55.6
Pittsburgh PA [1]	54.9	2.6	52.2	59.7
Portland OR	46.1	4.6	39.4	52.4
Providence RI-New Bedford MA	48.7	3.4	45.1	54.6
Raleigh-Durham (Fayetteville) NC	48.3	1.7	44.9	50.1
Richmond-Petersburg VA	52.6	2.6	49.1	56.3
Sacramento-Stockton-Modesto CA	47.3	3.5	41.2	52.4
Salt Lake City UT	42	3.4	37.5	46.2
San Antonio TX	48	1.9	44.9	49.9
San Diego CA	46.9	1.7	44.4	49.4
San Francisco-Oakland-San Jose CA [1]	44.8	2.3	42.4	49.1
Seattle-Tacoma WA [2]	50.7	3.5	45.4	56.7
St. Louis MO	46.5	2.6	41.6	48.8
Tampa-St. Petersburg (Sarasota) FL	49.8	1.8	46.5	52.1
Tulsa OK	48.8	3.5	42.9	53.9
Washington DC (Hagerstown MD)	52.5	2.1	50.6	56.9
West Palm Beach-Ft. Pierce FL	49.6	1.3	47.7	51.3

Appendix Table 3

OLS and IV triple-DID regressions of the DMA investment attention on the advertising exposure of stocks

This table presents the OLS and IV triple DID regressions of DMA investment attention on the advertising exposure of stocks. In Panel A, a time window between the pre-Super Bowl Friday and the post-Super Bowl Monday is specified for every year t . In Panel B, a time window between the pre-Super Bowl Monday and the post-Super Bowl Monday is specified for every year t . The dependent variable is $Attention_{i,j,t,\tau}$, i.e., DMA i 's investment attention on stock j in year t on the pre-Super Bowl ($\tau = 0$) or post-Super Bowl ($\tau = 1$) calendar date. $Post_{t,\tau}$ is an indicator variable that is equal to one after year t 's Super Bowl has happened. $SuperBowlAd_{j,t}$ is an indicator variable that is equal to one if stock j airs a Super Bowl commercial in year t . $Viewership_{i,t}$ is DMA i 's Super Bowl viewership in year t . The instrument of $Viewership_{i,t}$ is $Team_{i,t}$, i.e., an indicator variable that is equal to one if a team from DMA i appears in the Super Bowl in year t . The list of controls includes stock-DMA fixed effects, DMA demographics, and stock-calendar date fixed effects. Column 1 shows the OLS. Column 2 shows the 2SLS. The first-stage F -statistic tests the hypothesis that the coefficient of the instrument is zero. Column 3 shows the reduced form (where $Viewership_{i,t}$ is replaced by $Team_{i,t}$). The table depicts the coefficient estimates and the t -statistics [in brackets] based on two-way clustered standard errors at the DMA and year level. See Table 2 for details.

	(1) OLS	(2) 2SLS	(3) Reduced form
<i>Panel A: Pre-Super Bowl Friday versus post-Super Bowl Monday DMA investor attention</i>			
Post $\times$ SuperBowlAd $\times$ Viewership	3.258 [2.82]	7.732 [3.15]	
Post $\times$ SuperBowlAd $\times$ Team			0.478 [2.63]
SuperBowlAd $\times$ Viewership	YES	YES	NO
Post $\times$ Viewership	YES	YES	NO
Viewership	YES	YES	NO
SuperBowlAd $\times$ Team	NO	NO	YES
Post $\times$ Team	NO	NO	YES
Team	NO	NO	YES
Stock $\times$ DMA FE	YES	YES	YES
DMA demographics	YES	YES	YES
Stock $\times$ calendar date FE	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	571	571	571
Number of years	8	8	8
First-stage F -statistic		27.89	
R^2	0.33	0.33	0.33
<i>Panel B: Pre-Super Bowl Monday versus post-Super Bowl Monday DMA investor attention</i>			
Post $\times$ SuperBowlAd $\times$ Viewership	2.181 [2.5]	6.004 [2.89]	
Post $\times$ SuperBowlAd $\times$ Team			0.365 [2.41]
SuperBowlAd $\times$ Viewership	YES	YES	NO
Post $\times$ Viewership	YES	YES	NO
Viewership	YES	YES	NO
SuperBowlAd $\times$ Team	NO	NO	YES
Post $\times$ Team	NO	NO	YES
Team	NO	NO	YES
Stock $\times$ DMA FE	YES	YES	YES
DMA demographics	YES	YES	YES
Stock $\times$ calendar date FE	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	571	571	571
Number of years	8	8	8
First-stage F -statistic		27.89	
R^2	0.29	0.29	0.29

Appendix Table 4

OLS and IV regressions of the post-Super Bowl Tuesday and Friday DMA investment attention on the advertising exposure of stocks

