Political & Economic Research Council

Give Credit Where Credit Is Due:

Empirical Evidence on Alternative Data, Credit Scoring and Credit Access

By Michael Turner

Presentation for "Next Generation Microfinance"

World Bank Headquarters, Washington, D.C.

September 18th, 2007

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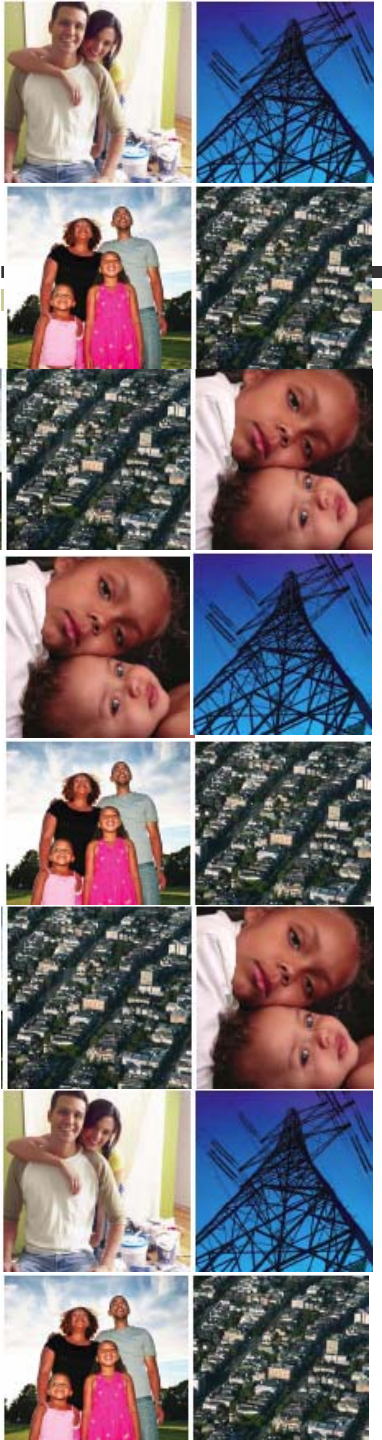

Introduction

Alternative Data Initiative Phase I

Completed: July 2005
Freely Available: www.infopolicy.org

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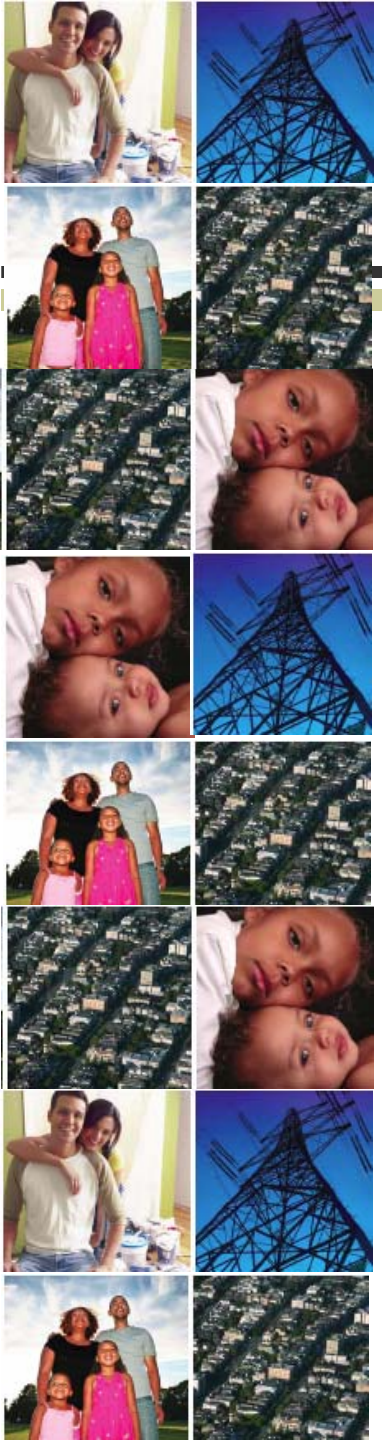

