# FINANCIAL PRIVACY FOR FREE? US CONSUMERS' RESPONSE TO FACTA

DRAFT - VERY PRELIMINARY

Alessandro Acquisti Carnegie Mellon University acquisti@andrew.cmu.edu Bin Zhang Carnegie Mellon University bzhang@cmu.edu

# Abstract

In December 2004 the three US credit reporting agencies - Equifax, Experian, and TransUnion complied with the Fair and Accurate Credit Transaction Act (FACTA) and started providing free copies of their credit reports to any consumers who requested it. The FACTA initiative was overseen by the Federal Trade Commission (FTC) and was significant in many respects: it was one of the first and largest initiatives by the federal government aiming at alleviating the rising concerns with identity theft; it forced – an unusual move in the laissez faire panorama of US privacy legislation - private sector companies to offer some of their products and services for free to the general public; and it required an uncommon concerted effort by the three credit agencies to provide reports to an estimated potential pool of 220 million US adults. However, to date, no data about the public response to the initiative has been provided by the FTC or the reporting agencies themselves. We present the results of a [institution name's removed] and Harris Interactive survey-based study of US consumers' response to FACTA. The survey was based on a nationally representative sample of US adults and provides the first look at the success of the initiative as well as the likely motivations for requesting one's credit report. Such information can help us understand consumers' interest in their financial information and, indirectly, their sensitivity towards the privacy of their financial data.

Keywords: Privacy, Information Security, Economics, Identity Theft, FACTA, Consumer studies

# Introduction

Advances in information technology have made it possible to conduct banking, credit, and shopping activities online. However, they have also exacerbated privacy risks. Imposters online and offline can use consumers' personal information (such as names, social security numbers, and credit card numbers) to commit a number of frauds: putting fraudulent charges on a consumer's credit card, stealing money from his bank account, or even impersonating him to open a new line of credit. These delinquent accounts will be reported on the victims' credit reports and will affect their ability to get credit, insurance, or even jobs.

The Fair and Accurate Credit Transaction Act (FACTA) of 2003 (United States Congress 2003) aimed, among other things, at helping consumers fight the growing crime of identity theft. Under one of FACTA provisions, consumers can request and obtain a free copy of their credit report every 12 months, from each of the three nationwide consumer credit reporting companies: Equifax, Experian, and TransUnion. By inspecting a credit report, consumers can confirm the accuracy and completeness of their personal information and identify errors or fraud, therefore guarding themselves against (or lessening the costs and risks of) identity theft. The Act started being enforced in December 2004, with a regional roll-out strategy that progressively covered the reports of US consumers across the fifty states by September 1st 2005.

Significant efforts and resources have been spent by legislators and the credit agencies to offer free credit reports to US consumers. Did they take advantage of this opportunity? Answering this question is important for several reasons: to evaluate the performance of a large-scale regulatory intervention in the area of financial information and financial privacy; to address possible shortcomings in its implementation; and to understand consumers' interest in information collected about them, and sensitivity towards the protection of that data.

To date, however, almost no information about the public response to the initiative has been provided by the FTC or the reporting agencies themselves. Since the annual free credit report initiative has been coordinated by the Federal Trade Commission (FTC) but actually managed by the three credit report agencies, no public information is available about the response of US consumers, and a FOIA request (Freedom of Information Act) is not applicable. The credit reporting agencies have been so far mute about the success and consequences of this initiatives, and have not provided to external parties (including the authors of this paper) access to even aggregate information about it. A survey instrument therefore is currently the only means for evaluating the FACTA initiative.

In this paper, we present the results of a [institution name's removed] and Harris Interactive survey-based study of US consumers' response to FACTA. Our survey method is not just the only information currently publicly available about FACTA performance; it also offers two additional advantages over agencies' data: since consumers who request their reports under FACTA may not request it from all agencies, a survey instrument may provide less biased information than data coming from a *single* agency. Furthermore, it may also cast a light on the motivations and behavior of those who did *not* take advantage of the FACTA initiative.

The goals of our research are to understand the response to the FACTA initiative, the demographics of those who took advantage of it, and their motivations. Consumers' reaction to FACTA can tell us about consumers' incentives to monitor their credit report and protect their financial data. Since protection against identity theft is often linked to financial privacy, studying FACTA also tells us something about consumers' sensitivity to the confidentiality of their private financial information.

As often noted in the literature, privacy is a complex concept, with varied, vague, and at times confusing interpretations (for an exhaustive taxonomy, see Solove 2006). Clearly, we do not refer in this paper to privacy as Warren and Brandeis's (1890) *right to be left alone*. Rather, the privacy relevance of FACTA is to be related to the individual's ability to access, verify, and if needed challenge data about himself (the "Individual participation principle", under the OECD's Fair Information Practices guidelines – see OECD 1980); as well as the individual's ability to prevent, stop, or impair others' ability to gain access to or misuse his personal data. In this regard, the response to the availability of a free resource to access and control one's personal credit information can help better understand US consumers' privacy sensitivity and actual behavior.

Our data was gathered in March 2006, when all consumers across the US had had the possibility of accessing their report for (at least) seven months. The survey was administered to a representative sample of 2,435 US adults in concert with Harris Interactive. Our empirical strategy starts with simple analyses that attempt to discern how many US consumers knew about credit reports and, specifically, about the possibility of obtaining a free one through FACTA, and how many took advantage of this opportunity (rather than falling for the many scam or look-alike offers that flourished since FACTA was enacted). Our approach thereafter includes multivariate analysis and grouped logistic regression models of sign-up frequencies on various combinations of demographic variables and other factors.

The rest of the paper is organized as follows. We discuss credit reports, credit frauds, and FACTA in Section 2. We present a literature review in Section 3. In Section 4, we discuss a model of consumer's credit report request. In Section 5 we present our empirical approach and in Section 6 we highlight its results. Discussions and ongoing work complete the paper in Section 7.

# Credit reports, credit frauds, and FACTA

Online retailing has boomed in recent years, and so have electronic payments. Because of these developments, however, the risk of being subject to online frauds, credit frauds, and identity frauds has also increased. Of particular concern to US consumers is the risk of identity theft - the illegal use of an individual's personal identifying information (such as name, address, Social Security number [SSN], and date of birth) to impersonate that person and commit financial fraud. Studies completed by Gartner Research and Harris Interactive indicate that from July 2002 to July 2003 alone approximately seven million people were victims of identity theft (Fetterman 2005). The Identity Theft Resource Center (2003, 2004) sent surveys to victims of this crime. The results indicate that the average fraudulent charge on victim's account in 2003 was \$92,893, an increase of 416% from 2002's \$18,000. Victims incur additional costs when attempting to resolve their cases: the average amount spent is \$1,495. These fees include certified return receipt mail, notarizing, telephone calls, court documents, travel expenses, photocopying, court transcript purchases, police reports, and may not include additional attorney and legal fees, or the opportunity costs associated with the time lost in the resolution of the fraud.

## Consumers' credit reports

A tool consumers can use to discover and limit the consequences of credit and identity frauds is the periodical review of their credit reports. A consumer's credit report (also known as a consumer's credit history, or credit file disclosure) is an ongoing report on consumers personal information and how they manage their finances.

Table 1:	Ways	to receive	e a credit report	
----------	------	------------	-------------------	--

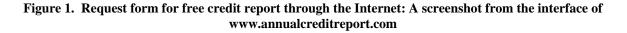
Free	Not Free
<ul> <li>Offered by credit agencies</li> </ul>	<ul> <li>Offered by credit agencies</li> </ul>
under FACTA	with a charge
<ul> <li>After fraud alert</li> </ul>	<ul> <li>Paid through other financial services</li> </ul>
<ul> <li>After denial of credit, insurance,</li> </ul>	
employment, government license	
or benefit, or other transactions	
<ul> <li>If unemployed and seeking job</li> </ul>	
• When receiving public welfare assistance	
<ul> <li>Under some states' law</li> </ul>	
<ul> <li>Free services offered by bank or credit</li> </ul>	
card companies	
Offered with other optional services	

Relevant data is typically submitted to a credit reporting agency by creditors, debt collection agencies, court system, and other public records. There are four categories of information on the report: personal information, public records

and collection accounts, credit history and current obligations, and credit inquiries. The personal information includes full name, social security number, birth date, current and previous addresses, current and past places of employment, driver's license number and state where issued. Public records and collection (collected from the court system and from debt collection agencies) include liens and judgments, bankruptcies, foreclosures, wage attachments, and accounts in collection. Credit history and current obligations include the dates when accounts were opened, the types of accounts (revolving, installment loan, mortgage), account balances and credit limits, payment history for each account, including late payments, unpaid child support and overdrawn checking accounts. Finally, credit inquiries report the inquiries made when seeking new credit and inquiries made for promotional mailings.