This table presents the OLS and IV regressions of the post-Super Bowl Tuesday and Friday DMA investment attention on the advertising exposure of stocks. In Panel A, the dependent variable is $AttentionTueAft_{i,j,t}$, i.e., DMA i 's investment attention on stock j on the post-Super Bowl Tuesday in year t . In Panel B, the dependent variable is $AttentionFriAft_{i,j,t}$, i.e., DMA i 's investment attention on stock j on the post-Super Bowl Friday in year t . In both panels, the independent variable is $SuperBowlAd_{j,t} \times Viewership_{i,t}$, i.e., the interaction between an indicator variable that is equal to one if stock j airs a Super Bowl commercial in year t ($SuperBowlAd_{j,t}$) and DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$). The instrument of $Viewership_{i,t}$ is $Team_{i,t}$, i.e., an indicator variable that is equal to one if a team from DMA i appears in the Super Bowl in year t . The list of controls includes DMA i 's investment attention on stock j four weeks before the Super Bowl ($Attention4WeeksAgo_{i,t}$), the log of the average distance of DMA i 's ZIP-Codes from stock j 's headquarters' ZIP-Code in year t ($LogDistance_{i,j,t}$), DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$), DMA demographics, and DMA fixed effects. All regressions have stock-year fixed effects. Column 1 shows the OLS. Column 2 shows the 2SLS. The first-stage F -statistic tests the hypothesis that the coefficient of the instrument is zero. Column 3 shows the reduced form (where $Viewership_{i,t}$ is replaced by $Team_{i,t}$). The table depicts the coefficient estimates and the t -statistics [in brackets] based on two-way clustered standard errors at the DMA and year level. See Table 2 for details.

	(1) OLS	(2) 2SLS	(3) Reduced form
<i>Panel A: Regressions of the post-Super Bowl Tuesday DMA investor attention</i>			
SuperBowlAd $\times$ Viewership	-1.043 [-1.34]	-0.243 [-0.16]	
SuperBowlAd $\times$ Team			-0.016 [-0.17]
Controls	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	571	571	571
Number of years	8	8	8
First-stage F -statistic		21.77	
R^2	0.24	0.24	0.24
<i>Panel B: Regressions of the post-Super Bowl Friday DMA investor attention</i>			
SuperBowlAd $\times$ Viewership	-0.783 [-0.87]	0.632 [0.19]	
SuperBowlAd $\times$ Team			0.041 [0.2]
Controls	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	571	571	571
Number of years	8	8	8
First-stage F -statistic		21.77	
R^2	0.25	0.25	0.25

Appendix Table 5

OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the advertising exposure of stocks in the subsample of years when 100% of the ad inventory is sold out about one month before the Super Bowl

This table presents the OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the advertising exposure of stocks in the subsample of years when 100% of the ad inventory is sold out about one month before the Super Bowl. As shown in Table ??, these are the years 2011-2014. The dependent variable is $Attention_{i,j,t}$, i.e., DMA i 's investment attention on stock j on the post-Super Bowl Monday in year t . The independent variable is $SuperBowlAd_{j,t} \times Viewership_{i,t}$, i.e., the interaction between an indicator variable that is equal to one if stock j airs a Super Bowl commercial in year t ($SuperBowlAd_{j,t}$) and DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$). The instrument of $Viewership_{i,t}$ is $Team_{i,t}$, i.e., an indicator variable that is equal to one if a team from DMA i appears in Super Bowl in year t . The list of controls includes DMA i 's investor attention on stock j four weeks before the Super Bowl ($Attention4WeeksAgo_{i,t}$), the log of the average distance of DMA i 's ZIP-Codes from stock j 's headquarters' ZIP-Code in year t ($LogDistance_{i,j,t}$), DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$), DMA demographics, and DMA fixed effects. All regressions have stock-year fixed effects. Column 1 shows the OLS. Column 2 shows the 2SLS. The first-stage F -statistic tests the hypothesis that the coefficient of the instrument is zero. Column 3 shows the reduced form (where $Viewership_{i,t}$ is replaced by $Team_{i,t}$). The table depicts the coefficient estimates and the t -statistics [in brackets] based on two-way clustered standard errors at the DMA and year level. See Table 2 for details.

	(1) OLS	(2) 2SLS	(3) Reduced form
SuperBowlAd $\times$ Viewership	4.787 [2.52]	9.466 [3.1]	
SuperBowlAd $\times$ Team			0.541 [3.87]
Attention4WeeksAgo	0.016 [5.01]	0.016 [5.01]	0.016 [5.02]
LogDistance	-0.112 [-6.84]	-0.112 [-6.27]	-0.112 [-6.87]
Viewership	YES	YES	NO
Team	NO	NO	YES
DMA demographics	YES	YES	YES
DMA FE	YES	YES	YES
Stock $\times$ year FE	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	571	571	571
Number of years	4	4	4
First-stage F -statistic		11.85	
R^2	0.23	0.23	0.23