Introduction

Why Care About Alternative Data? (Consumer)

- 35 to 54 million Americans "unscorable"
- Primarily low income, immigrants, elderly, and ethnic minorities
- Access to credit crucial for asset formation

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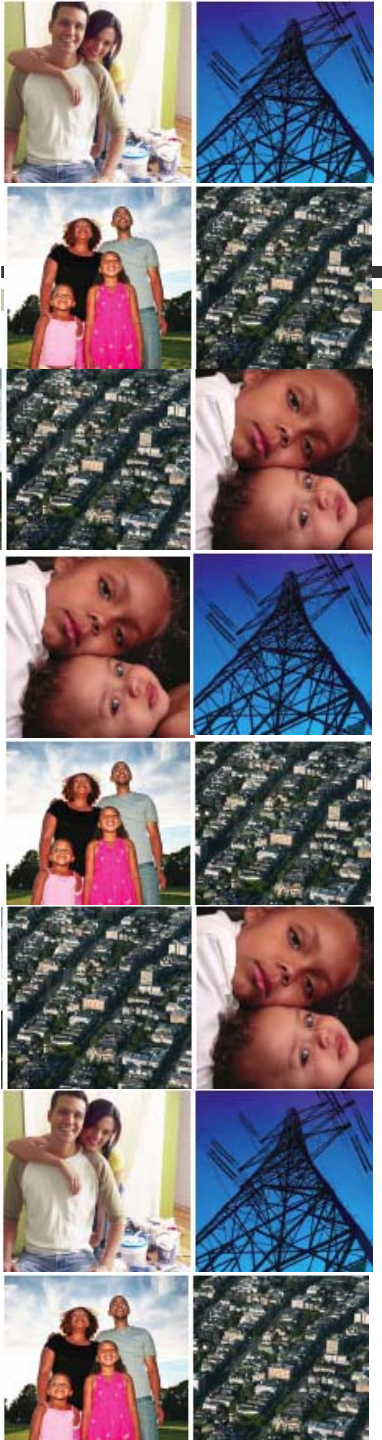

Introduction-- The Promise for Asset Formation

Why Care About Alternative Data? (Commercial)

- 90% of businesses are small
- 12.5% fail within 3 years often for reasons of credit access.
- African-American and Latino owners face greater loan denial rates (SBA)

Lower rates among minorities (2000 SBA data)

- Whites: self-employment rate 10.5%; $53,000 average income
- African Americans: self-employment rate 4.25%; $35,000 average income
- Non-White Latinos: self-employment rate 6.11%; average income $28,000

African-Americans have seen great rates of growth in small business ownership: 23% between 1990 and 2000

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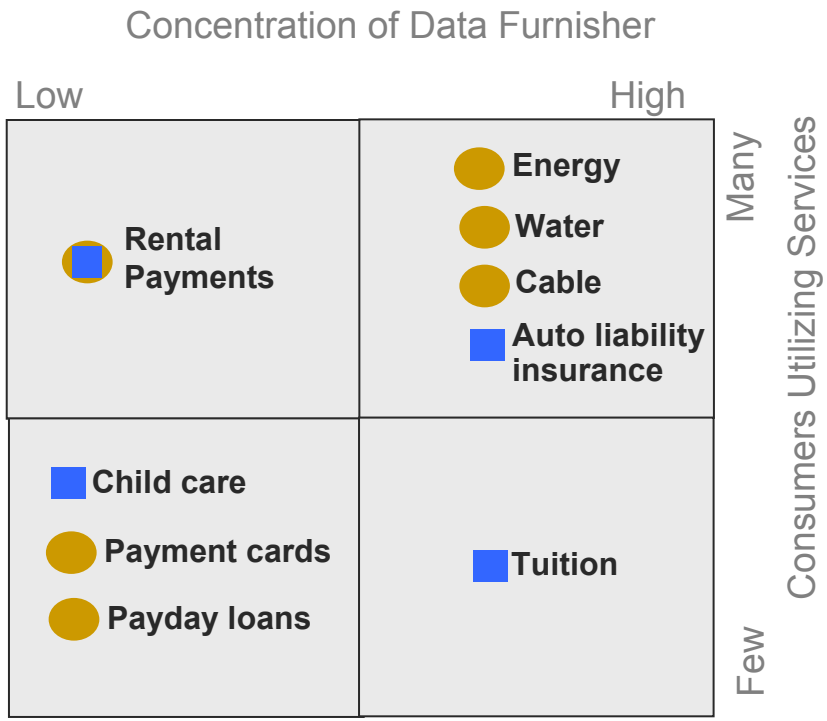
Methodology

