

**EX PARTE OR LATE FILED**

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**JAN 14 2008**

Federal Communications Commission  
Office of the Secretary

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January 14, 2008

**VIA HAND DELIVERY**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

**ORIGINAL**

Re: Consolidated Application for Authority to Transfer Control of XM Satellite Radio Holdings Inc. and Sirius Satellite Radio Inc., MB Docket No. 07-57;  
**EX PARTE – REDACTED FOR PUBLIC INSPECTION**

Dear Ms. Dortch:

In accordance with Section 1.1206 of the Commission’s rules, 47 C.F.R. § 1.1206, and the Commission’s Public Notice dated March 29, 2007 (DA 07-1435), this letter notifies the Commission that on January 11, 2008, the following individuals met with the individuals listed below from the FCC: Jeffrey Blattner with XM Satellite Radio Holdings Inc. (Senior Vice President, Public Policy and Special Counsel); Patrick Donnelly with Sirius Satellite Radio Inc. (Executive Vice President and General Counsel); Steven Salop, Steven Brenner, Timothy Savage, and Martino De Stefano with CRA International; Jim Barker, Barry Blonien, and I of Latham & Watkins LLP (counsel for XM); and Richard Wiley, Robert Pettit, and Peter Shields of Wiley Rein LLP (counsel for Sirius). At the meeting, Steven Brenner provided a brief summary of the findings and conclusions set forth in a paper prepared by CRA entitled, “Further Analysis of Economic Evidence that Satellite and Terrestrial Radio are Demand Substitutes,” which has been filed in the above-captioned docket on January 11, 2008. The CRA economists answered several questions regarding this paper and other participants at the meeting briefly discussed whether there may be additional supporting material that may assist the Commission’s review of the Consolidated Application.

XM and Sirius representatives provided courtesy copies of the CRA paper and a powerpoint presentation summarizing the findings and conclusions in the paper. In accordance with the Order adopting the Protective Order,<sup>1</sup> enclosed are two redacted copies of the powerpoint presentation. Per the Protective Order and staff instructions, XM and Sirius are filing today, under separate transmittal, one redacted, public version of these materials via ECFS, one unredacted copy with the Secretary’s Office, and two unredacted copies with Jamila Bess

<sup>1</sup> *In the Matter of Sirius Satellite Radio Inc. and XM Satellite Radio Holdings Inc. for Approval to Transfer Control*, MB Docket No. 07-57, Protective Order, DA 07-3135 (rel. July 11, 2007).

No. of copies rec'd \_\_\_\_\_  
DATE \_\_\_\_\_

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Johnson of the Industry Analysis Division of the Media Bureau. An unredacted version will be made available pursuant to the terms of the Protective Order, as applicable, at the offices of Latham & Watkins LLP, 555 11th Street, NW, Suite 1000, Washington, DC 20004. Counsel for parties to this proceeding should contact me at (202) 637-2249 or Barry J. Blonien at (202) 637-2109 to coordinate access after they comply with the terms of the FCC's Protective Order. Parties seeking access to Confidential Documents should serve the required Acknowledgement of Confidentiality on Barry J. Blonien and Jeffrey M. Shrader at Latham & Watkins LLP, 555 Eleventh Street NW, Suite 1000, Washington DC, 20004.

Please contact me with any questions.

Respectfully,

/s/ Gary M. Epstein

Gary M. Epstein  
*Counsel for XM Satellite Radio Holdings Inc.*

FCC representatives in attendance (and cc):

Greg Crawford (OSP)	Monica Desai (MB) (by phone)	William D. Freedman (MB)
Marcia Glauberman (MB)	Rosemary Harold (MB)	Joel Rabinovitz (OGC)
Donald Stockdale (WCB)	Tracy Waldon (MB)	Royce Sherlock (MB)

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# **Econometric Evidence that Satellite and Terrestrial Radio Are Substitutes: Further Analysis**



INTERNATIONAL

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## CRA's Econometric Analysis

- **Data**
  - Cross-section data on number of TR signals and SR subscribers by ZIP code provide information on substitution between SR and TR
- **Hypothesis**
  - If consumers view SR and TR as substitutes, the *proportion* of consumers in a ZIP code who subscribe to SR should decline with increases in the quality of TR service – all else equal
- **Hypothesis confirmed**
  - There is a statistically significant, inverse relationship between SR penetration and number of TR signals