Appendix Table 6

OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the advertising exposure of stocks in the subsample that drops stocks that air Super Bowl ads only in the years when a local team appears in the game

This table presents the OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the advertising exposure of stocks in the subsample that drops stocks that air Super Bowl commercials only in the years when a team from the DMA where they are headquartered appears in the Super Bowl. The dependent variable is $Attention_{i,j,t}$, i.e., DMA i 's investment attention on stock j on the post-Super Bowl Monday in year t . The independent variable is $SuperBowlAd_{j,t} \times Viewership_{i,t}$, i.e., the interaction between an indicator variable that is equal to one if stock j airs a Super Bowl commercial in year t ($SuperBowlAd_{j,t}$) and DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$). The instrument of $Viewership_{i,t}$ is $Team_{i,t}$, i.e., an indicator variable that is equal to one if a team from DMA i appears in Super Bowl in year t . The list of controls includes DMA i 's investment attention on stock j four weeks before the Super Bowl ($Attention4WeeksAgo_{i,t}$), the log of the average distance of DMA i 's ZIP-Codes from stock j 's headquarters in year t ($LogDistance_{i,j,t}$), DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$), DMA demographics, and DMA fixed effects. All regressions have stock-year fixed effects. Column 1 shows the OLS. Column 2 shows the 2SLS. The first-stage F -statistic tests the hypothesis that the coefficient of the instrument is zero. Column 3 shows the reduced form (where $Viewership_{i,t}$ is replaced by $Team_{i,t}$). The table depicts the coefficient estimates and the t -statistics [in brackets] based on two-way clustered standard errors at the DMA and year level. See Table 2 for details.

	(1) OLS	(2) 2SLS	(3) Reduced form
SuperBowlAd $\times$ Viewership	2.864 [2.69]	4.764 [2.73]	
SuperBowlAd $\times$ Team			0.292 [2.6]
Attention4WeeksAgo	0.035 [2.12]	0.035 [2.18]	0.036 [1.75]
LogDistance	-0.11 [-8.12]	-0.11 [-9.12]	-0.11 [-8.36]
Viewership	YES	YES	NO
Team	NO	NO	YES
DMA demographics	YES	YES	YES
DMA FE	YES	YES	YES
Stock $\times$ year FE	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	569	569	569
Number of years	8	8	8
First-stage F -statistic		21.22	
R^2	0.28	0.28	0.28

Appendix Table 7

OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the advertising exposure of stocks in the subsample of DMAs with an NFL team

This table presents the OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the advertising exposure of stocks in the subsample of DMAs with an NFL team (i.e., in every year, DMAs without an NFL team are dropped). The dependent variable is $Attention_{i,j,t}$, i.e., DMA i 's investment attention on stock j on the post-Super Bowl Monday in year t . The independent variable is $SuperBowlAd_{j,t} \times Viewership_{i,t}$, i.e., the interaction between an indicator variable that is equal to one if stock j airs a Super Bowl commercial in year t ($SuperBowlAd_{j,t}$) and DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$). The instrument of $Viewership_{i,t}$ is $Team_{i,t}$, i.e., an indicator variable that is equal to one if a team from DMA i appears in Super Bowl in year t . The list of controls includes DMA i 's investment attention on stock j four weeks before the Super Bowl ($Attention4WeeksAgo_{i,t}$), the log of the average distance of DMA i 's ZIP-Codes from stock j 's headquarters' ZIP-Code in year t ($LogDistance_{i,j,t}$), DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$), DMA demographics, and DMA fixed effects. All regressions have stock-year fixed effects. Column 1 shows the OLS. Column 2 shows the 2SLS. The first-stage F -statistic tests the hypothesis that the coefficient of the instrument is zero. Column 3 shows the reduced form (where $Viewership_{i,t}$ is replaced by $Team_{i,t}$). The table depicts the coefficient estimates and the t -statistics [in brackets] based on two-way clustered standard errors at the DMA and year level. See Table 2 for details.

	(1) OLS	(2) 2SLS	(3) Reduced form
SuperBowlAd $\times$ Viewership	0.77 [1.11]	5.511 [3.73]	
SuperBowlAd $\times$ Team			0.312 [3.42]
Attention4WeeksAgo	0.082 [3.09]	0.082 [3.54]	0.082 [3.45]
LogDistance	-0.105 [-7.88]	-0.105 [-9.21]	-0.105 [-8.5]
Viewership	YES	YES	NO
Team	NO	NO	YES
DMA demographics	YES	YES	YES
DMA FE	YES	YES	YES
Stock $\times$ year FE	YES	YES	YES
Number of DMAs	30	30	30
Number of stocks	571	571	571
Number of years	8	8	8
First-stage F -statistic		21.29	
R^2	0.365	0.365	0.365

Appendix Table 8

Distribution of the stocks with non-recognizable ad exposure in the Super Bowl by year

This table presents the distribution of the stocks with non-recognizable advertising exposure in the Super Bowl by year. Row 1 shows their total number. Rows 2-18 show the industries of the stocks based on the 17 Fama-French industry portfolios.

