

CIPHER 2025

BEYOND INCENTIVES AND FOLLOW UP ATTEMPTS Pragmatic Methods for Increasing Response Rates

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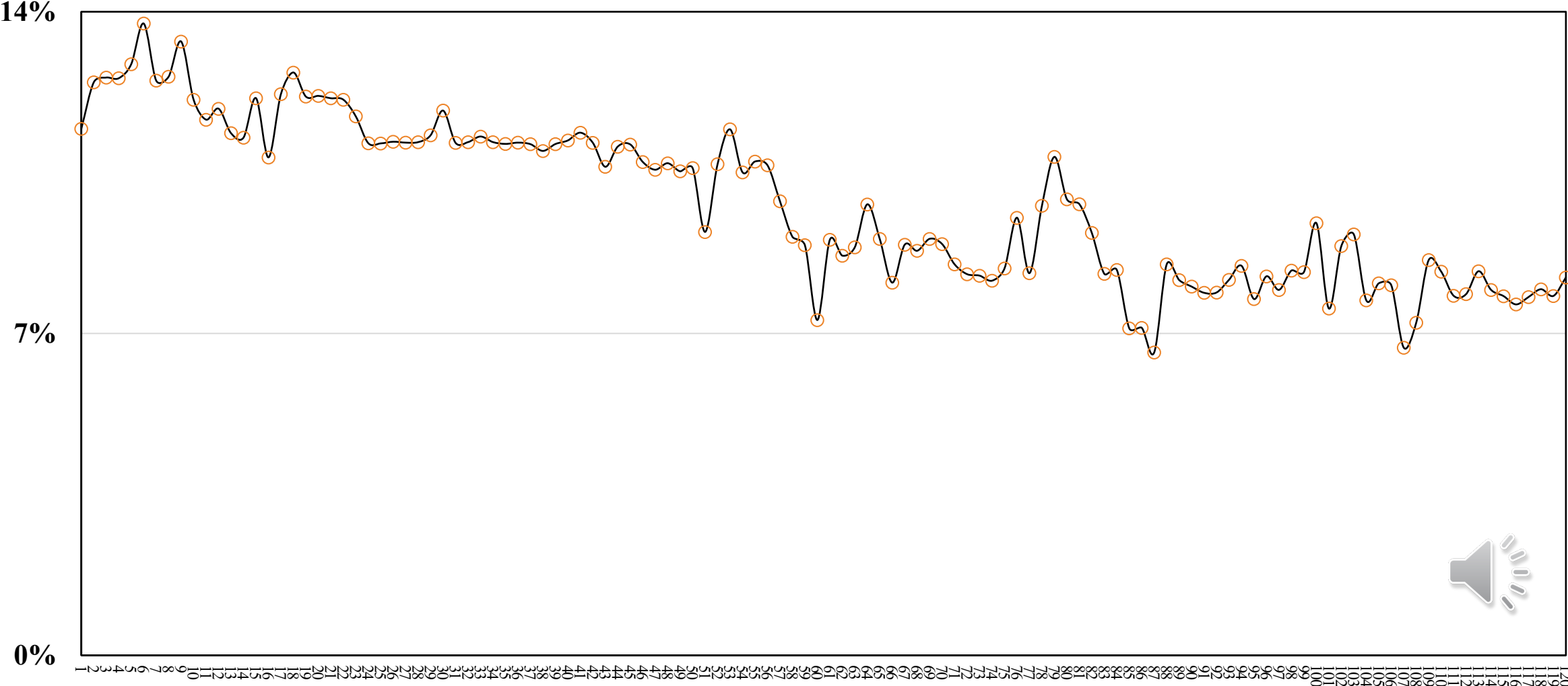
PRESENTATION OUTLINE

- ❑ **Diminishing Response Rates**
- ❑ **Beyond Incentives and Follow up Attempts**
- ❑ **Sampling Design Considerations**
- ❑ **Takeaways**