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## Ex Parte Presentation on CRA's Analysis

- **CRA's paper answers the Ex Parte's arguments**
- **Our conclusions**
  - None of the Ex Parte's criticisms are valid
  - Regression results presented by the Ex Parte are unreliable
- **CRA's econometric analysis provides reliable empirical evidence that consumers consider satellite and terrestrial radio to be demand substitutes**

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## Issues To Be Discussed

- 1. Relevance of evidence other than cross-price elasticity**
- 2. CRA's econometric specification**
  - Number of TR signals measures quality of TR service
- 3. Use of cross-section data**
- 4. Geographic granularity**
  - Effects of aggregation
  - ZCTA5 vs. ZCTA3 results
  - Disadvantages of Arbitron-defined market areas for this analysis
- 5. Effects of population**
  - Sidak's flawed econometric specification
  - Discrete choice demand models
  - Statistical experiment
  - Adding population variables



# Relevance of Evidence Other Than Cross-Price Elasticity

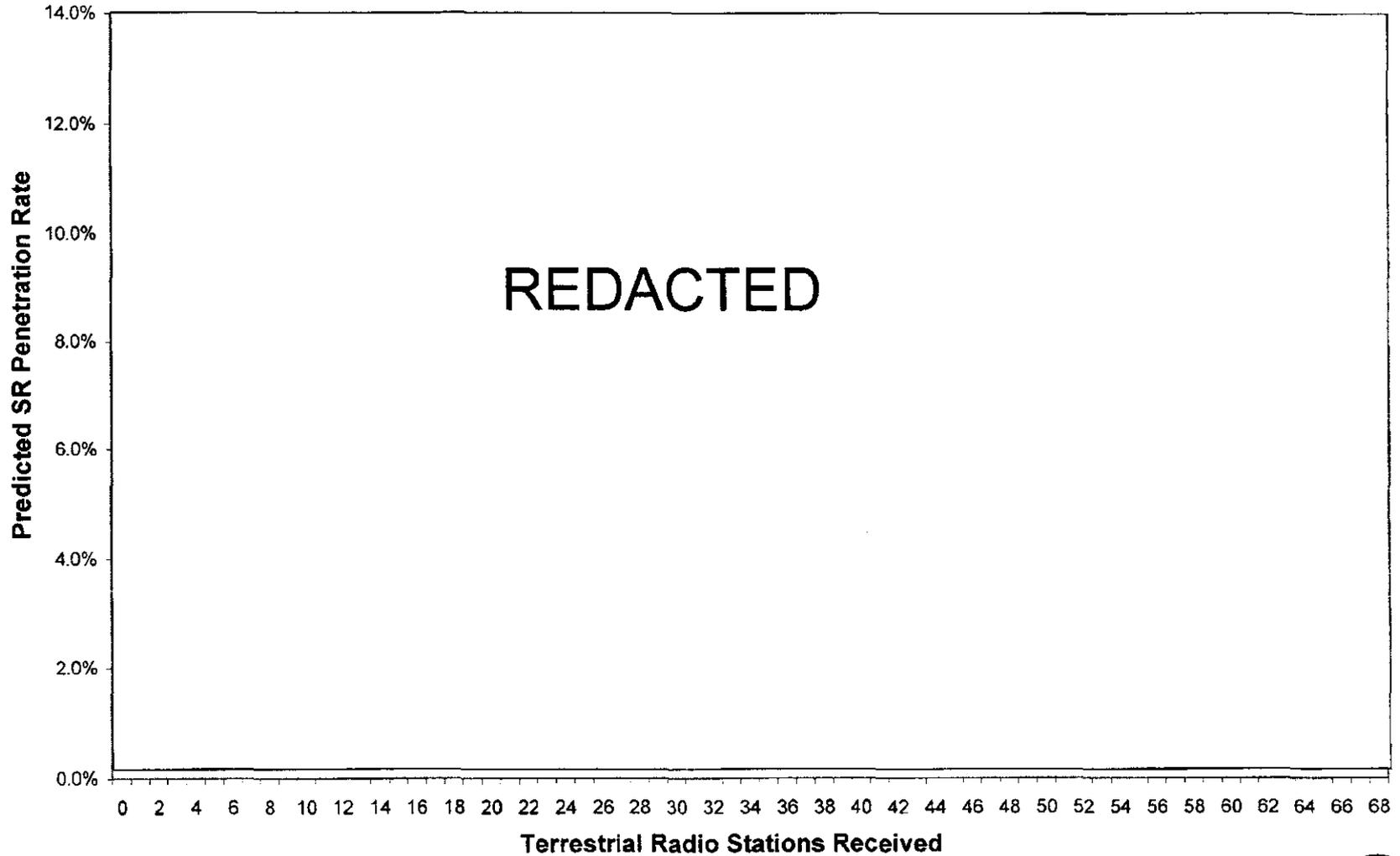
## Horizontal Merger Guidelines, §1.11:

In considering the likely reaction of buyers to a price increase, the Agency will take into account ***all relevant evidence including but not limited to*** the following:

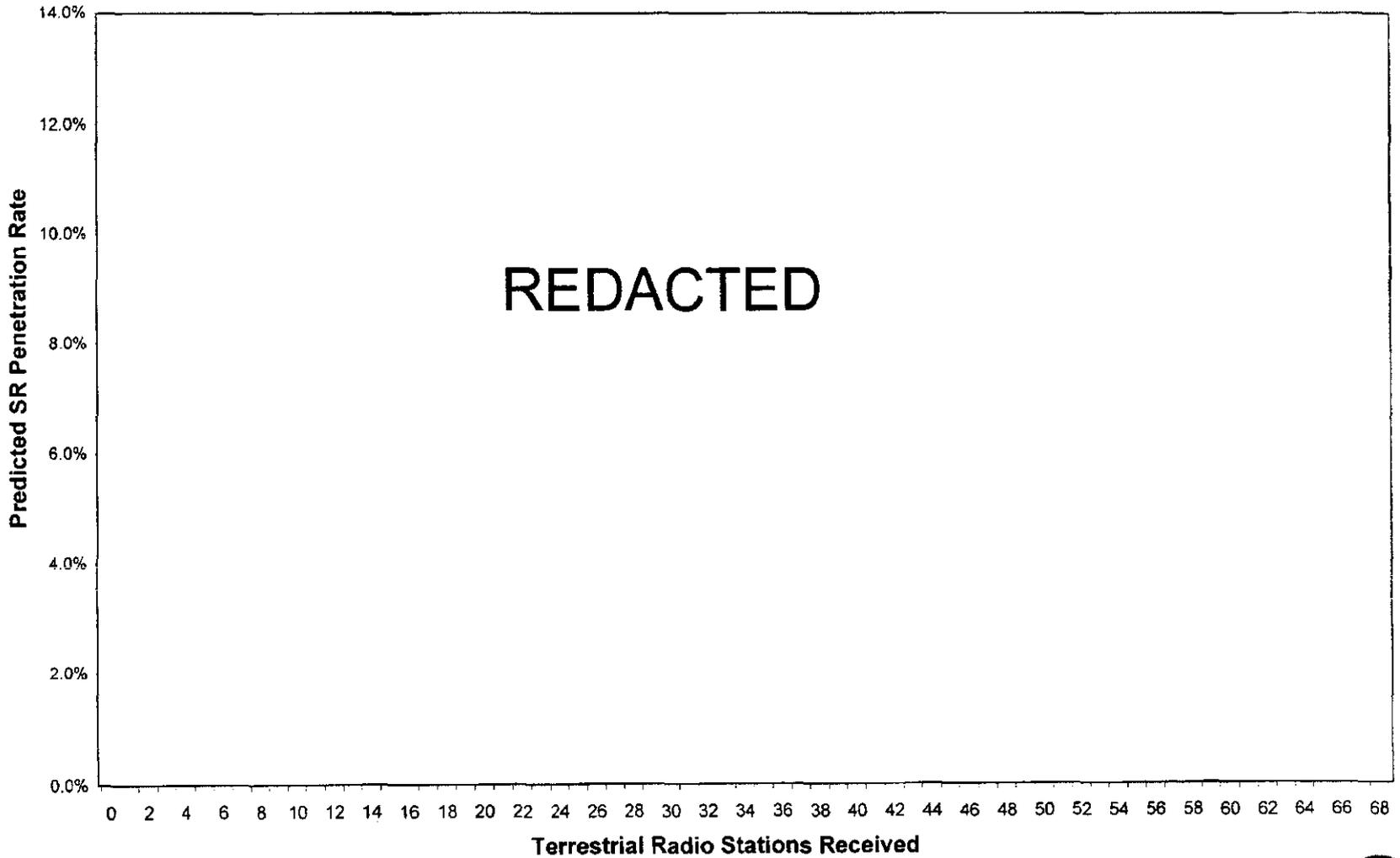
- (1) evidence that buyers have shifted or have considered shifting purchases between products in response to relative changes in ***price or other competitive variables***;
- (2) evidence that sellers base business decisions on the prospect of buyer substitution between products in response to relative changes in price or other competitive variables;
- (3) the influence of downstream competition faced by buyers in their output markets; and
- (4) the timing and costs of switching products.