	Year							
	2011	2012	2013	2014	2015	2016	2017	2018
Total Number	2	3	8	4	5	7	4	3
<u>Industry</u>								
Food			1				1	
Mines								
Oil								
Clothes			1					
Consumer durables						1		
Chemicals								
Drugs, soap, perfumes & tobacco			2		1	2	1	1
Construction						1		
Steel								
Fabricated products								
Machines				1				
Cars	1	1	1	1	1	1	1	1
Transportation								
Utilities								
Retail stores			1		1	1	1	
Finance		1	1	1	2	1		
Services	1	1	1	1				1

Appendix Table 9

OLS and IV placebo regressions of the post-Super Bowl Monday DMA investment attention on the non-recognizable advertising exposure of stocks

This table presents the OLS and IV placebo regressions of the post-Super Bowl Monday DMA investment attention on the non-recognizable advertising exposure of stocks. The dependent variable is $Attention_{i,j,t}$, i.e., DMA i 's investment attention on stock j on the post-Super Bowl Monday in year t . In Panel A, the independent variable is $SuperBowlAdRnR_{j,t} \times Viewership_{i,t}$, i.e., the interaction between an indicator variable that is equal to one if stock j airs a recognizable or non-recognizable Super Bowl commercial in year t ($SuperBowlAdRnR_{j,t}$) and DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$). In Panel B, the independent variables are $SuperBowlAd_{j,t} \times Viewership_{i,t}$, i.e., the interaction between an indicator variable that is equal to one if stock j airs a recognizable Super Bowl commercial in year t ($SuperBowlAd_{j,t}$) and DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$), and $SuperBowlAdUnrec_{j,t} \times Viewership_{i,t}$, i.e., the interaction between an indicator variable that is equal to one if stock j airs a non-recognizable Super Bowl commercial in year t ($SuperBowlAdUnrec_{j,t}$) with DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$). The instrument of $Viewership_{i,t}$ is $Team_{i,t}$, i.e., an indicator variable that is equal to one if a team from DMA i appears in the Super Bowl in year t . In both panels, the list of controls includes DMA i 's investor attention on stock j four weeks before the Super Bowl ($Attention4WeeksAgo_{i,t}$), the log of the average distance of DMA i 's ZIP-Codes from stock j 's headquarters' ZIP-Code in year t ($LogDistance_{i,j,t}$), DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$), DMA demographics, and DMA fixed effects. All regressions have stock-year fixed effects. Column 1 shows the OLS. Column 2 shows the 2SLS. The first-stage F -statistic tests the hypothesis that the coefficient of the instrument is zero. Column 3 shows the reduced form (where $Viewership_{i,t}$ is replaced by $Team_{i,t}$). The table depicts the coefficient estimates and the t -statistics [in brackets] based on two-way clustered standard errors at the DMA and year level. See Table 2 for details.

	(1) OLS	(2) 2SLS	(3) Reduced form
<i>Panel A: Regressions on the advertising exposure of stocks regardless of its recognizably</i>			
SuperBowlAdRnR $\times$ Viewership	2.243 [2.06]	5.988 [2.24]	
SuperBowlAdRnR $\times$ Team			0.328 [2.26]
Controls	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	571	571	571
Number of years	8	8	8
First-stage F -statistic		19.51	
R^2	0.27	0.27	0.27
<i>Panel B: Regressions on the recognizable versus non-recognizable advertising exposure of stocks</i>			
SuperBowlAd $\times$ Viewership	2.883 [2.86]	6.27 [3.16]	
SuperBowlAdUnrec $\times$ Viewership	0.58 [0.44]	0.619 [0.67]	
SuperBowlAd $\times$ Team		0.281	0.382 [3.31]
SuperBowlAdUnrec $\times$ Team			-0.183 [-0.41]
Controls	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	571	571	571
Number of years	8	8	8
First-stage F -statistic		12.4	
R^2	0.28	0.28	0.28

Appendix Table 10

OLS and IV regressions of the post-Super Bowl DMA investment attention on the characteristics of the advertising exposure of stocks