Checking one's credit report may ensure an early alert about errors and possible fraudulent accounts or activities. When a consumer discovers fraudulent or inaccurate information on his report, he can take further remedy. The Fair Credit Reporting Act (FCRA) established procedures for correcting fraudulent information on consumers' reports. Under the FCRA, consumers can request both the consumer reporting company and the information provider (such as a bank or credit card company) to correct fraudulent information. Consumers need to provide evidence of fraud and companies will block fraudulent information from appearing on the credit report.

AnnualCredifRepert.com	Frequently Asked Questions	Contact Us	+ About the	<b>V</b>	
When you click NEXT you y	all be transferred to the Equifics sit	•			
	repart from more than one compar fore proceeding to the next credit			a	
l'o return te this site, click	in the "Return to AnnualCreditRep	eart com" link at the	up of the following pay	<b>[+</b> 1.	
	Û				
AnnualCred (Reportion ) & R	turn to AnnualCreditReport.csm 🕨 Freque	enty Asked Questions 🕨	Contact An moliCred itileport	com	
	Click Next to construe.	You will be transferred b	o the Equifier ate <b>NE</b> J	λτ.	
		You will be transferred b In to AnnualCreditExport		to be description	
Cappen		n to AnnualCreditReport	.com Home Page CAN	to be description	
Engen	Click Cencel to retur	n to AnnualCreditReport	.com Home Page CAN	to be description	
Cappers	Click Cencel to retur	n to AnnualCreditReport	.com Home Page CAN	the Restaurant	
Corport	Click Cencel to retur	n to AnnualCreditReport	.com Home Page CAN	the Restaurant	
Corport	Click Cencel to retur	n to AnnualCreditReport	.com Home Page CAN	the Restaurant	



#### The Fair and Accurate Credit Transaction Act (FACTA)

A consumer can get a copy of his credit report in several ways (see Table 1). The Fair and Accurate Credit Transaction Act (FACTA) of 2003 (Public Law 108-159, 117 Stat. 1952) has added a new, no-strings attached, and widely publicized way to get a free copy of one's credit.

FACTA was signed into law on December 4th, 2003. It imposes new requirements on consumer reporting services, including the "obligation to provide, upon request, one free file disclosure - commonly called a credit report - to the consumer once in a 12-month period" (Federal Trade Commission 2004). It was intended, among other things, to help consumers fight the growing crime of identity theft. Under FACTA, consumers can request and obtain a free credit report once every 12 months from each of the three nationwide consumer credit reporting companies, Equifax, Experian, and TransUnion.

#### REQUEST FOR FREE CREDIT REPORT

*Note to Consumers:* You have the right to obtain a free copy of your credit report once every 12 months (also known as an "annual file disclosure"), from each of the nationwide consumer reporting agencies. Your report may contain information on where you work and live, the credit accounts that have been opened in your name, if you've paid your bills on time, and whether you have been sued, arrested, or have filed for bankruptcy. Businesses use this information in making decisions about whether to offer you credit, insurance, or employment, and on what terms.

Use this form to request your credit report from any, or all, of the nationwide consumer reporting agencies.

The following information is required to process your request:

method to every consumer. We will try to honor your preference.)

Your Full Name:
Your Street Address:
Your City, State & Zip Code:
Your Telephone Numbers (with area code): Day: Evening:
Your Social Security number: Your Date of Birth
Place a check next to each credit report you want.
I want a credit report from each of the nationwide consumer reporting agencies
OR I want a credit report from: [name of nationwide consumer reporting agency] [name of nationwide consumer reporting agency] [name of nationwide consumer reporting agency]
Please check how you would like to receive your report. (Note: because of the need to accurately identify you before we send you your credit report, we may not be able to offer every delivery

#### Figure 2: Request form for free credit report through mail

#### How to get FACTA reports

There are three ways of getting one's credit report under FACTA: via Internet, by mail, or by phone (see Figures 1 and 2).

The three credit agencies have set up a centralized system for all three access channels. When using the Internet, consumers need to go to a centralized website, www.annualcreditreport.com, and select the State in which they currently live. After entering their personal information (such as name, birth date, SSN and address), consumers can choose the agency from which they want to request their report. Only after answering a number of security questions about their accounts, consumers can actually access their reports.

Consumers can only make Internet requests from one agency each time. Telephone and mail requests instead have the benefit that consumers can apply for reports from multiple agencies at the same time.

Unfortunately, after FACTA was enacted, a number of Internet sites started appearing, offering "free" credit reports but actually luring consumers into paid services. Some of these sites have been established by the very credit reporting agencies that were forced by FACTA to offer their reports for free.<sup>1</sup> The sites owned or related to the credit reporting agencies often provide non conspicuous and sometimes hardly visible links to the FACTA site, with little or no reference to the free nature of the service that can be obtained from it. These sites cause additional potential costs to consumers willing to inspect their reports, as well as present them with a dilemma: requesting the report by phone or mail (with fewer security questions, a centralized request for all agencies, but delayed results – the report will only be received days later by mail); or requesting the report on the Internet (with more security questions to answer and time to spend in the process, with increased risk of exposure to scam or paid sites, but with the immediate gratification of inspecting one's report immediately, upon completion of the screening phase)?

# Literature review

The study which is closest to ours in goals and scope was conducted by Varian, Wallenberg, and Woroch (2004). Varian et al. studied who signed up for the do-not-call marketing list. After the FTC created a national registry "DNC" list, on June 27, 2003, 60 million phone numbers had registered by May 2004. Assuming that all the registered numbers came from different households and that each household included 2.62 people (according to the Census 2000 – see U.S. Census Bureau 2005), then more than 157 million US residents took advantage of this opportunity, proving a strong interest in the protection of the privacy of personal phone numbers. Varian et al. find some relation between demographics variables (such as race, household size, income, and education) and the propensity to sign up for the DNC list.

Since there exists no comparable study on the response to FACTA, the question about US consumer's sensitivity to their financial information and financial privacy remains open.

# A random utility model of FACTA credit report request

Financial privacy has become a concern often quoted in surveys of Internet users (see, for instance, Westin 1998, Ackerman et al. 1999, and Hann et al. 2002). By inspecting their credit report, consumers can confirm the accuracy and completeness of their personal information, and identify errors or ongoing frauds. Accessing one's credit report, therefore, can help guard against identity theft and provides consumers some (limited) form of access and control on their personal information – and other parties' access to it.

However, even requesting a report under FACTA is not really free. First, a consumer needs to consider the time spent requesting the report: it will depend on the interface used (mail, phone, or the Internet, with the Internet possibly being the lengthiest process to complete – because of additional security questions – but the fastest to produce the report). Second, a consumer needs to consider the (limited, but non-zero) transaction costs (such as phone calls or stamps to request the report). In addition, consumers face the risk that, by the very act of requesting their report, they may end up damaging the privacy of their financial information (for example, if their requests – with the accompanying personal data – were intercepted; or if they fell for scam offers and sites, thus providing personal information to criminals).

We use standard consumer theory to describe a consumer's decision to protect her financial privacy and diminish the potential adverse effects of various credit and identity frauds by requesting a credit report through FACTA. We describe the individual's decision process in Figure 3.

First, an individual must know about the existence of credit reports, believe that there exists one about himself, and know about FACTA. Then, the individual must actually be interested in getting such free copy of his report. We

<sup>&</sup>lt;sup>1</sup> It is telling that the domain for the truly free credit report is www.annualcreditreport.com, while the domain for one of its paid look-alike is www.freecreditreport.com.

assume that consumers who know about the availability of free reports will trade-off the expected benefits from receiving it against the costs of requesting it.

If a consumer doesn't request a report, with some probability his losses due to undetected credit or identity fraud will be higher than under the scenario in which the consumer could detect and react to them. Such probability depends on the likelihood that, in fact, his identity and/or financial information has been targeted by criminals.

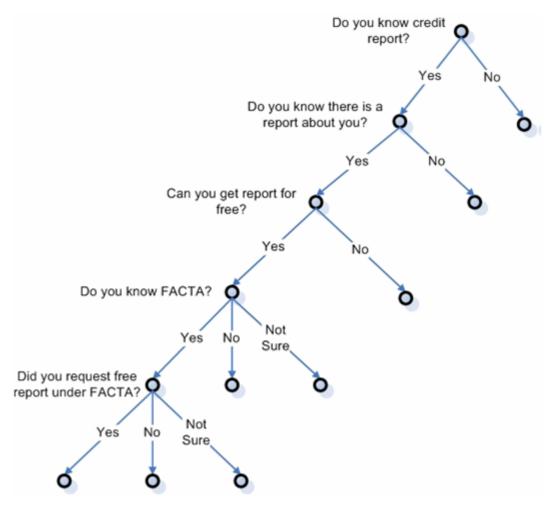


Figure 3: Consumer decision tree for credit report request

Other economic models of privacy decision making (such as Taylor 2004 and Acquisti and Varian 2005) have focused on rational or myopic agents with complete information. Our model, however, needs to deal with the inherent information asymmetry that characterizes the risk of identity and credit fraud. Therefore we base our approach on Varian et al.'s (2004) random utility model of do-not-call list registration. In a random utility model, utility of agent *n*,  $u_n$ , consists of two parts: a deterministic part  $v_n$  and a stochastic part  $\varepsilon_n$ . The stochastic part is due to the uncertainty associated with the consumer's incomplete information:

$$u_n = v_n + \varepsilon_n$$

Taking a simplified view of the individual decision process, if a consumer equests his credit report through FACTA, his utility  $u_n^l$  will be:

$$u_n^1 = p_n \cdot [v_n(y_n - c_i - l_n + b_n, z_n)] + (1 - p_n) \cdot [v_n(y_n - c_i, z_n)] + \varepsilon_n^1$$
(1)

where:

 $v_n(\bullet) = \text{deterministic utility}$   $y_n = \text{individual income}$   $z_n = \text{demographic characteristics - e.g., race, education, etc.}$   $c_i = \text{the costs of request using method } i;$   $l_n = \text{the expected and subjective disutility of identity or credit fraud specific}$ to individual n  $b_n = \text{the expected and subjective utility the consumer may receive from}$ knowing his financial information  $\varepsilon_n^1 = \text{stochastic utility, capturing the uncertainty}$ 

And  $p_n$  is the probability that the consumer's identity and/or financial information will be breached.