*(Emphasis added)*

**Figure 1**  
**Relationship Between Predicted SR Penetration Rate and Number of TR Signals**  
**ZCTA5 and ZCTA3**



**Figure 2**  
**Relationship Between Predicted SR Penetration Rate and Number of TR Signals**  
**With and Without Function of Population as Explanatory Variable**



# Statistical Experiment

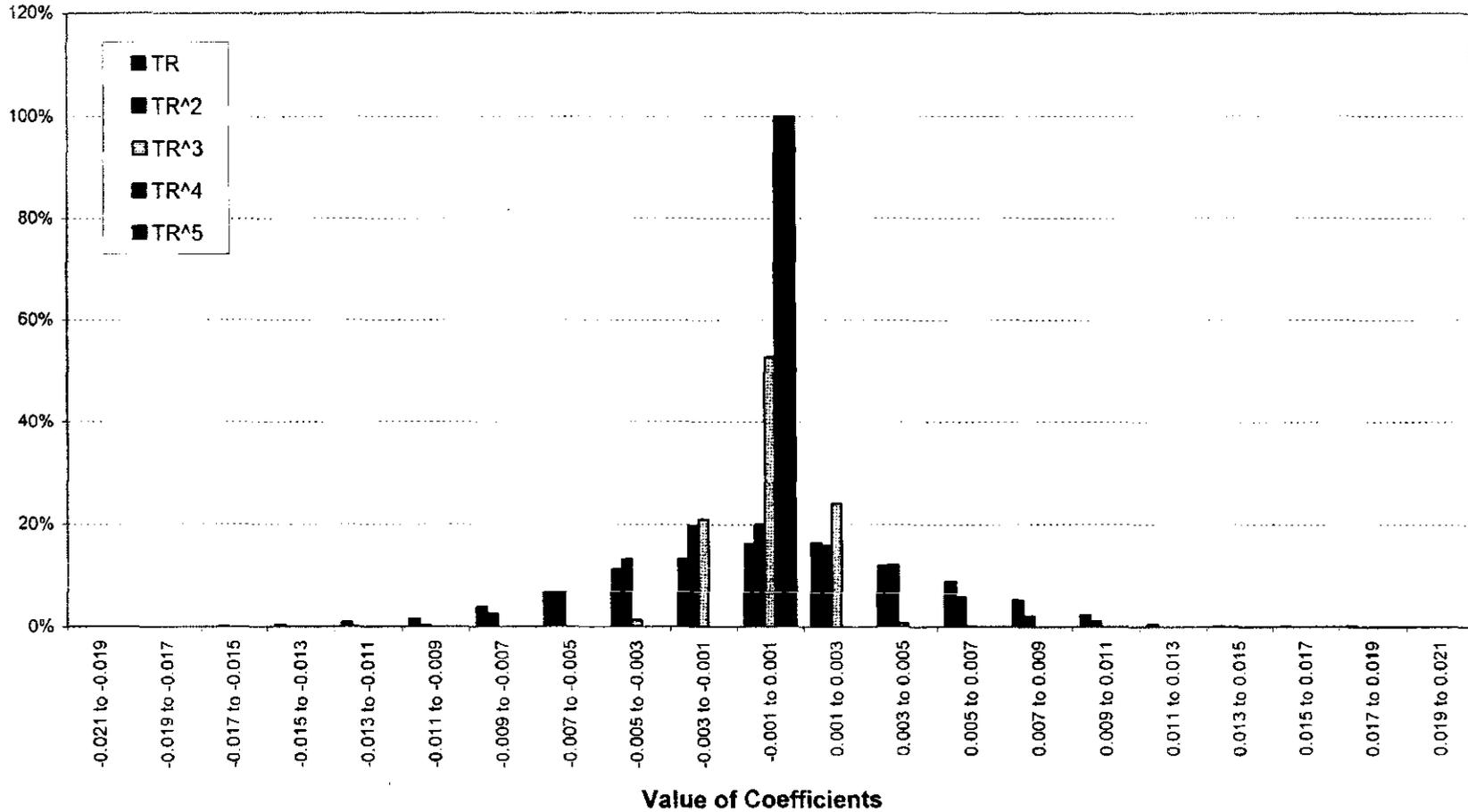
- **Methodology**

1. Construct numbers for SR “subscribers” by ZCTA5 that are independent of the number of TR signals
2. Calculate SR penetration from constructed SR “subscriber” values and merge into dataset
3. Estimate CRA regression model with constructed dataset
4. Replicate steps 1 through 3 1000 times
5. Compare estimates with *constructed* SR “subscribers” to estimates using *actual* SR subscribers

- **Results**

- Figures 3-5
- Tables 3-4

**Figure 3**  
**Statistical Experiment - Constructed Data**  
**Value of Estimated Coefficients for Each Term of the Fifth-Degree Polynomial**



**Note:** Constructed data: the number of subscribers in each ZCTA is determined from the binomial