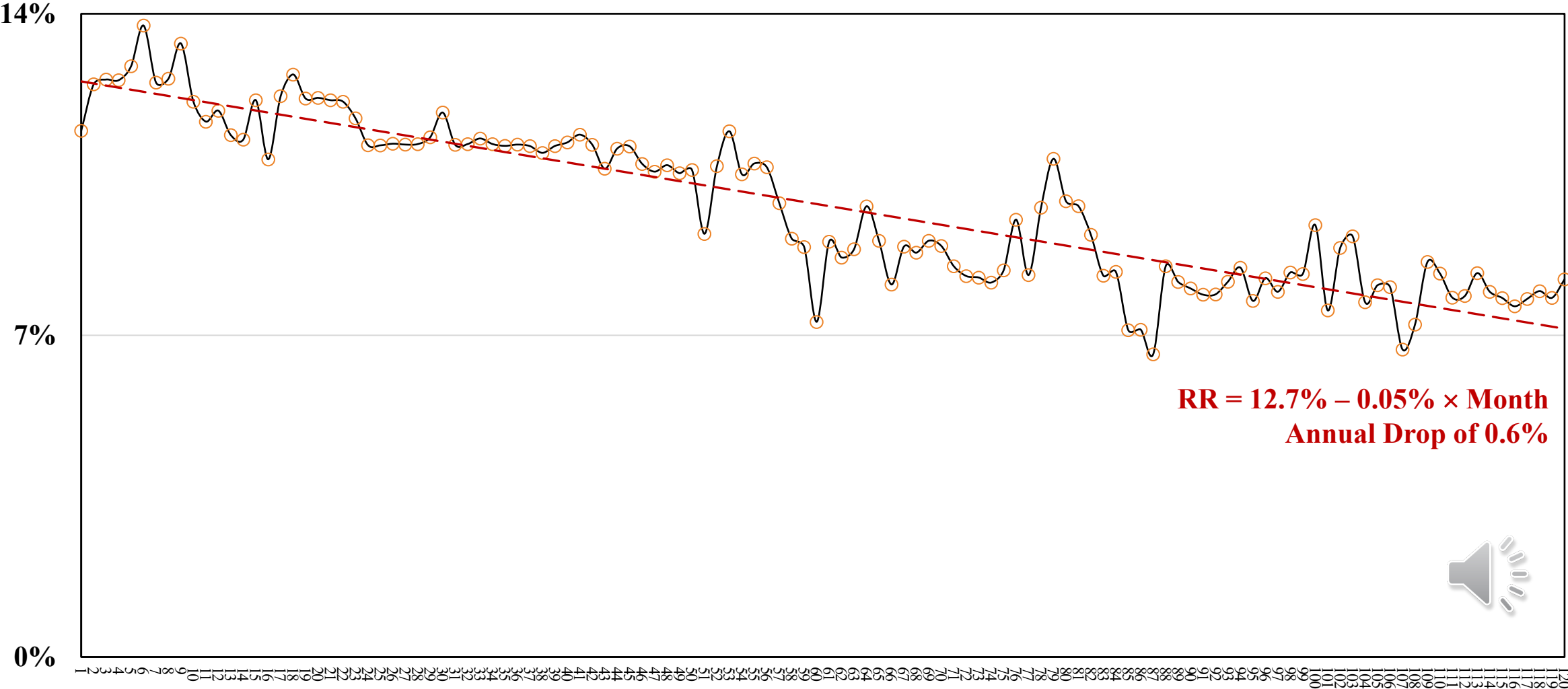
DIMINISHING RESPONSE RATES

Monthly ABS Push-to-Web Response Rates for Past Decade