Checking one's credit report may ensure an early alert on possible frauds on the consumer's accounts, and therefore will help him reduce the expected costs of identity or credit fraud. In other words,

$$l_n^e < 0, \ b_n^e > 0, \ \text{and} \ b_n^e <= l_n^e.$$

This implies that we focus on benefits as *reductions* of expected losses. Further specification of this model will also attempt to consider the additional value that consumers may derive from inspecting their report – such as piece of mind, satisfaction of personal curiosity, and so on.

When the individual does *not* request, his utility  $u_n^0$  will be:

$$u_n^0 = p_n \cdot [v_n(y_n, z_n) - l_n] + (1 - p_n) \cdot v_n(y_n, z_n) + \varepsilon_n^0 = v_n(y_n, z_n) - p_n l_n + \varepsilon_n^0$$
(2)

Individual *n* will register when  $u_n^l > u_n^0$ .

Let  $F(\bullet)$  be the c.d.f. of the difference between the two distributions. Then the probability of registration is:

$$\phi = P(u_n^1 > u_n^0) = 1 - F(v_n(y_n, z_n) - v_n(y_n - c_i - l_n + b_n, z_n) - p_n l_n)$$

If we were to assume that the deterministic part of utility is linear in the variables  $y_n$  and  $z_n$ , i.e.,

$$v_n(y_n, z_n) = \beta_0 + \beta_y y_n + \beta_z z_n$$

then the probability of request is:

$$\phi = 1 - \beta_y c_i - \beta_y l_n + \beta_y b_n + p_n l_n$$

If we differentiate probability with regard to cost, benefit and loss, we obviously find that the request probability is decreasing in the cost of request (that is affected by the means chosen to request a FACTA report) and increasing in the magnitude of the benefit (which may in turn be affected by factors such as the individual's income). In following Sections we concentrate our analysis on the role of costs, expected benefits, and various demographic factors through logistic regressions.

#### Hypotheses

A number of hypothesis drive our survey design and are tested with the data we present in the rest of this paper.

H1: The probability of FACTA request is positively affected by income

This hypothesis is based on the observation that higher income demographics may have more to lose from credit and identity frauds, and therefore would have higher incentives to inspect their credit report. However, these higher incentives should be discounted by the higher probability that those demographics may, in fact, already had access to their credit reports (something we investigate in our survey).

H2: The probability of FACTA request is positively affected by education

Protection of one's personal financial information is a more rarefied concept than protection of one's phone number and defense of one's homely piece from marketers and solicitors. In addition, the cognitive costs associated with properly requesting a FACTA report are higher (see previous Sections). Hence we expect that higher education demographics will be correlated with higher rates of FACTA requests. However, it may be that higher education impacts more the probability of *knowing* about FACTA rather than actually requesting – this would be shown in the data after controlling for the share of subjects who claim to be familiar with the FACTA initiative.

**H3:** A share of consumers who believe they have requested a FACTA report may, in fact, have fallen for scam sites or look-alike paid services

Because of the cognitive costs associated with requesting a FACTA credit report online, and because of the creation of paid look-alike sites by the same credit agencies that were asked to provide their reports for free (see previous Section), we expected that a non marginal number of US consumers may have been tricked into paying for what otherwise would have been a free service.

H4: The overall request rate of FACTA report will be lower than the registration rates to the do-not-call list.

This hypothesis is based on a combination of observations: the FACTA initiative 1) affects a smaller number of individuals (fewer consumers have credit lines than they have phone numbers); 2) focuses on a form of protection which may be valued by consumers less than protection of their personal phone number; 3) is more costly (in terms of transaction and cognitive costs) to adopt; 4) may have been less publicized.

In particular, our current dataset allows to contrast FACTA requests by demographics and contrast them to the results report in Varian et al. (2004).

# An empirical study of US consumers' response to FACTA

Since no credit reporting agency has so far provided data about the impact of the FACTA initiative, and since no FOIA request is possible in this context (the FTC supervised FACTA implementation but did not gather any data itself), a survey instrument is the only tool currently available to the public to evaluate US consumers' response to the Act.

### Survey instrument

Our survey instrument is informed by the FACTA request decision tree reported in Figure 3, and the model reported in the previous Section: in order to request a free copy of his credit report, an individual must know about the existence of credit reports, believe to have one, and know about FACTA. He must also be interested in getting a copy of this report and believe that the costs of doing so will be compensated by the benefits.<sup>2</sup>

Accordingly, Figure 4 offers an overview of the logical flow of the survey, and the Appendix reports the complete list of questions. Respondents were asked questions about their knowledge of credit reports, free reports, and FACTA, and about their credit requesting behavior - related and unrelated to FACTA. In addition, we obtained a number of demographic variables, including gender, age, education, income, race, and so on.

Our survey was administered online to a sample of 2,435 US adults in concern with Harris Interactive in March 2006. The size and nature of the sample makes it representative of the US adult population.<sup>3</sup> Harris Poll Online surveys are based on panels of online respondents consisting of several million individuals, recruited through several channels. Several sample selection and propensity score matching methodologies were adopted to make sure that the

 $<sup>^{2}</sup>$  As mentioned above, we are currently focusing on benefits as reductions of expected losses from credit and identity frauds. Further specifications of our model will also investigate the additional value that consumers may derive from inspecting their report (piece of mind, satisfaction of personal curiosity, etc.).

<sup>&</sup>lt;sup>3</sup> Because of delays in the reception of the survey results, the rest of our empirical analysis should not be considered as final, but rather as subject to further study, specification, and expansion.

results were as representative as possible of both online and offline US populations.<sup>4</sup> Our survey intentionally oversampled richer demographics, as one of our hypotheses was that those demographics would be more likely to request FACTA reports, but also numerically so small as to not provide us with enough power of analysis in multivariate regressions. Of course, our results below are presented after the appropriate weighting was used to return our sample to a nationally representative composition of respondents.

The first goal of our research is to describe the response of US consumers to the FACTA act. This is discussed immediately below. Following that, we will present an analysis of the relationships between demographic categories and the observed frequency of credit report requests. Finally, we will present regression analysis (and, specifically, grouped logistical models) of request frequencies on various combinations of demographic variables and other factors, based on the model presented earlier.

#### **Descriptive Statistics**

The majority of our sample claimed to know what a credit report is (Table 2) and what a credit score is (Table 3), although fewer Americans are confident with the latter concept.<sup>5</sup>

Answer	Number	Percentage
Yes	2,252	92.51%
No	91	3.72%
Not sure	92	3.77%
Total	2,435	100.00%

Table 2: Do you know what a credit report is?

Most of the individuals who know about the existence of credit reports also believe that there is one about them (this number includes both people who, in other questions, responded that they had obtained at least once their report, as well as people who have never done so - see Table 4).

<sup>&</sup>lt;sup>4</sup> A representative of one of the three credit agencies reported to us in private, confidential discussion, that "around 80 to 85%" of *their* FACTA requests were submitted on the Internet. This fact, together with the sampling and propensity score methods applied to our sample, make us quite confident that the results of our online survey are actually representative of the US population.

<sup>&</sup>lt;sup>5</sup> Note that the titles of the Tables report shortened versions of the actual questions that our subjects were asked. See the Appendix for the actual text.

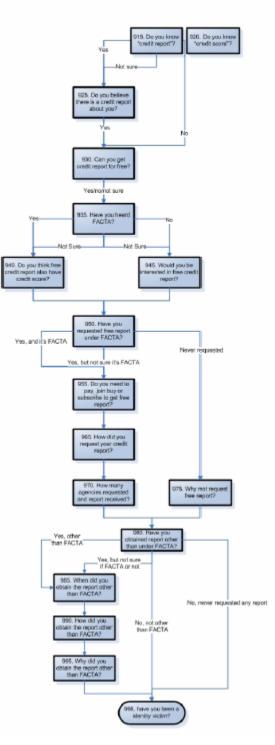


Figure 4: Survey logical flow

Before asking about FACTA, we investigated how many of our respondents believed that there were ways to obtain their credit report for free (Table 5). Interestingly, almost 74% of our subjects know that it is possible to get a free credit report.