Assessed usefulness along 3 key dimensions

- **"Cash-like" vs. "Credit-like" (incentive to furnish)**
- **Coverage (reach of data in population)**
- **Concentration (resources needed to reach furnishers)**



Traditional "credit-like" data

Non-traditional "cash-like" data

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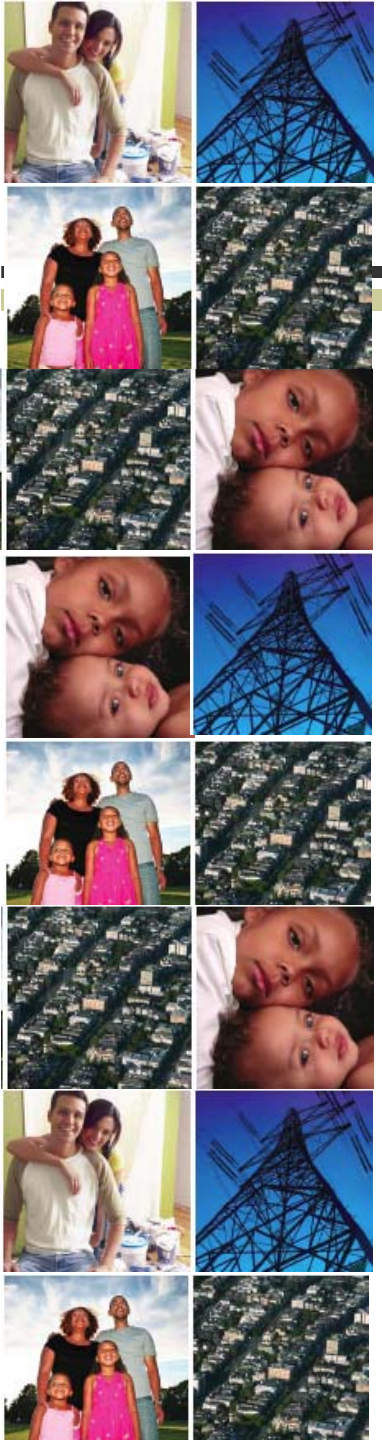

Quantitative Research

Alternative Data Initiative, Phase II:

How Much of a Difference Can the Data Make?

Released December 2006
Freely Available: www.infopolicy.org

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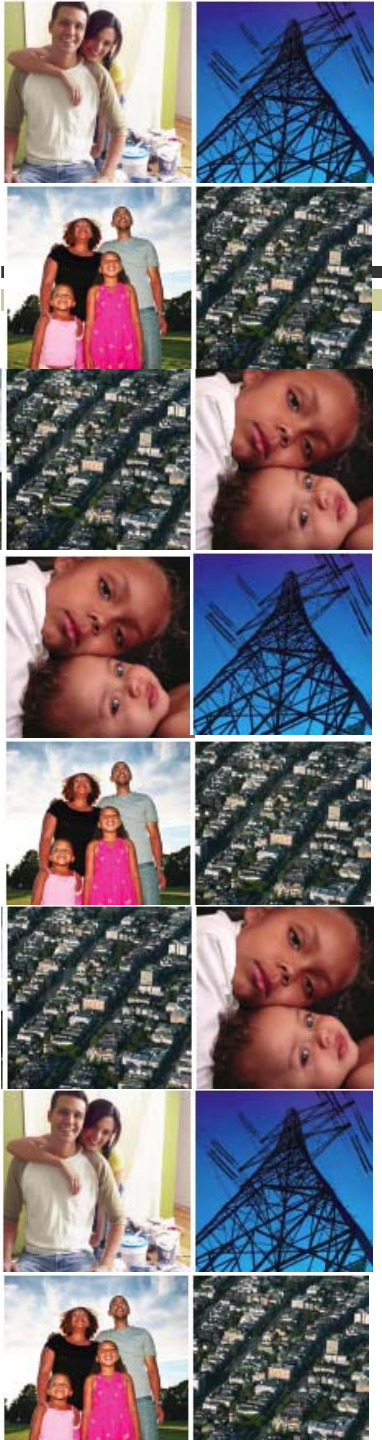