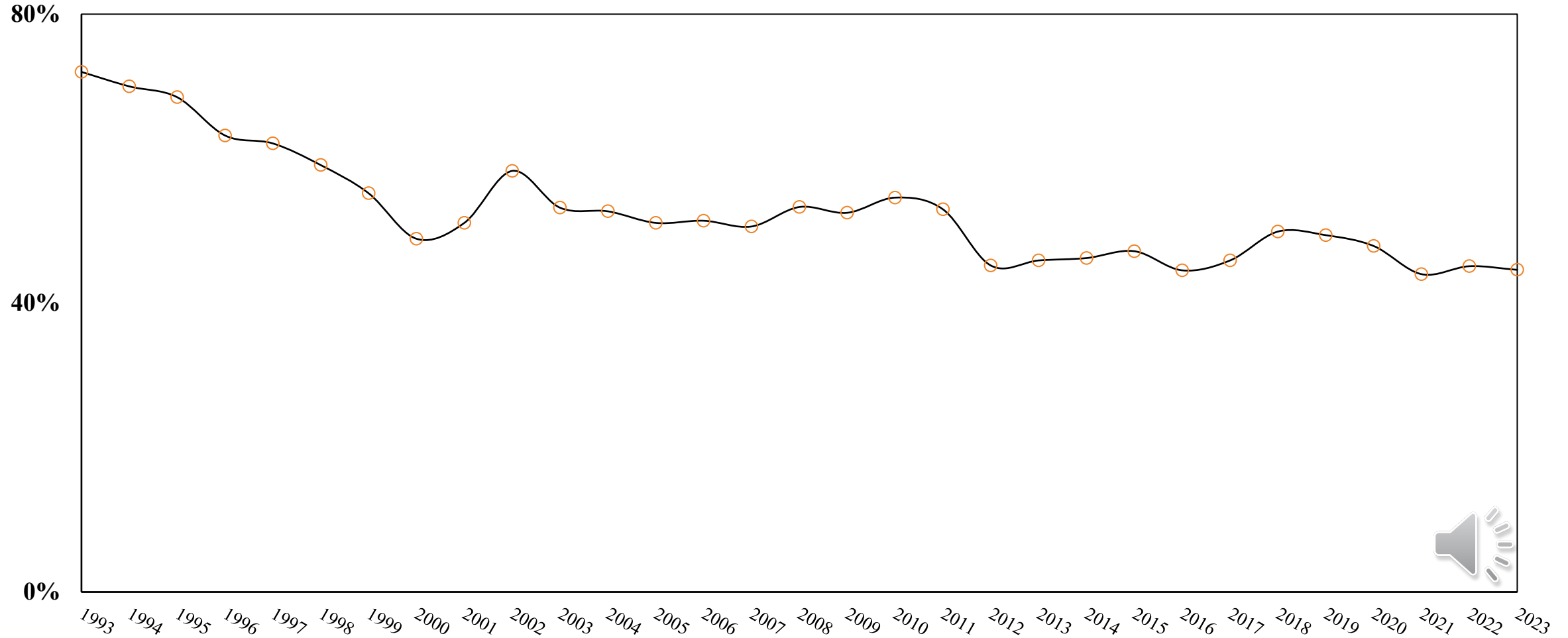
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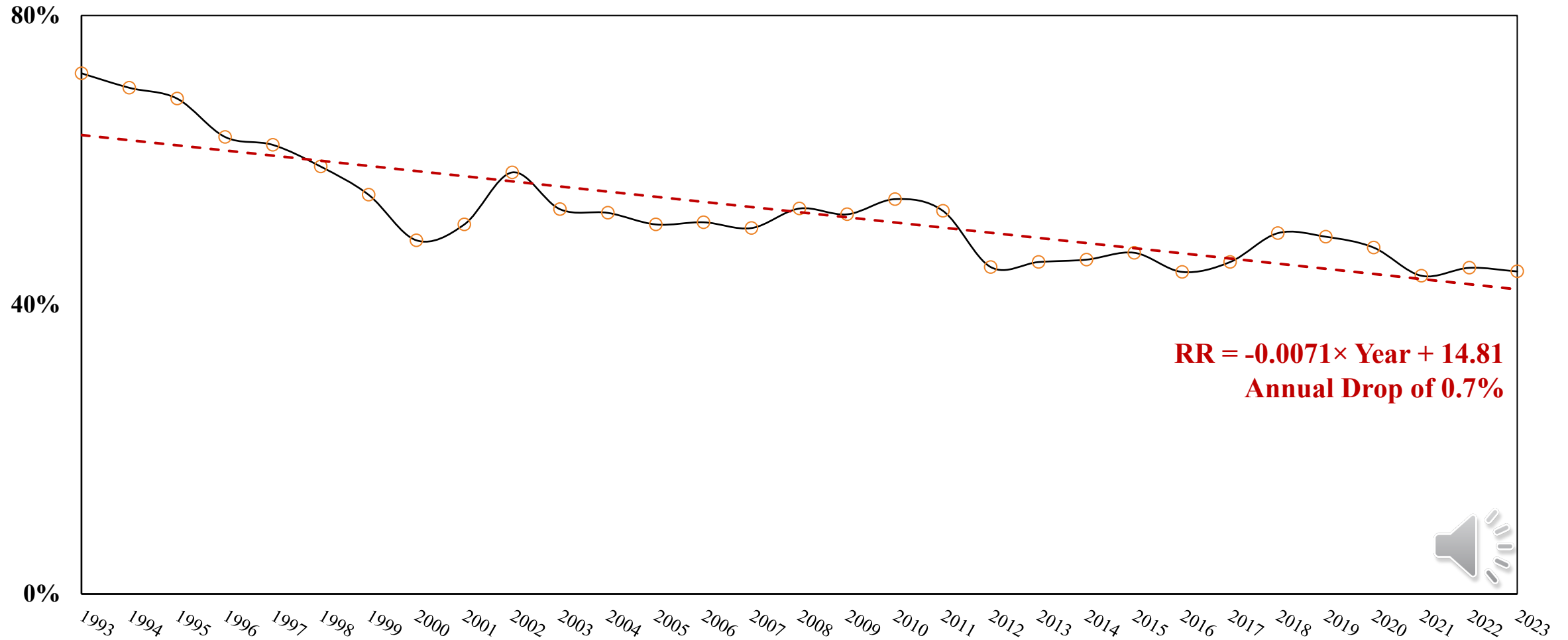
DIMINISHING RESPONSE RATES