Answer	Number	Percentage
Yes	1,964	80.66%
No	288	11.85%
Not sure	183	7.50%
Total	2,435	100.00%

Table 3: Do you know what a credit score is?

Next, we asked specifically whether the respondent had heard about the opportunity of getting one free credit report a year from the three credit agencies, and we specified that this was the so-called "FACTA" initiative (for the exact text of the question, please see the Appendix).

Table 4: Do you think there is a credit report about you?

Answer	Percentage
Yes	91.22%
No	2.34%
Not sure	6.44%
Total	100.00%

Our results are reported in Table 6. The total number of people who claim they have heard about the FACTA initiative is almost identical (in fact, the people who answered "yes" to the previous question are also the people who answered "yes" to the second one; the correlation is very high: Pearson chi2(4) is 786.6209).

Table 5: Do you know about the possibility of receiving free credit reports?

Answer	Percentage
Yes	73.43%
No	11.32%
No sure	15.26%
Total	100.00%

However, we can also find a larger number of people who have actually never heard about the program, rather than just being unsure about it (compare Table 5 and Table 6).

Answer	Percentage
Yes	72.80%
No	24.29%
No sure	3.92%
Total	100.00%

Table 6: Do you know about FACTA?

The fact that so many people have heard of FACTA may be considered surprising, considered the relatively high sophistication of the domain of interest. However, an obvious concern is *how well* people actually know about this initiative.

Answer	Number	Percentage
Yes	721	39.11%
No	636	34.50%

487

1,844

26.39%

100.00%

Not sure

Total

Table 7: Do you think that FACTA reports include credit scores?

To ascertain this we asked a number of follow-up questions.

First, we asked individuals who had claimed to know about FACTA (or not being sure about it) whether they thought that the credit report one can obtain under this legislation contained or not also their credit score (it does not). As reported in Table 7, a large fraction of our respondents thought (incorrectly) that the free credit report they can order every year from the three agencies also contain their credit score (note that these results do not change when controlling only for people who answered to know FACTA. The only difference between the group unsure about FACTA and the group that claims to know about it is that the former is also more likely to be uncertain about whether FACTA report include credit scores; the latter tend to be less uncertain, and more often wrong).

Table 8: Would you be interested in receiving a free credit report?

Answer	Percentage
Yes	57.72%
No	26.92%
No sure	15.36%
Total	100.00%

To people who did not know (or were not sure to know) FACTA, we asked whether they would have some interest in receiving a free copy of their report (Table 8). Almost 58% of the respondents claimed to be interested - conditional to the answer described in Table 6, this means that around 386 respondents in our sample (almost 17%)

may be in fact want to receive a free copy of their report, but do not because they do not know about this opportunity (we present below in Section a number of cross-tabulations and regressions that cast some light about who these individuals may be). Since our sample of 2435 is quite representative of US adults, the number of people falling in this category is, in absolute terms, quite significant

#### How many used FACTA to obtain a free report?

How many people actually took advantage of FACTA to get a free copy of their report? Answering this question is not trivial, because getting a report under FACTA is not, in itself, a trivial task.

First, the subject must know what a credit report is and care to have a recent copy of it. Second, the subject must know about FACTA. Third, and perhaps even more importantly, the subject must be able to find out how, exactly, she can get her FACTA report and must be willing to go over the process of actually ordering a report.

1010	
1012	41.54%
670	27.53%
341	14.02%
1423	58.46%
2435	100.00%
	341 1423

Table 9: Did you request a free report under FACTA?

Such process can be: *confusing*, because of the large number of copy-cat sites or scam sites described above, that lure consumers into providing their information or pay a fee to get what in reality should be a completely free product; *risky*, because of the risk of revealing personal information to malicious entities; *time consuming*, especially for requests completed by Internet, because the consumer needs to complete three separate processes (one with each credit agency), and answer various sets of questions (including trick questions, designed to avoid providing one's credit score to the wrong individual).

For similar reasons, it is not always possible to determine with certainty through a survey instrument whether a subject really requested a free report under FACTA or not. She could have fallen victim of a scam site and never have received her report, for instance. Or she could have fallen for one of the many FACTA look alike sites that advertise "free credit reports" only for luring consumers into buying additional services or products.

Table 10: I	Iow did	you request	your FAC	CTA report?

Answer	Percentage
Internet	78.43%
Phone	12.53%
Mail	7.28%
Others	1.76%
Total	100.00%

Answer	Percentage
Yes, as a condition to get my report	12.54%
Yes, but not as a condition	36.92%
No	45.08%
Not sure	5.47%
Total	100.00%

Table 11: Were you asked to buy something when you requested your FACTA report?

Our survey was designed with this uncertainties and intrinsic ambiguities in mind, and a number of follow up questions were asked to try to ascertain a level of confidence on whether the individual had indeed requested a FACTA report or not.

Let us start from Table 9. A staggering 42% of our sample answered 'yes' or 'yes, but I am not sure it was under FACTA' to the question: "Did you ever ask a copy of your credit report under FACTA?" Actually, only 27.3% of the sample are sure it was FACTA - the rest could not be sure.

The vast majority of respondents who claimed to have requested a credit report under FACTA did so by Internet (Table 10). The fraction found in the sample (78%) is very close to the actual fraction that a representative of one of the three credit agencies reported to us (80-85%). This is a result that we plan to investigate more, since it shows the preference towards a medium that offers immediate satisfaction of the consumer's desire to see his report, at the price of (possibly) higher transactions and cognitive costs (see previous Sections).

Next, we asked our respondents whether they were offered additional services or products when they requested their free report. In particular, we asked whether additional services or products were offered as a condition to actually receive their report, or not. FACTA reports are completely free. When requested by phone or on the Internet, no other offer is made by the agencies. When requested on the Internet, some of the agencies propose additional packages, but not as conditions to get one's report.

Of the subjects who answered unconditional 'yes' to the question described in Table 9, almost 13% were offered services *as conditions* to get their report. With some margin of error due to the survey nature of the data, we can infer that most of these individuals, in fact, did (not) really ask a report under FACTA. They represent around 8% of subjects who had answered with confidence that they requested a report under FACTA, and around 22% of those who were not sure whether they had requested a report under FACTA or not.

This, alone, brings down the percentage of respondents who may have requested FACTA reports down to 36%. Controlling also for the way subjects chose to request their report, and knowing that FACTA reports could only be asked via Internet, phone, or mail, and that phone or mail requesters could not be offered additional services, we can make similar inferences and bring down the above number to around 35% (24% confident they requested their free report under FACTA, 11% not sure). In other words, we can estimate a lower bound of US adults that requested a free credit report under FACTA as 24%, and an higher bound at 35%.

Answer	Number	Percentage
Yes, Obtained Credit Report other than FACTA	1,338	54.94%
Yes	1,014	41.65%
But not sure it was under FACTA or not	324	13.29%
Never obtained credit report other than FACTA	1,097	45.06%
No other than FACTA	295	12.13%
Never obtained a report	802	32.93%
Total	2,435	100.00%

Table 12: Have you ever obtained your credit report in any other way?

It is important to add that not everybody who asked for their free report under FACTA (or thought she did) actually received it: Table 13 shows that almost 18% of our sample either did not receive the report from the only single agency they requested it from, or did not receive it at least from one of them. We found a significant correlation (Pearson chi\_2(3) = 28.2858) between being use or not of having requested a free credit report under FACTA and having actually received it: respondents who were not sure were also more likely to report not having received all requested reports (a Wilcoxon-Mann-Whitney ranksum test for the equality of the distributions strongly reject the null hypothesis: z = -4.465, Prob > |z| = 0.0000).

Nevertheless, FACTA seems to have played a role in connecting individuals to their credit reports for the first time: Table 12 shows that 12% of our respondents received their report only and for the first time under FACTA - this is a relatively high number, equivalent to more than a quarter of individuals that, before FACTA, had never seen their credit report.

Answer	Number	Percentage
Received all report	830	82.02%
Requested $> 1$ and received all	449	44.40%
Requested 1 and received	381	37.61%
Not received all	182	17.98%
Requested $> 1$ , not received all	145	14.37%
Requested 1, not received	37	3.61%
Total	1,012	100.00%

Table 13: Did you receive your report from all the agencies you requested it from?

Why did people ask or did not ask their report? We provide some charts and figures.

		Answer	
Group	Yes	No	Not sure
18-24	49.21%	18.60%	32.19%
25 - 29	76.23%	11.26%	12.51%
30-39	77.27%	13.35%	9.38%
40-49	78.37%	9.89%	11.73%
50-64	76.57%	9.66%	13.76%
65 +	74.07%	8.38%	17.54%

Table 15: Who knows about getting free credit reports, by age

Table 16: Who knows about getting free credit reports, by race

		Answer	
Group	Yes	No	Not Sure
White	75.32%	9.05%	15.63%
Black	80.02%	12.71%	7.27%
Hispanic	60.38%	24.50%	15.12%

Figures 5 and 6 are based on the answers to Likert-scale questions about respondents' motivations to request (or not to request) a free credit report under FACTA. The 7-point Likert-scales range from "Strongly disagree" (with a certain explanation of motivation) to "Strongly agree" (with a certain explanation or motivation).