Methodology-- Quantitative Research

To measure the extent of lift from non-traditional information

- Sample credit files with 1 or more non-traditional tradelines and sub-sample of thin-file reports (very few trade lines, < 3)
- Drawn from two points in time to measure performance
- Use commercial grade scoring models
- Over 8 million files from TransUnion

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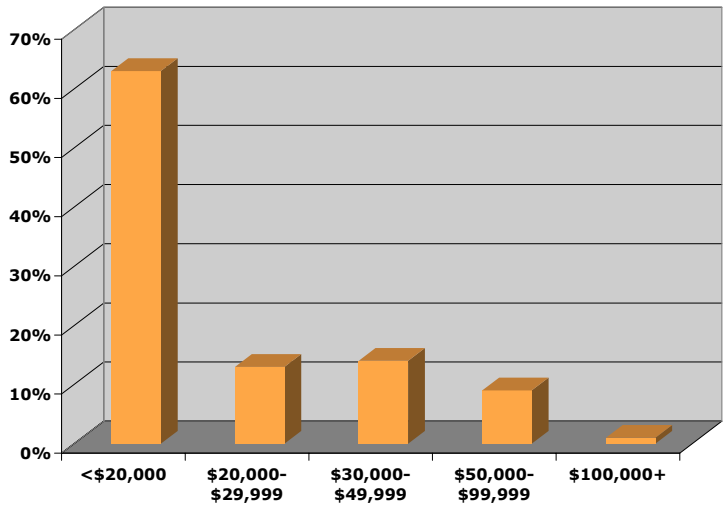
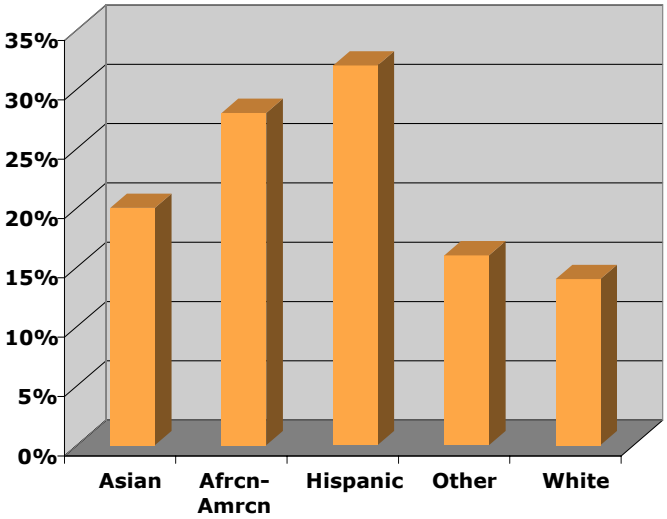
Thin-files disproportionately low-income and ethnic