Median Response Rates for the BRFSS by Year (CATI)



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BEYOND INCENTIVES AND FOLLOW UPS

❑ Incentive Types:

- Noncontingent:
 - ✓ May help to get your foot in the door
 - ✓ For large surveys it can be sizable
 - ✓ A considerable number get wasted
- Contingent:
 - ✓ To be impactful they need to be large
 - ✓ Eats up a good portion of the budget
 - ✓ Tend to attract more fraudulent respondents

❑ Follow Up Attempts:

- Effective protocols require cellular callbacks
- Exceedingly costly
- Loosing efficacy



BEYOND INCENTIVES AND FOLLOW UPS

❑ Incentives & Follow Ups:

- Costly
- Somewhat effective only in certain instances

❑ What is Researcher on a Budget Supposed to Do?

❑ Other Stones to Unturn:

- What are distinguishable characteristics of survey-friendly households?
- Can such characteristics be preidentified based on sampling frame data?
- Should such households be oversampled?
- Consequences of oversampling:
 - + Increase overall response rates
 - + Reduce survey cost
 - Require additional weighting adjustments
 - Reduces effective sample size



DEVELOPING RESPONSE PROPENSITY MODEL

❑ **Test Data:**

- A general population survey data with nearly 500K sample addresses
- Appended ancillary data to all sample addresses (respondents and nonrespondents)

❑ **Ancillary Data:**

- L2 Data:
 - ✓ Examined 658 variables from Consumer database
 - ✓ Examined 700 variables from Voter database
- Neustar segments with 173 categories
- Census geographies and CBG-level response rates