Curiosity about one's credit report information and interest in checking any error are the most agreed upon reasons listed by our respondents for taking advantage of the FACTA credit report opportunity (Figure 5).

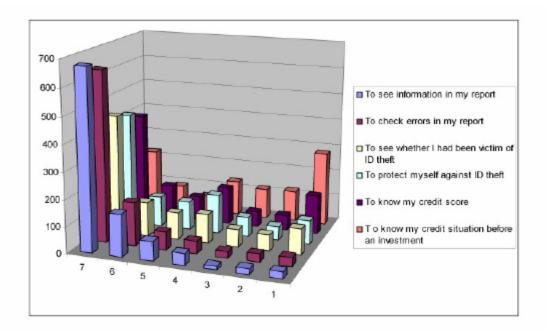


Figure 5: Why did you request your free credit report under FACTA? Answers on a 7-point Likert scale.

Among the reasons not to request one's report, respondents mostly reported not being interested - although also not knowing about the opportunity or how to take advantage of it played an important role (Figure 6).

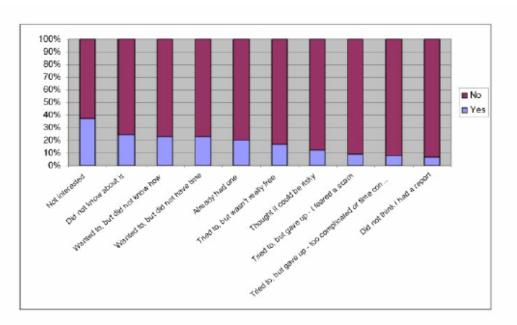


Figure 6: Was this a reason why you did not request your free credit report under FACTA?

		Answer	
Group	Yes	No	Not sure
18-24	52.20%	40.62%	7.17%
25 - 29	71.42%	23.63%	4.94%
30-39	76.13%	18.30%	5.57%
40 - 49	74.82%	22.63%	2.55%
50-64	74.78%	22.48%	2.74%
65 +	73.25%	23.89%	2.85%

Table 17: Who knows about FACTA, by age

## Multivariate analysis and logistic regressions

We discuss here some relations between knowledge of FACTA, credit reports, or FACTA request, and demographic variables. Tables 14, 15, 16, and 17 offer examples of such analyses. Knowledge of FACTA and FACTA request rates seem to be correlated with age and income. The relation with age is follows and inverted U-shape: the youngest and oldest demographics are less likely to know and to have requested FACTA reports. The relation between knowledge and request on one side and education and income on the other is more monotonic, and increasing. These relations are statistically significant under chi\_2 tests. However, we specify below a series of

logistic model (inspired by the request model presented in the Section "A random utility model of credit report request") to disentangle the effects of these various variables on the probability of knowing FACTA and requesting a free report through FACTA.

		Answer	
Group	Yes	No	Not sure
18-24	73.26%	8.98%	17.76%
25 - 29	92.15%	2.24%	6.84%
30-39	93.53%	14.06%	2.88%
40-49	96.63%	6.34%	2.17%
50-64	93.55%	5.31%	5.49%
65 +	89.39%	4.23%	9.55%

Table 14: Who knows about credit reports, by age

We consider as predictor variables gender, age, region of resident, marital status, employment status, education level, income level and race.

First, we study the probability of knowing about the FACTA initiative – without which it would not be possible to make a FACTA request:

 $logit(KnowFACTA) = \beta_0 + \beta_1Gender + \beta_2Age + \beta_3 \operatorname{Re}gion + \beta_4Marital + \beta_5Employment + \beta_6Education + \beta_7Income + \beta_8Race$ 

In general, this model is significant (Wald F (41) = 156.8718, p < 0.0001; Likelihood Ratio (41) = 192.3814, p < 0.0001).

Wald						
Effect	DF	Chi	-Square	Pr > ChiSc	ł	
Male	1		0.0718	0.7887		
Age	1	-	3.8268	0.0504		
Region	3		5.9134	0.1159		
Marital st	atus	5	9.655	2 0.0856	5	
Emp statu	IS	7	8.106	6 0.323	3	
Education	ı	7	51.267	4 <.000	1	
Income	10	)	43.7838	3 <.0001		
Race	7	1	6.3908	0.0218		

Predictor variables age ( $\chi^2 = 3.8268$ , p = 0.0504), education ( $\chi^2 = 51.2674$ , p < 0.0001), income ( $\chi^2 = 48.7838$ , p < 0.0001), and race ( $\chi^2 = 16.3908$ , p = 0.0218) are significant at the 0.05 level. Marital status ( $\chi^2 = 9.6552$ , p = 0.0856) is significant at 0.10 level (see Table 15).

Specifically, when running odds-ratio estimates, we can find out that holding other variables constant, for each year increase in the respondents age, the odds of knowing FACTA increases by 1.011 times.

Table 16: Odds Ratio Estimates					
Point 95% Wald					
Effect	Estimate	Confidenc	e Limits		
Region 4 vs 1	0.907	0.652	1.261		
Region 3 vs 1	1.090	0.804	1.478		
Region 2 vs 1	0.766	0.555	1.058		
(Region $1 = \text{East}$ , Region $2 = \text{Midwest}$ , Region $3 = \text{South}$ , Region $4 = \text{West}$ )					

Although Region is not a significant factor, we still can see some difference about knowledge of FACTA in different regions. South has the highest rate of knowing FACTA, while midwest has the lowest odds.

Table	17: Odds Ra	tio Estima	tes	
Р	oint 95	% Wald		
Effect	Estimate	Confider	ice Limits	
Edu 7 vs 1	4.355	1.110	17.077	
Edu 6 vs 1	8.968	1.826	44.033	
Edu 5 vs 1	7.629	2.011	28.949	
Edu 70 vs 1	5.161	1.340	19.874	
Edu 4 vs 1	2.958	0.802	10.906	
Edu 3 vs 1	2.232	0.619	8.055	
Edu 2 vs 1	2.038	0.515	8.067	
1 0 1 1 1	1 1 0	TT' 1 1	1 4 0	11

(1 = Less than high school, 2 = some high school, 3 = High school, 4 = Some college, 5 = College, 6 = Some graduate school, 7 = graduate school, 70 = associate degree)

The impact of education is presented in Table 17. The likelihood of knowing about FACTA follows a linear relationship with education. As level of education increases, the odds of knowing FACTA increase.

Table 18	: Odds Rat	io Estimate	es
Poin	it 959	% Wald	
Effect E	stimate	Confidence	e Limits
Income 11 vs 1	6.264	0.895	43.839
Income 10 vs 1	21.792	2.010	236.209
Income 9 vs 1	5.415	1.873	15.649
Income 8 vs 1	3.185	1.468	6.910
Income 7 vs 1	3.213	1.836	5.622
Income 6 vs 1	2.282	1.423	3.659
Income 5 vs 1	2.262	1.488	3.439
Income 4 vs 1	1.242	0.818	1.886
Income 3 vs 1	1.745	1.126	2.704
Income 2 vs 1	1.287	0.839	1.974

(1=<15,000, 2=15,000-24,999, 3=25,000-34,999, 4=35,000-49,999, 5=50,000-74,999, 6=75,000-99,999 7=100,000-124,999, 8=125,000-149,999, 9=150,000-199,999, 10=199,999-249,999, 11=>250,000) The likelihood of knowing FACTA also shows a linear relationship with income (Table 18). We can observe that, as the amount of income increases, the odds of knowing FACTA increase as well. For a respondent having income between \$15,000 and \$24,999, his odds of knowing FACTA is 1.287 times higher than that of a respondent with income less than \$15,000. People who have income between \$200,000 and \$249,999 have the highest odds, which is 21.792 times higher than that of people with income less than \$15,000. This ratio is drastically higher than any other categories and is significant (0.0653).

Next, we focus on the probability that an individual actually *requests* a copy of his credit report through FACTA. We restrict our analysis to the subjects who, in fact, claimed to know about the existence of the initiative:

logit(Re quest FACTA Re port | know FACTA) =  $\beta_0 + \beta_1 Gender + \beta_2 Age + \beta_3 Re gion + \beta_4 Marrital + \beta_5 Employment + \beta_6 Education + \beta_7 Income + \beta_8 Race$ 

Effect D		Wald hi-Square	Pr > ChiSq
Male	1	0.2600	0.6102
Age	1	1.3830	0.2396
Region	3	8.5877	0.0353
Marital status	4	5 18.939	97 0.0020
Emp status	7	16.199	1 0.0234
Education	7	25.2656	0.0007
Income	10	18.7444	0.0436
Race	7	19.1974	0.0076

Table 19: Type 3 Analysis of Effects

Table 19 presents a cumulative analysis of effects. Region ( $\chi^2 = 8.5877$ , p = 0.0353), marital status ( $\chi^2 = 18.9397$ , p = 0.002), employment status ( $\chi^2 = 16.1991$ , p = 0.0234), education ( $\chi^2 = 25.2656$ , p = 0.0007), income ( $\chi^2 = 18.7444$ , p = 0.0436), and race (q244,  $\chi^2 = 19.1974$ , p = 0.0076) are in fact significant at the 0.05 level.