This table presents the OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the characteristics of the advertising exposure of stocks. The dependent variable is $Attention_{i,j,t}$, i.e., DMA i 's investment attention on stock j on the post-Super Bowl Monday in year t . In Panel A, the independent variable is $AdLength_{j,t} \times Viewership_{i,t}$, i.e., the interaction between the length of the commercials that stock j airs during the Super Bowl in year t ($AdLength_{j,t}$) and DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$). In Panel B, the independent variable is $AdRating_{j,t} \times Viewership_{i,t}$, i.e., the interaction between the average likeability rating (in the *USA Today* Super Bowl Ad Meter) of the commercials that stock j airs during the Super Bowl in year t ($AdRating_{j,t}$) and DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$). The instrument of $Viewership_{i,t}$ is $Team_{i,t}$, i.e., an indicator variable that is equal to one if a team from DMA i appears in Super Bowl in year t . The list of controls includes DMA i 's investment attention on stock j four weeks before the Super Bowl ($Attention4WeeksAgo_{i,t}$), the log of the average distance of DMA i 's ZIP-Codes from stock j 's headquarters' ZIP-Code in year t ($LogDistance_{i,j,t}$), DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$), DMA demographics, and DMA fixed effects. All regressions have stock-year fixed effects. Column 1 shows the OLS. Column 2 shows the 2SLS. The first-stage F -statistic tests the hypothesis that the coefficient of the instrument is zero. Column 3 shows the reduced form (where $Viewership_{i,t}$ is replaced by $Team_{i,t}$). The table depicts the coefficient estimates and the t -statistics [in brackets] based on two-way clustered standard errors at the DMA and year level. See Table 2 for details.

	(1) OLS	(2) 2SLS	(3) Reduced form
<i>Panel A: Regressions on the length of the advertising exposure of stocks</i>			
AdLength $\times$ Viewership	0.037 [2.42]	0.061 [3.13]	
AdLength $\times$ Team			0.004 [2.51]
Controls	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	571	571	571
Number of years	8	8	8
First-stage F -statistic		23.55	
R^2	0.28	0.28	0.28
<i>Panel B: Regressions on the likeability of the advertising exposure of stocks</i>			
AdRating $\times$ Viewership	0.505 [2.93]	1.156 [2.94]	
AdRating $\times$ Team			0.072 [2.71]
Controls	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	571	571	571
Number of years	8	8	8
First-stage F -statistic		18.17	
R^2	0.28	0.28	0.28

Appendix Table 11

OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the advertising exposure of stocks based on their geographical proximity

This table presents the OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the advertising exposure of stocks based on their geographical proximity. The dependent variable is $Attention_{i,j,t}$, i.e., DMA i 's investment attention on stock j on the post-Super Bowl Monday in year t . The independent variables are (i) $Away250mi_{i,j,t} \times (SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is more than 250 miles away and has a high advertising exposure in DMA i in year t , (ii) $Betw100_250mi_{i,j,t} \times (SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is between 100 and 250 miles away and has a high advertising exposure in DMA i in year t , (iii) $Betw100_250mi_{i,j,t} \times (1 - SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is between 100 and 250 miles away and has a low advertising exposure in DMA i in year t , (iv) $Local100mi_{i,j,t} \times (SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is at most 100 miles away and has a high advertising exposure in DMA i in year t , and (v) $Local100mi_{i,j,t} \times (1 - SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is at most 100 miles away in DMA i and has low advertising exposure in DMA i in year t . The base group is $Away250mi_{i,j,t} \times (1 - SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is more than 250 miles away and has a low advertising exposure in DMA i in year t . The instrument of $HighView_{i,t}$ is $Team_{i,t}$, i.e., an indicator variable that is equal to one if a team from DMA i appears in Super Bowl in year t . The list of controls includes DMA i 's investment attention on stock j four weeks before the Super Bowl ($Attention4WeeksAgo_{i,t}$), the log of the average distance of DMA i 's ZIP-Codes from stock j 's headquarters' ZIP-Code in year t ($LogDistance_{i,j,t}$), DMA demographics, and DMA fixed effects. All regressions have stock-year fixed effects. Column 1 shows the OLS. Column 2 shows the 2SLS. The first-stage F -statistic tests the hypothesis that the coefficient of the instrument is zero. Column 3 shows the reduced form (where $HighView_{i,t}$ is replaced by $Team_{i,t}$). The table depicts the coefficient estimates and the t -statistics [in brackets] based on two-way clustered standard errors at the DMA and year level. See Table 2 for details.

	(1) OLS	(2) 2SLS	(3) Reduced form
Away250mi $\times$ (SuperBowlAd $\times$ HighView)	0.711 [5.22]	1.318 [2.96]	
Betw100_250mi $\times$ (SuperBowlAd $\times$ HighView)	0.265 [0.91]	0.298 [1]	
Betw100_250mi $\times$ (1 - SuperBowlAd $\times$ HighView)	0.047 [2.19]	0.053 [2.57]	
Local100mi $\times$ (SuperBowlAd $\times$ HighView)	1.756 [1.84]	1.783 [1.88]	
Local100mi $\times$ (1 - SuperBowlAd $\times$ HighView)	0.42 [5.83]	0.426 [5.8]	
Away250mi $\times$ (SuperBowlAd $\times$ Team)			1.162 [3.39]
Betw100_250mi $\times$ (SuperBowlAd $\times$ Team)			0.068 [0.56]
Betw100_250mi $\times$ (1 - SuperBowlAd $\times$ Team)			0.043 [1.91]
Local100mi $\times$ (SuperBowlAd $\times$ Team)			1.859 [2.15]
Local100mi $\times$ (1 - SuperBowlAd $\times$ Team)			0.422 [5.72]
Controls	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	571	571	571
Number of years	8	8	8
First-stage F -statistic		10.67	
R^2	0.28	0.28	0.28