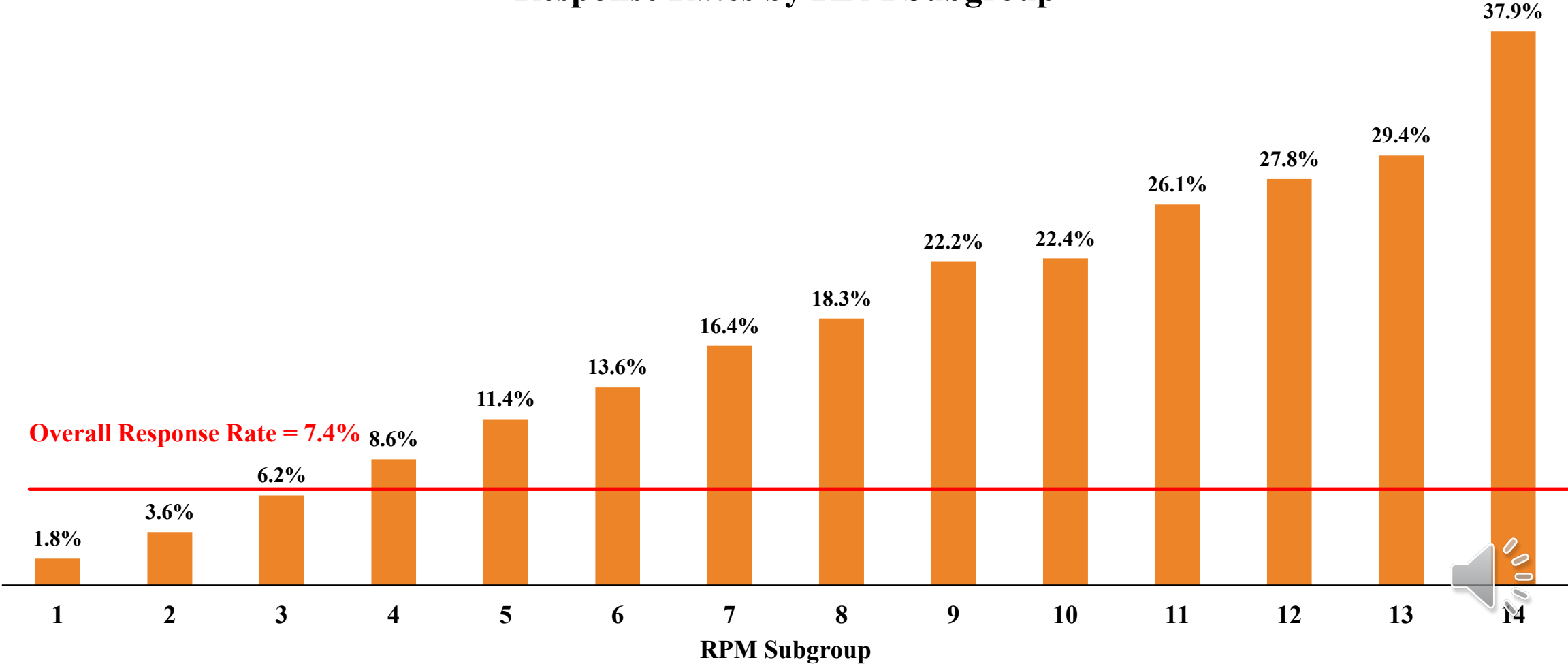
❑ **Modeling:**

- Used stepwise logistic regression to identify significant predictors of response (from ~1,500 to 42)
- Used Random Forest to reduce the set of 42 predictors down to 21 key drivers of response
- Profiled subgroups of addresses with different Response Propensity Measure (RPM)



RESPONSE PROPENSITY MODEL

Response Rates by RPM Subgroup



SAMPLING DESIGN CONSIDERATIONS

□ How to Allocate the Sample to Strata:

- i Sampling strata (1, ..., h)
- N_i Households in stratum i
- S_i Variability in stratum i
- C_i Cost in stratum i

□ Optimal Sample Allocation:

$$n_i = n \times \frac{\frac{N_i \times S_i}{\sqrt{C_i}}}{\sum \frac{N_i \times S_i}{\sqrt{C_i}}}$$

□ Unequal Weighting Effect:

$$\delta = 1 + \frac{\sum_i \frac{(W_i - \bar{W})^2}{n - 1}}{\bar{W}^2}$$

□ Reduction in Effective Sample Size:

$$n^* = \frac{n}{\delta}$$



TAKEAWAYS

❑ **New Realities:**

- Response rates are on a perpetual decline
- Nonresponse is differential and erodes representation
- Incentives and follow up attempts are becoming exceedingly costly and ineffective

❑ **Beyond Incentives and Follow Ups:**

- Can identify households with higher RPM
- Can oversample high RMP households to reduce cost
- Can do so judiciously considering the resulting variance inflations

❑ **Purism for the Optics' Sake is Getting Old:**

- Multi-frame samples (hybrid samples) are inescapable
- Multi-mode survey administration is inevitable



THANK YOU

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