The odds presented in Tables 20 are based on the regression coefficients. They show that the relation between income and FACTA request rates remain (mostly) monotonic and increasing (confirming one of our hypotheses); while the relation between education and FACTA request rates is no longer so, once we control for knowledge of the FACTA initiative.

Table 20: Odds Ratio Estimates (selected variables)

Р	oint 95	5% Wald	
Effect	Estimate	Confiden	ce Limits
Male 2 vs 1	0.932	0.710	1.223
Age	0.993	0.981	1.005
Edu 70 vs 1	0.810	0.116	5.629
Edu 7 vs 1	0.628	0.090	4.368
Edu 6 vs 1	0.271	0.036	2.050
Edu 5 vs 1	0.398	0.059	2.692

Edu 4 vs 1	0.322	0.048	2.177
Edu 3 vs 1	0.305	0.046	2.027
Edu 2 vs 1	0.510	0.066	3.931
Income 11 vs 1	1.980	0.527	7.445
Income 10 vs 1	3.062	0.954	9.828
Income 9 vs 1	3.005	1.289	7.007
Income 8 vs 1	2.800	1.282	6.115
Income 7 vs 1	1.812	0.944	3.478
Income 6 vs 1	2.186	1.179	4.055
Income 5 vs 1	2.296	1.274	4.137
Income 4 vs 1	2.652	1.437	4.892
Income 3 vs 1	3.154	1.697	5.861
Income 2 vs 1	1.787	0.948	3.368

We present in Tables 21 a comparison of the significance of various demographic variables across three independent variables: knowledge of FACTA, FACTA request, and registration to the do-not-call list (from Varian et al. 2004).

Significant Independent Variables							
		Do-not-Call List (reported in Varian					
Know FACTA	Request FACTA	et al. (2004)					
Age	Region	Median Househouse Income					
Education	Education	Latino Household					
Income	Income	Household with children 12-18 Yrs					
Race	Race	Household linguistic isolation					
Marital Status	Marital Status	Education low					
		State has own DNC-like list					
		State has merged with DNC					

Table 21 : Comparison of significant predictors, odds ratios

One of the assumptions of our research is that the motivation to request free credit report under FACTA is conceptually comparable (although obviously mostly unrelated) to the motivation of sign up for a do-not-call list studied by Varian et al (2004).

First, in absolute terms, it is clear that the rates of FACTA requests we estimated in previous Sections translate to a smaller population than the 157 million do-not-call list registrants Varian et al (2004) estimate. In terms of behavioral and demographic differences in the two datasets, we found that age is not a significant variable in our model, and it doesn't have a consistent impact on the likelihood of registering to the do-not-call list either. The impact of income on do-not-call list sign up and FACTA report request are very similar in the two scenarios. High income people/household have high likelihood of or request or sign-up frequency. The likelihood increases with income. People or household at high end in both researches all have substantial likelihood comparing with other group. The only difference is that in our research, people with average income, from \$25,000 to \$34,999, have substantial increase in request odds ratio too. The effects of education are similar in the two context too. In general, the likelihood increases with education level. People with associate degree have highest likelihood of request FACTA report, while people with post graduate education have highest likelihood of sign-up to the do-not-call list. People with graduate school education in our research have the second highest odds of request.

We also find those who are unmarried and live with partners have high likelihood of request free credit report under FACTA. In our research, those people have the second highest odds, next to those are separated. Varian et al. use unmarried and with partner as control and compare it with all the other groups. Their results show the former group does have lower frequencies. So marital status has similar effect in the two cases.

The effect of race on the request rates of FACTA credit reports, however, is different than the likelihood found by Varian et al. (2004) for the do-not-call list case. In their findings, Asian households have the highest sign-up rate, followed up multiracial households, white, and black households. In our context, black individuals, after controlling for other variables, have in fact the highest odds of any other group to request FACTA reports. This is one of the various items of analysis that will inform the rest of our research agenda. We present in Table 22 an overview of various specifications of our models and these various independent variables.

# Conclusion

We have presented initial results from a nationally representative survey we conducted in concert with Harris Interactive to study US adults' response to the FACTA legislation.

We have found that knowledge about FACTA is widespread, and that 24 to 36% of US adults took advantage of this opportunity. However, a significant fraction of US population may have erroneously ended up spending money in the attempt of getting a free credit report. On the other hand, the FACTA initiative has led a quarter of consumers who had never seen their report to finally receive it. The response rate to FACTA is therefore, as one of our hypotheses suggested, lower than the registration rate that Varian et al. (2004) found for the do-not-call list – but it is still quite high, considering the transaction and cognitive costs associated both with the problem (identity theft and financial fraud) and its solution (the FACTA initiative).

Our analysis is preliminary, because of the very recent date at which our data was received. Our ongoing research agenda includes a refinement of the random utility model presented above, and a more detailed analysis of our dataset. We also plan to address a number of additional questions - such as the prevalence of Internet FACTA requests notwithstanding their higher risks and complexity when compared to phone or mail requests, and the difficulty users experience in finding out about the way to request FACTA reports online in the presence of several look-alike sites.

			1 4010 2	22 : Comparison of significa			ibid, with know FACTA			Request FACTA, know		
	Kr	now FACT	ſA	<b>Requested FACTA Report</b>			only			FACTA as IV		
Variable	Est.	Std err	р	Est.	Std err	р	Est.	Std err	р	Est.	Std err	р
Gender =	0.0166	0.0721	0.7007	0.0254	0.0610	0.6701	0.0254	0.0004	0.6102	0.0070	0.0670	0.5000
Female	0.0166	0.0621	0.7887	-0.0254	0.0613	0.6791	-0.0354	0.0694	0.6102	-0.0372	0.0672	0.5802
Gender = Male												
Region = West	-0.0286	0.1013	0.7779	0.1339	0.1011	0.1856	0.1934	0.1127	0.0860	0.1476	0.1092	0.1768
Region = South Region =	0.1557	0.0893	0.0814	0.1235	0.0871	0.1558	-0.0467	0.0977	0.6324	0.0445	0.0944	0.6374
Midwest	-0.1966	0.0984	0.0457	-0.0008	0.1003	0.9936	0.1489	0.1137	0.1903	0.1274	0.1098	0.2459
Region = East												
Marital Status = Live with partner	-0.4442	0.2052	0.0304	0.0007	0.2098	0.9973	0.3959	0.2547	0.1201	0.1542	0.2431	0.5259
Marital Status = Widowed	-0.044	0.2269	0.8462	-0.4211	0.2543	0.0977	-0.3908	0.2895	0.177	-0.5022	0.2819	0.0748
Marital Status = Seperated	0.4523	0.3871	0.2426	1.2897	0.3505	0.0002	0.5890	0.3919	0.1329	1.3338	0.4062	0.0010
Marital Status =												
Divorced Marital Status =	-0.0769	0.1691	0.6492	-0.1574	0.1721	0.3605	0.0732	0.1980	0.7114	-0.1192	0.1920	0.5347
Married Marital Status = Single, never	0.1884	0.1242	0.1295	-0.0081	0.1205	0.9462	-0.0159	0.1356	0.9065	-0.1060	0.1351	0.4327
married Employment = Homemaker	-0.2590	0.1716	0.1312	-0.4860	0.1907	0.0108	-0.5342	0.2203	0.0153	-0.3332	0.2083	0.1097
Employment = Student	0.1394	0.1990	0.4836	0.0726	0.2151	0.7359	-0.1593	0.2408	0.5082	-0.1289	0.2329	0.5799
Employment = Retired	-0.1684	0.1652	0.3082	0.2168	0.1663	0.1922	0.4064	0.186	0.0289	0.3461	0.1798	0.0543
Employment = Not Employed, not searching	-0.0530	0.2659	0.8419	0.5291	0.2812	0.0599	0.8293	0.3346	0.0132	0.6592	0.3148	0.0363
Employment = Not Employed, searching	0.2740	0.2845	0.3355	-0.1451	0.3094	0.6391	-0.1172	0.3370	0.728	-0.1493	0.3314	0.6523
Employment = Self-employed	0.3558	0.2130	0.0949	-0.0809	0.2070	0.6958	-0.2143	0.2262	0.3435	-0.2408	0.2199	0.2733
Employment = Employed, part												
time Employment = Employed, full time	-0.0979	0.2115	0.6436	-0.0554	0.2177	0.7991	-0.1737	0.2419	0.4727	-0.1364	0.2367	0.5644
Education = Associate degree	0.3990	0.2186	0.0680	0.6233	0.1995	0.0018	0.5259	0.2405	0.0288	0.4652	0.2247	0.0384
Education = Graduate school	0.2291	0.2325	0.3244	0.4169	0.1976	0.0349	0.2715	0.2361	0.2502	0.3084	0.2256	0.1716
Education = Some graduate school	0.9515	0.4291	0.0266	-0.0945	0.3213	0.7687	-0.5675	0.3521	0.1071	-0.4633	0.3446	0.1788
Education = College	0.7898	0.1937	<0.000	0.2922	0.1599	0.0676	-0.1853	0.1913	0.3328	-0.1034	0.182	0.5699
Education = Some college	-0.1577	0.1567	0.3142	-0.1714	0.1562	0.2725	-0.3955	0.1915	0.0389	-0.3099	0.1799	0.0850
Education = High school	-0.4391	0.1388	0.0016	-0.3250	0.1385	0.0189	-0.4494	0.1724	0.0092	-0.3512	0.1611	0.0293
Education = Some high school	-0.5303	0.2658	0.0460	-0.2135	0.3221	0.5075	0.0633	0.3851	0.8695	-0.1020	0.3683	0.7819
Education = Less than HS	0.0000	0.2000	0.0400	0.2133	0.5221	0.5015	0.0000	0.5051	0.0075	0.1020	0.5005	0.7017