Appendix Table 12

OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the advertising exposure of stocks based on different thresholds of their geographical proximity

This table presents the OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the advertising exposure of stocks based on different thresholds of their geographical proximity. The dependent variable is $Attention_{i,j,t}$, i.e., DMA i 's investment attention on stock j on the post-Super Bowl Monday in year t . The independent variables are (i) $Away450km_{i,j,t} \times (SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is more than 450 kilometers away and has a high advertising exposure in DMA i in year t , (ii) $Betw100_450km_{i,j,t} \times (SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is between 100 and 450 kilometers away and has a high advertising exposure in DMA i in year t , (iii) $Betw100_450km_{i,j,t} \times (1 - SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is between 100 and 450 kilometers away and has a low advertising exposure in DMA i in year t , (iv) $Local100_{i,j,t} \times (SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is at most 100 kilometers away and has a high advertising exposure in DMA i in year t , and (v) $Local100_{i,j,t} \times (1 - SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is at most 100 kilometers away in DMA i and has low advertising exposure in DMA i in year t . The base group is $Away450km_{i,j,t} \times (1 - SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is more than 450 kilometers away and has a low advertising exposure in DMA i in year t . The instrument of $HighView_{i,t}$ is $Team_{i,t}$, i.e., an indicator variable that is equal to one if a team from DMA i appears in Super Bowl in year t . The list of controls includes DMA i 's investment attention on stock j four weeks before the Super Bowl ($Attention4WeeksAgo_{i,t}$), the log of the average distance of DMA i 's ZIP-Codes from stock j 's headquarters' ZIP-Code in year t ($LogDistance_{i,j,t}$), DMA demographics, and DMA fixed effects. All regressions have stock-year fixed effects. Column 1 shows the OLS. Column 2 shows the 2SLS. The first-stage F -statistic tests the hypothesis that the coefficient of the instrument is zero. Column 3 shows the reduced form (where $HighView_{i,t}$ is replaced by $Team_{i,t}$). The table depicts the coefficient estimates and the t -statistics [in brackets] based on two-way clustered standard errors at the DMA and year level. See Table 2 for details.

	(1) OLS	(2) 2SLS	(3) Reduced form
Away450km $\times$ (SuperBowlAd $\times$ HighView)	0.723 [5.3]	1.373 [2.94]	
Betw100_450km $\times$ (SuperBowlAd $\times$ HighView)	0.204 [0.75]	0.238 [0.86]	
Betw100_450km $\times$ (1 - SuperBowlAd $\times$ HighView)	0.052 [2.52]	0.059 [2.9]	
Local100km $\times$ (SuperBowlAd $\times$ HighView)	2.514 [1.63]	2.549 [1.66]	
Local100km $\times$ (1 - SuperBowlAd $\times$ HighView)	0.597 [5.37]	0.603 [5.38]	
Away450km $\times$ (SuperBowlAd $\times$ Team)			1.207 [3.36]
Betw100_450km $\times$ (SuperBowlAd $\times$ Team)			0.097 [0.69]
Betw100_450km $\times$ (1 - SuperBowlAd $\times$ Team)			0.046 [2.1]
Local100km $\times$ (SuperBowlAd $\times$ Team)			2.775 [2.27]
Local100km $\times$ (1 - SuperBowlAd $\times$ Team)			0.602 [5.3]
Controls	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	571	571	571
Number of years	8	8	8
First-stage F -statistic		9.53	
R^2	0.28	0.28	0.28

Appendix Table 13

Linear probability regressions of the stocks' industry indicators on the average values of indicators of their geographical proximity from the DMAs in the sample

This table presents the linear probability (trivariate) regressions of stocks' industry indicators on the average values of indicators of their geographical proximity from the DMAs in the sample. In each column, the dependent variable is one of the 17 Fama-French industry indicator variables for stock j . The independent variables are (i) $\overline{Local100mi}_{j,t} \equiv \frac{1}{56} \sum_{i=1}^{56} Local100mi_{i,j,t}$, i.e., the average value of the indicator variable which is equal to one if stock j 's headquarters are at most 100 miles away from DMA i in year t , and (ii) $\overline{Betw100_250mi}_{j,t} \equiv \frac{1}{56} \sum_{i=1}^{56} Betw100_250mi_{i,j,t}$, i.e., the average value of the indicator variable which is equal to one if stock j 's headquarters are between 100 and 250 miles away from DMA i in year t . The base group is $\overline{Away250mi}_{j,t} \equiv \frac{1}{56} \sum_{i=1}^{56} Away250mi_{i,j,t}$, i.e., the average value of the indicator variable which is equal to one if stock j 's headquarters are more than 250 miles away from DMA i in year t . The table depicts the coefficient estimates and the t -statistics [in brackets] based on two-way clustered standard errors at the stock and year level. See Table 2 for details.