Thin-file with Energy Utility Trade by Income & Ethnicity





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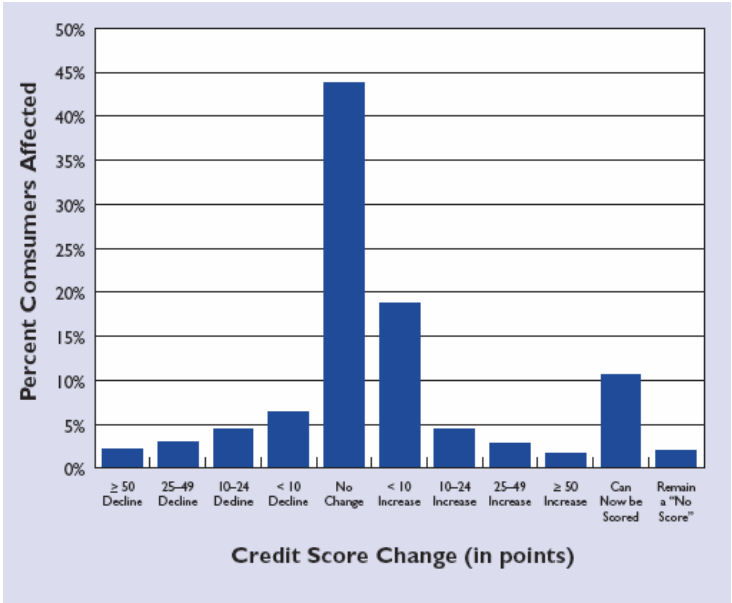
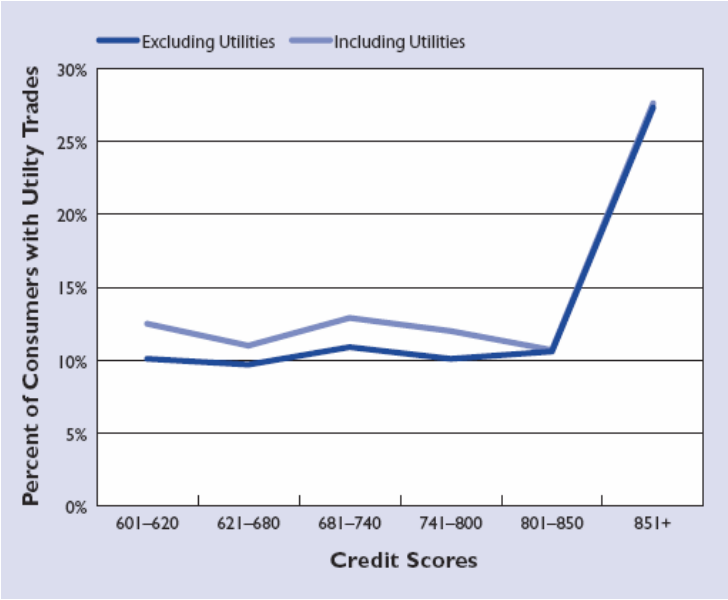
Addition of utility data has small impact on score distribution