 Table 22 : Comparison of significant predictors

Income:			l I									
>\$250,000	0.7805	0.8972	0.3843	0.0002	0.5336	0.9998	-0.1208	0.564	0.8304	-0.1335	0.5559	0.8103
Income:												
\$200,000- \$249,999	2.0272	1.0998	0.0653	0.7734	0.4691	0.0992	0.3149	0.4877	0.5184	0.3250	0.4847	0.5025
Jacome:	2.0212	1.0996	0.0055	0.7754	0.4091	0.0992	0.3149	0.4677	0.5164	0.3230	0.4647	0.3023
\$150,000-												
\$199,999	0.6347	0.4842	0.1899	0.4046	0.2896	0.1624	0.2963	0.3118	0.3419	0.2681	0.3070	0.3826
Income:												
\$125,000- \$149,999	0.1042	0.3514	0.7668	0.1895	0.2454	0.4400	0.2256	0.2708	0.4048	0.1823	0.2647	0.4911
\$149,999 Income:	0.1042	0.5514	0.7008	0.1895	0.2454	0.4400	0.2256	0.2708	0.4048	0.1825	0.2047	0.4911
\$100,000-												
\$124,999	0.1127	0.2509	0.6532	-0.1205	0.1766	0.4949	-0.2095	0.1901	0.2706	-0.2537	0.1873	0.1755
Income: \$75,000-\$99,999	-0.2294	0.2149	0.2858	-0.0717	0.1599	0.6538	-0.0219	0.1737	0.8997	-0.0648	0.1705	0.704
Income:		0.22.12	012000			0.0000	010212			010010	0121.02	
\$50,000-\$74,999	-0.2381	0.1937	0.2189	-0.0549	0.1420	0.6988	0.0272	0.1552	0.8611	-0.0432	0.1517	0.7757
Income:	0.0070	0.1056	< 0.000	0.1007	0.1546	0 51 47	0.1711	0.15(0)	0.0015	0.1702	0.1700	0.0017
\$35,000-\$49,999 Income:	-0.8378	0.1956	1	-0.1007	0.1546	0.5147	0.1711	0.1762	0.3315	0.1793	0.1700	0.2917
\$25,000-\$34,999	-0.4977	0.2110	0.0184	0.2104	0.1699	0.2155	0.3446	0.1943	0.0762	0.3158	0.1881	0.0932
Income:												
\$15,000-\$24,999	-0.802	0.2134	0.0002	-0.3514	0.1867	0.0598	-0.2236	0.2119	0.2914	-0.2128	0.2051	0.2994
Income: <\$15,000												
Race: African												
American	0.3141	0.2937	0.2849	0.3624	0.4007	0.3658	0.2945	0.4451	0.5081	0.2504	0.4339	0.5639
Race: Hispanic	0.5731	0.2554	0.0248	0.2289	0.3804	0.5473	0.0542	0.4194	0.8972	0.1479	0.4083	0.7171
Race: Other	0.0260	0.9736	0.9787	-1.7981	2.0430	0.3788	-2.3781	2.0958	0.2565	-2.2757	2.0832	0.2746
Race: Mixed	-0.6385	0.4815	0.1848	-0.0582	0.6591	0.9296	0.3339	0.8071	0.6791	0.2094	0.7708	0.7858
Race: Native American	-1.3557	0.8349	0.1044	-1.0105	1.1055	0.3607	-0.3944	1.3264	0.7662	-0.403	1.2720	0.7514
Race: Asian	0.3925	0.4908	0.4238	0.7950	0.5920	0.1793	0.9455	0.7803	0.2256	0.7844	0.7162	0.2734
Race: Black	0.0470	0.2939	0.8729	1.2538	0.4073	0.0021	1.2147	0.4671	0.0093	1.3358	0.4464	0.0028
Race: White						,					,	,

# References

- Ackerman, M., Cranor, L., and J. Reagle. Privacy in E-Commerce: Examining User Scenarios and Privacy Preferences. In *Proceedings of the ACM Conference on Electronic Commerce (EC'99)*, pp. 1–8, Denver, CO, November 1999.
- Ackoff, R. L. "Management Misinformation Systems," Management Science 14(4), December 1967, pp. 147-156.
- Acquisti, A. and H.R. Varian. "Conditioning Prices on Purchase History", Marketing Science, 24(3), pp. 1-15, 2005.
- Beer, S. The Heart of the Enterprise, John Wiley, Chichester, England, 1979.
- Federal Trade Commission. Free annual file disclosures. Federal Register, 69(121), June 2004.
- Fetterman, M. "Identity theft, new law about to send shredding on a tear." USA Today, 1/14/2005, http://www.usatoday.com/money/perfi/general/2005-01-14-shredder-cover\_x.htm (accessed 4/5/2006).
- Forrester Research. Forrester research projects US online retail sales to top \$300 billion by 2010. Internet: http://www.forrester.com/ER/Press/Release/0,1769,937,00.html, August 2004.
- Hann, I.H., Hui, K.L, Lee, T.S. and I.P.L. Png. The Value of Online Information Privacy: Evidence from the USA and Singapore. September 2002.
- Identity Theft Resource Center. Identity Theft: The Aftermath 2003, A Comprehensive Study. Irvine, CA, 2003.
- Identity Theft Resource Center. Identity Theft: The Aftermath 2004, A Comparative Study. Irvine, CA, 2004.
- Keen, P.G.W. "MIS Research: Reference Disciplines and a Cumulative Tradition", in *Proceedings of the First International Conference on Information Systems*, McLean, E.R. (Ed.), Philadelphia, Pennsylvania, December 1980, pp. 9-18.
- OECD, Guidelines on the Protection of Privacy and Transborder Flows of Personal Data, OECD, 1980.
- Solove, D. "A Taxonomy of Privacy." University of Pennsylvania Law Review, 154(3), p. 477, January 2006.
- Taylor, C.R.. "Consumer Privacy and the Market for Customer Information." *Rand Journal of Economics*, 35(4), pp. 631-51, 2004.
- Trevino, L.K. "Business Ethics and the Social Sciences", in *A Companion to Business Ethics*, Frederick, R.E. (Ed.), Blackwell Publishers, Oxford, England, pp. 218-230, 1999.
- U.S. Census Bureau. Average population per household and family: 1940 to present. Internet: http://www.census.gov/population/socdemo/hhfam/hh6.pdf, June 2005.
- U.S. Congress. Fair and accurate credit transactions act of 2003. 108th Congress, 1st Session, 2003.
- Varian, H., Wallenberg, F., and G. Woroch. Who Signed Up for the Do-Not-Call List? In *Third Workshop on Economics and Information Security*, University of Minnesota, Minneapolis, MN, May 2004.
- Warren S. and L. Brandeis. "The Right to Privacy." Harvard Law Review, IV(5), 1890.
- Westin, A. E-commerce & Privacy: What Net users Want. Privacy & American Business, Hackensack, NJ, 1998.

# **Appendix: Survey instrument**

# BASE: ALL U.S. RESPONDENTS 18+

**Q900** How many of the following do you **currently** have?

- 1 O
- 2 1
- 3 2-4
- 4 5-9
- 5 10+ 8 Not su
- 8 Not sure

Q901 - RANDOMIZE

- 1 Credit cards
- 2 Payment cards
- 3 Check cards
- 4 Mortgages
- 5 Loans from financial Institutions

#### BASE: ALL U.S. RESPONDENTS 18+

**Q905** Have you ever filed for personal bankruptcy?

- 1 Yes
- 2 No
- 9 Decline to answer

# BASE: THOSE WHO HAVE 1 OR MORE IN Q900 (Q900/2-5)

Q910 How much debt do you currently have on your...