	(1) Food	(2) Mines	(3) Oil	(4) Clothes	(5) Consumer durables
$\overline{Local100mi}$	-0.63 [-1.07]	-0.778 [-2.41]	-2.208 [-3.22]	0.475 [1.22]	0.288 [0.87]
$\overline{Away100Local250mi}$	0.166 [0.8]	0.106 [0.56]	-0.175 [-0.87]	0.082 [0.93]	0.164 [1.23]
Number of stocks	571	571	571	571	571
Number of years	8	8	8	8	8
R^2	0.00	0.01	0.02	0.01	0.00
	(6) Chemicals	(7) Drugs, etc.	(8) Construction	(9) Steel	(10) Fabricated products
$\overline{Local100mi}$	-0.26 [-0.68]	1.48 [2.2]	-0.98 [-2.13]	-0.1 [-0.24]	-0.11 [-0.82]
$\overline{Away100Local250mi}$	0.36 [1.62]	0.04 [0.14]	0.42 [1.77]	0.11 [0.75]	-0.09 [-1.13]
Number of stocks	571	571	571	571	571
Number of years	8	8	8	8	8
R^2	0.01	0.01	0.02	0.00	0.01
	(11) Machines	(12) Cars	(13) Transportation	(14) Utilities	(15) Retail stores
$\overline{Local100mi}$	1.855 [1.79]	-0.762 [-1.43]	-1.357 [-2.13]	-0.311 [-0.48]	0.051 [0.07]
$\overline{Away100Local250mi}$	-1.815 [-4.87]	0.274 [1.74]	0.14 [0.68]	0.175 [0.62]	-0.414 [-1.58]
Number of stocks	571	571	571	571	571
Number of years	8	8	8	8	8
R^2	0.05	0.01	0.01	0.00	0.00
	(16) Finance	(17) Services			
$\overline{Local100mi}$	2.269 [1.75]	1.086 [0.9]			
$\overline{Away100Local250mi}$	0.682 [1.6]	-0.228 [-0.49]			
Number of stocks	571	571			
Number of years	8	8			
R^2	0.01	0.00			

Appendix Table 14

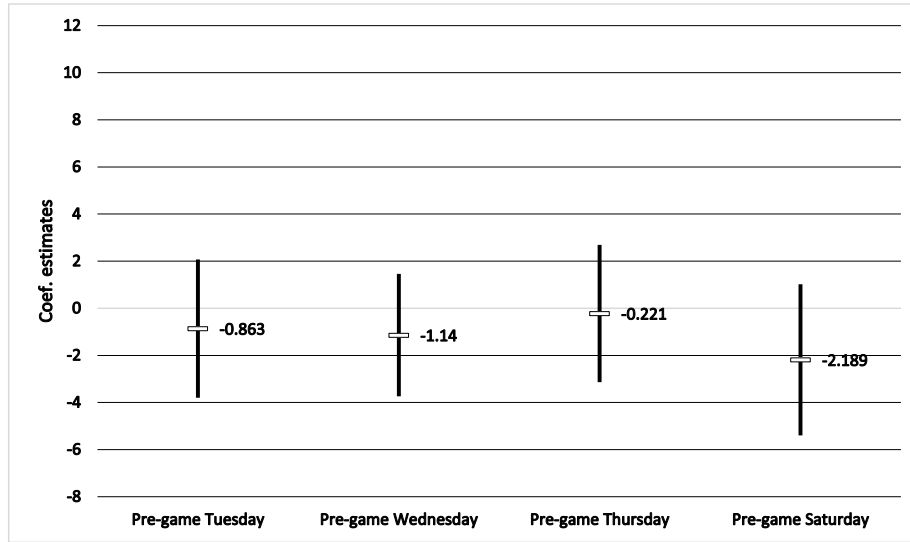
OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the advertising exposure of stocks based on their geographical proximity in the subsample of stocks that are not more or less likely to be local based on their industry