distribution where the probability of success is set equal to [redacted] (the national self-pay penetration of satellite radio in our data) and the number of trials equals the population of the ZCTA.



**Table 3**  
**Statistical Experiment - Actual vs Constructed Data**  
**Value of Estimated Coefficients for Each Term of the Fifth-Degree Polynomial**

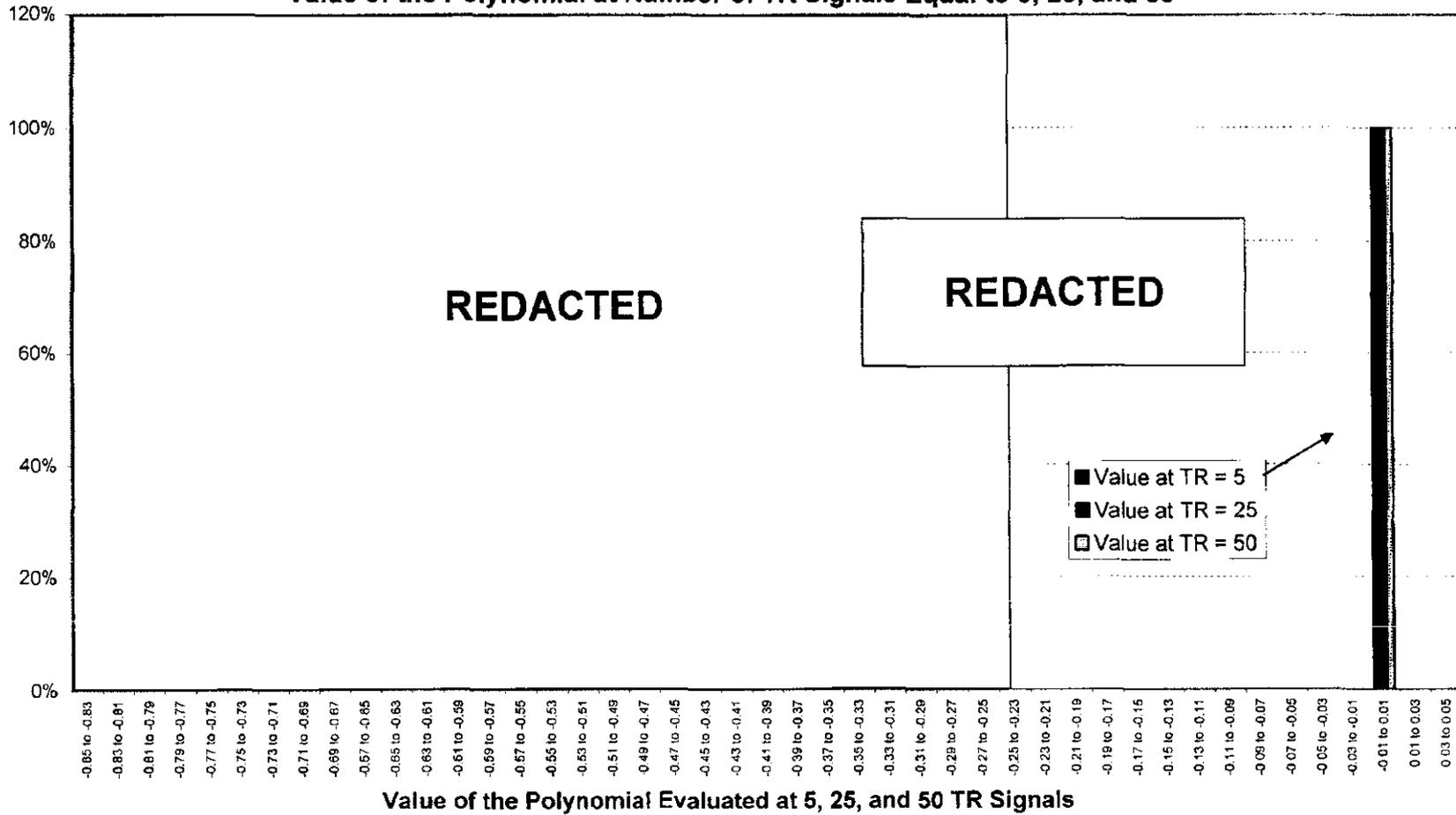
		TR	TR <sup>2</sup>	TR <sup>3</sup>	TR <sup>4</sup>	TR <sup>5</sup>
Results with Actual SR Penetration	<b>REDACTED</b>					
	Coefficient Significant at 5%	Yes	Yes	Yes	Yes	Yes
Results with Random SR Penetration (1,000 Replications)	Mean*	0.00033234	-0.00023005	0.00006716	-0.00000864	0.00000040
	Standard Deviation*	0.00486874	0.00383243	0.00134483	0.00021412	0.00001259
	Maximum*	0.01768412	0.01097320	0.00537602	0.00065352	0.00004916
	Minimum*	-0.01398333	-0.01502264	-0.00402745	-0.00085093	-0.00003864
	Percentage of Significant Coefficients at 5%	4.7%	5.0%	4.4%	4.7%	4.7%
	At 5%, an F-test rejects the hypothesis that all coefficients equal zero in 4.8% of the replications.					