### [PN: ONLY SHOW ITEMS THAT ARE Q900/2-5 BELOW]

- 1 Credit cards
- 2 Payment cards
- 3 Check cards
- 4 Mortgages
- 5 Loans from financial Institutions

#### Q911

- 1 None
- 2 \$1 to \$500
- 3 \$501 to \$1,000
- 4 \$1,001 to \$2,500
- 5 \$2,501 to \$5,000
- 6 \$5,001 to \$10,000
- 7 \$10,001 to \$25,000
- 8 \$25,001 to \$50,000
- 9 More than \$50,000
- 10 Decline to answer

### DRAFT – VERY PRELIMINARY

# [PN: ROTATE ORDER OF Q915 AND Q920]

# **BASE: ALL U.S. RESPONDENTS 18+**

Q915 Do you know what a consumer's "credit report" (also known as consumer's "credit history") is?

- 1 Yes
- 2 No
- 8 Not sure

# BASE: ALL U.S. RESPONDENTS 18+

**Q920** Do you know what a consumer's "credit score" is?

- 1 Yes
- 2 No
- 8 Not sure

### BASE: THOSE WHO KNOW/NOT SURE WHAT A CREDIT REPORT IT (Q915/1,8)

- **Q925** Do you believe there is a credit report about you?
  - 1 Yes
  - 2 No
  - 8 Not sure

# BASE: ALL U.S. RESPONDENTS 18+

**Q930** Currently, can you get your credit report for free?

- 1 Yes, it is available for free
- 2 No, you have to pay to get your credit report
- 8 Not sure

# **BASE: ALL U.S. RESPONDENTS 18+**

**Q935** In December 2004, a legislation was enacted that gives US consumers the right to get a **free** copy of their credit report **every year** (also called "annual credit report") from the three credit reporting agencies (Equifax, Experian, and TransUnion). This legislation is called the **Federal Fair and Accurate Credit Transactions Act (FACTA)**.

Have you heard about this legislation?

- 2 No
- 8 Not sure

#### BASE: HEAR OF LEGISLATION/NOT SURE (0935/1,8)

**Q940** Do you think that the **free** credit report you can get under that legislation (FACTA) also contains your consumer's credit score?

- 1 Yes
- 2 No
- 8 Not sure

#### BASE: NEVER HEARD OF LEGISLATION OR NOT SURE (Q935/2,8)

**Q945** Would you be interested in receiving a **free** copy of your credit report?

- 1 Yes
- 2 No
- 8 Not sure

# BASE: ALL U.S. RESPONDNETS 18+

**Q950** As a reminder, in December 2004, a legislation was enacted that gives US consumers the right to get a free copy of their credit report every year (also called "annual credit report") from the three credit reporting agencies (Equifax, Experian, and TransUnion). This legislation is called the Federal Fair and Accurate Credit Transactions Act (FACTA).

Have you ever requested a free copy of your credit report under this legislation?

- 1 Yes, I requested a free copy of my credit report under this legislation
- 2 Yes, I requested a free copy of my credit report but I am not sure if it was under this legislation
- 3 No, I have never requested a free copy of my credit report

#### [PN: BANK Q955 & Q960]

#### BASE: THOSE WHO HAVE REQUESTED THEIR FREE CREDIT REPORT (Q950/1,2)

**Q955** When you requested your credit report, were you asked or offered to pay money, join some service, buy some product, or subscribe to something **as a condition** for getting your credit report?

- 1 Yes, I was **asked** to pay money, join some service, buy some product, or subscribe to something **as a condition** for getting my credit report
- 2 I was offered some additional service or product, but not as a condition for getting my credit report
- 3 No, I was not **asked** or offered any of the above
- 8 Not sure

# BASE: THOSE WHO HAVE REQUESTED THEIR FREE CREDIT REPORT (Q950/1,2)

**Q960** How did you request your credit report?

- 1 By Internet
- 2 By phone
- 3 By mail
- 4 Some other way

# BASE: THOSE WHO HAVE REQUESTED THEIR FREE CREDIT REPORT (Q950/1,2)

**Q965** On a scale of 1 to 7, with 1 being "Strongly disagree," and 7 being "Strongly agree," please explain what motivated you to request your **free** credit report.

- Strongly disagree
   Strongly disagree
   G
- 7 Strongly agree

#### *Q966 - RAMDOMIZE*

- 1 I wanted to know what information was in my credit record
- 2 I wanted to see if there were errors in my credit report
- 3 I wanted to know whether I had been victim of frauds (such as credit card fraud or identity theft), or whether any of my financial accounts had been compromised
- 4 I wanted to protect myself against identity theft
- 5 I wanted to know my credit score
- 6 I wanted to know my credit situation before making a significant purchase or investment

#### BASE: THOSE WHO HAVE REQUESTED THER FREE CREDIT REPORT (Q950/1,2)

- Q970 Can you please specify whether...
  - 1 You requested it from more than one credit reporting agency and you received copies from all of them
  - 2 You requested it from more than one credit reporting agencies but you did not receive copies from all of them
  - 3 You requested it only from one credit reporting agency and you received it from that agency
  - 4 You requested it only from one credit reporting agency but you did not receive it from that agency

#### BASE: THOSE WHO HAVE NOT REQUESTED THEIR FREE CREDIT REPORT (Q950/3)

**Q975** For each of the following items, please identify if it is a reason you did not order your **free** credit report under the legislation known as FACTA.

- 1 A reason for me
- 2 Not a reason for me

#### Q976 - RANDOMIZE

- 1 I did not know about it
- 2 I did not think I had a credit report
- 3 I already had a credit report
- 4 I was not interested in getting my credit report
- 5 I thought it could be risky to request my credit report
- 6 I wanted to request it, but I did not know how
- 7 I wanted to request it, but I never had the time or opportunity
- 8 I tried to request it, but I gave up because it was too complicated or time consuming
- 9 I tried to request it, but I gave up because I thought that it was a scam/fraud
- 10 I tried to request it, but it was not really free

# BASE: ALL U.S. RESPONDENTS 18+

**Q980** Excluding any free credit report that you may have obtained under FACTA, have you ever obtained a copy of your credit report?

- 1 Yes, I have obtained my credit report through ways other than under FACTA
- 2 I obtained a credit report, but I am not sure if when I obtained my credit report it was under FACTA or not
- 3 No, I have never obtained my credit report other than under FACTA
- 4 No, I have never obtained my credit report at all.

#### BASE: THOSE WHO (MAY OR MAY NOT HAVE) OBTAINED CREDIT REPORT THROUGH WAYS OTHER THAN UNDER FACTA (Q980/1,2)

**Q985** Excluding any free credit report that you may have obtained under FACTA, when did you obtain any other copy (or copies) of your credit report? Please select all that apply.

- 1 Before December 1st 2004
- 2 From December 1st 2004 to February 28th 2005
- 3 From March 1st 2005 to May 31st, 2005
- 4 From June 1st, 2005 to August 31st, 2005
- 5 From September 1st 2005 on
- 8 Not sure

# BASE: THOSE WHO (MAY OR MAY NOT HAVE) OBTAINED CREDIT REPORT THROUGH WAYS OTHER THAN UNDER FACTA (0980/1,2)

**Q990** Excluding any free credit report that you may have obtained under FACTA, identify whether each of the following reasons applies to you or not in terms of how you obtained your credit report.

1 Yes

2 No

Q991

- 1 I bought it online or by phone from a specialized company
- 2 It was given to me as part of another service or product
- 3 It was sent by a credit reporting agency for free after I was victim of a fraud or/and after a credit alert was added to my account
- 4 It was free

# BASE: THOSE WHO (MAY HAVE) OBTAINED CREDIT REPORT THROUGH WAYS OTHER THAN UNDER FACTA (Q980/1,2)

**Q995** On a scale of 1 to 7, with 1 being "Strongly disagree," and 7 being "Strongly agree," and **excluding any free credit report that you may have requested under FACTA**, please explain what motivated you to request any other credit report.

- 1 Strongly disagree
- 2 3 4 5 6

7

Strongly agree

#### Q996 - RANDOMIZE

- 1 I wanted to know what information was in my credit record
- 2 I wanted to see if there were errors in my credit report
- 3 I wanted to know whether I had been victim of frauds (such as credit card fraud or identity theft), or whether any of my financial accounts had been compromised
- 4 I wanted to protect myself against identity theft
- 5 I wanted to know my credit score
- 6 I wanted to know my credit situation before making a significant purchase or investment

# **BASE: ALL U.S. RESPONDENTS 18+**

Q998 Have you ever been victim of....

- 1 Yes
- 2 No
- 8 Not sure

#### Q999 - RANDOMIZE 1 -3

- 1 Fraudulent personal information exposure (e.g., your financial data was exposed to others or was obtained illegally by others)
- 2 Physical credit card theft (e.g., your credit card was stolen from your wallet)
- 3 Credit card fraud not involving physical theft (e.g., fraudulent charges appearing on your account)
- 4 Other forms of identity theft excluding credit card theft or fraud (e.g., somebody else opening some financial account under your name)