This table presents the OLS and IV regressions of the post-Super Bowl Monday DMA investment attention on the advertising exposure of stocks based on their geographical proximity after dropping stocks in industries that are more or less likely to be local (i.e., Mines, Oil, Drugs etc., Construction, Machines and Transportation as shown in online Appendix Table 13). The dependent variable is $Attention_{i,j,t}$, i.e., DMA i 's investment attention on stock j on the post-Super Bowl Monday in year t . The independent variables are (i) $Away250mi_{i,j,t} \times (SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is more than 250 miles away and has a high advertising exposure in DMA i in year t , (ii) $Betw100_250mi_{i,j,t} \times (SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is between 100 and 250 miles away and has a high advertising exposure in DMA i in year t , (iii) $Betw100_250mi_{i,j,t} \times (1 - SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is between 100 and 250 miles away and has a low advertising exposure in DMA i in year t , (iv) $Local100mi_{i,j,t} \times (SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is at most 100 miles away and has a high advertising exposure in DMA i in year t , and (v) $Local100mi_{i,j,t} \times (1 - SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is at most 100 miles away in DMA i and has low advertising exposure in DMA i in year t . The base group is $Away250mi_{i,j,t} \times (1 - SuperBowlAd_{j,t} \times HighView_{i,t})$, i.e., an indicator variable which is equal to one if stock j is more than 250 miles away and has a low advertising exposure in DMA i in year t . The instrument of $HighView_{i,t}$ is $Team_{i,t}$, i.e., an indicator variable that is equal to one if a team from DMA i appears in Super Bowl in year t . The list of controls includes DMA i 's investment attention on stock j four weeks before the Super Bowl ($Attention4WeeksAgo_{i,t}$), the log of the average distance of DMA i 's ZIP-Codes from stock j 's headquarters' ZIP-Code in year t ($LogDistance_{i,j,t}$), DMA demographics, and DMA fixed effects. All regressions have stock-year fixed effects. Column 1 shows the OLS. Column 2 shows the 2SLS. The first-stage F -statistic tests the hypothesis that the coefficient of the instrument is zero. Column 3 shows the reduced form (where $HighView_{i,t}$ is replaced by $Team_{i,t}$). The table depicts the coefficient estimates and the t -statistics [in brackets] based on two-way clustered standard errors at the DMA and year level. See Table 2 for details.

	(1) OLS	(2) 2SLS	(3) Reduced form
Away250mi $\times$ (SuperBowlAd $\times$ HighView)	0.647 [4.75]	1.25 [2.84]	
Betw100_250mi $\times$ (SuperBowlAd $\times$ HighView)	0.208 [0.71]	0.244 [0.82]	
Betw100_250mi $\times$ (1 - SuperBowlAd $\times$ HighView)	0.049 [2.05]	0.057 [2.38]	
Local100mi $\times$ (SuperBowlAd $\times$ HighView)	1.697 [1.8]	1.726 [1.84]	
Local100mi $\times$ (1 - SuperBowlAd $\times$ HighView)	0.317 [6.11]	0.324 [6.18]	
Away250mi $\times$ (SuperBowlAd $\times$ Team)			1.098 [3.23]
Betw100_250mi $\times$ (SuperBowlAd $\times$ Team)			0.036 [0.29]
Betw100_250mi $\times$ (1 - SuperBowlAd $\times$ Team)			0.044 [1.73]
Local100mi $\times$ (SuperBowlAd $\times$ Team)			1.798 [2.13]
Local100mi $\times$ (1 - SuperBowlAd $\times$ Team)			0.321 [5.71]
Controls	YES	YES	YES
Number of DMAs	56	56	56
Number of stocks	414	414	414
Number of years	8	8	8
First-stage F -statistic	16	9.11	
R^2	0.30	0.30	0.30

Fig. 1. IV regression coefficient estimates of the DMA investment attention on the advertising exposure of stocks on the other days of the pre-Super Bowl week. The dependent variables are DMA i 's investment attention on stock j in year t on (i) the pre-Super Bowl Tuesday ($AttentionTueBef_{i,j,t}$), (ii) the pre-Super Bowl Wednesday ($AttentionWedBef_{i,j,t}$), (iii) the pre-Super Bowl Thursday ($AttentionThuBef_{i,j,t}$), and (iv) the pre-Super Bowl Saturday ($AttentionSatBef_{i,j,t}$). The independent variable is $SuperBowlAd_{j,t} \times Viewership_{i,t}$, i.e., the interaction between an indicator variable that is equal to one if stock j airs a Super Bowl commercial in year t ($SuperBowlAd_{j,t}$) and DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$). The instrument of $Viewership_{i,t}$ is $Team_{i,t}$, i.e., an indicator variable that is equal to one if a local team from DMA i appears in the Super Bowl in year t . The list of controls includes DMA i 's investment attention on stock j four weeks before the Super Bowl ($Attention4WeeksAgo_{i,t}$), the log of the average distance of DMA i 's ZIP-Codes from stock j 's headquarters' ZIP-Code in year t ($LogDistance_{i,j,t}$), DMA i 's Super Bowl viewership in year t ($Viewership_{i,t}$), DMA demographics, and DMA fixed effects. All regressions have stock-year fixed effects. Subfigure 2a shows the 2SLS coefficient estimates. Subfigure 2b shows the reduced form coefficient estimates (where $Viewership_{i,t}$ is replaced by $Team_{i,t}$). The point estimates are depicted with a white dash. The 95% confidence intervals are depicted with solid black lines.

(a) 2SLS coefficient estimates of the pre-Super Bowl DMA investment attention



(b) Reduced form coefficient estimates of the pre-Super Bowl DMA investment attention