**Note:** Constructed data: the number of subscribers in each ZCTA is determined from the binomial distribution where the probability of success is set equal to [REDACTED] (the national self-pay penetration of satellite radio in our data) and the number of trials equals the population of the ZCTA.

\* Mean, Standard Deviation, Maximum, and Minimum refer to the distribution of the 1,000 estimated coefficient values.

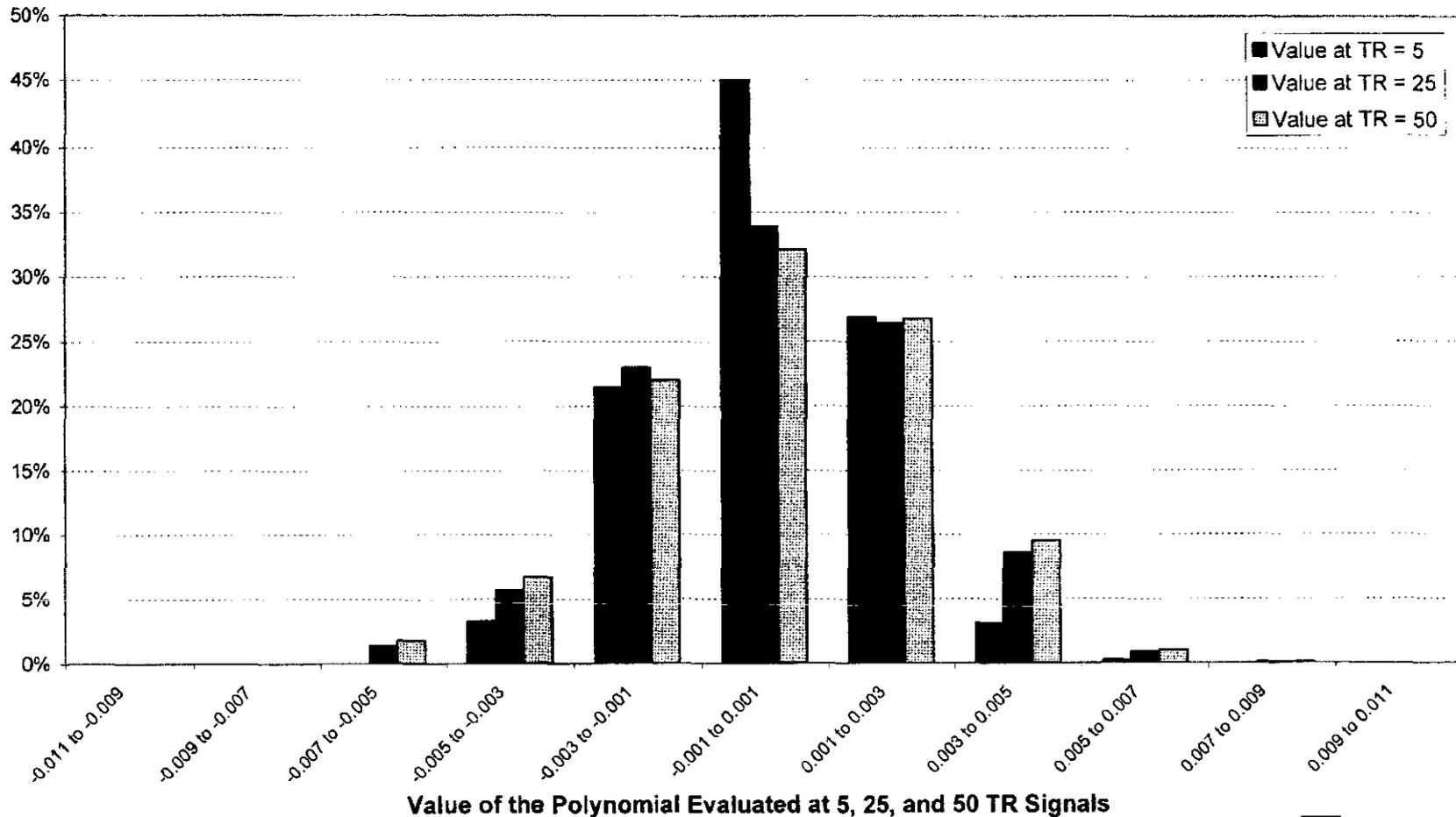


**Figure 4**  
**Statistical Experiment - Actual vs Constructed Data**  
**Value of the Polynomial at Number of TR Signals Equal to 5, 25, and 50**



**Note:** 1) Constructed data: the number of subscribers in each ZCTA is determined from the binomial distribution where the probability of success is set equal to [REDACTED] (the national self-pay penetration of satellite radio in our data) and the number of trials equals the population of the ZCTA.  
 2) Results that use randomly generated data are pictured in more detail in Figure 5.

**Figure 5**  
**Statistical Experiment - Constructed Data**  
**Value of the Polynomial at Number of TR Signals Equal to 5, 25, and 50**



**Note:** Constructed data: the number of subscribers in each ZCTA is determined from the binomial distribution where the probability of success is set equal to [redacted] (the national self-pay penetration of satellite radio in our data) and the number of trials equals the population of the ZCTA.

**Table 4**  
**Statistical Experiment - Actual vs Constructed Data**  
**Value of the Polynomial at Number of TR Signals Equal to 5, 25, and 50**

		TR = 5	TR = 25	TR = 50
<b>Results with Actual SR Penetration</b>	<b>Value of Polynomial</b>	<b>REDACTED</b>		
<b>Results with Random SR Penetration (1,000 Replications)</b>	<b>Mean*</b>	0.000117	0.000144	0.000154
	<b>Standard Deviation*</b>	0.001650	0.002197	0.002312
	<b>Maximum*</b>	0.005707	0.007142	0.008014
	<b>Minimum*</b>	-0.004765	-0.006495	-0.006955

**Note:** Constructed data: the number of subscribers in each ZCTA is determined from the binomial distribution where the probability of success is set equal to [REDACTED] (the national self-pay penetration of satellite radio in our data) and the number of trials equals the population of the ZCTA.

\* Mean, Standard Deviation, Maximum, and Minimum refer to the distribution of the 1,000 estimated polynomial values.