Total sample 7.5M





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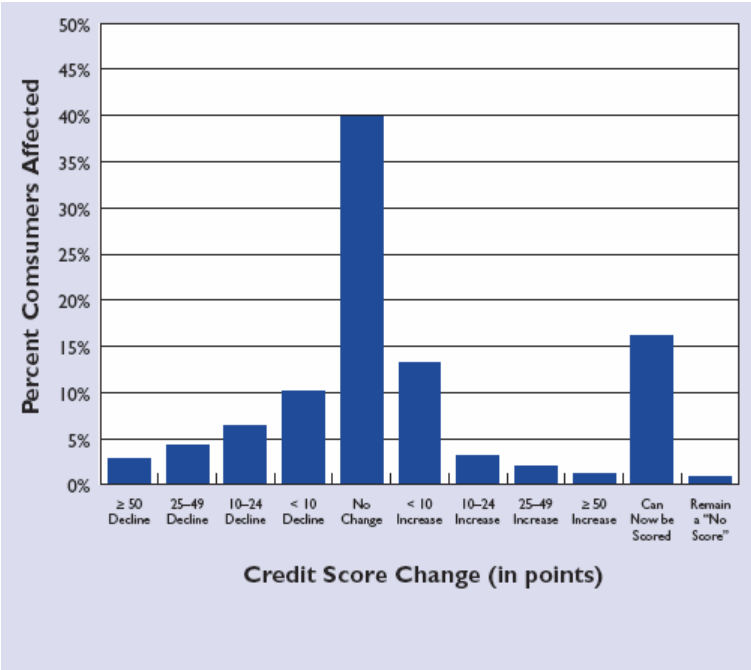
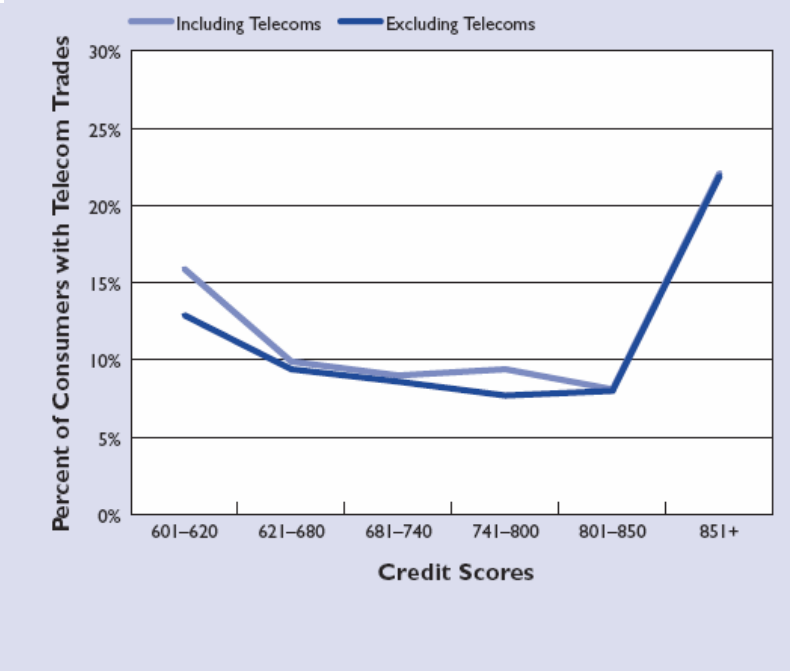
Addition of telecom data has small impact on score distribution

Total sample 0.5M





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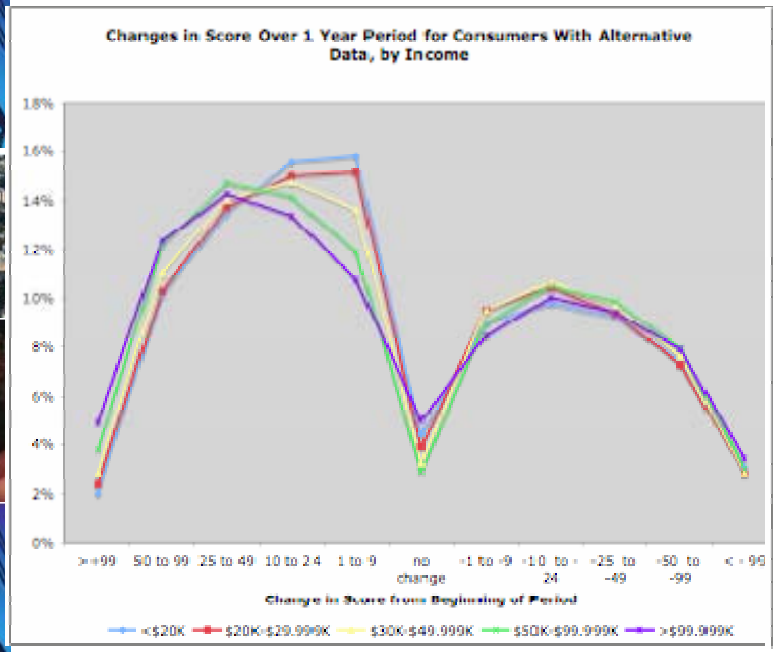
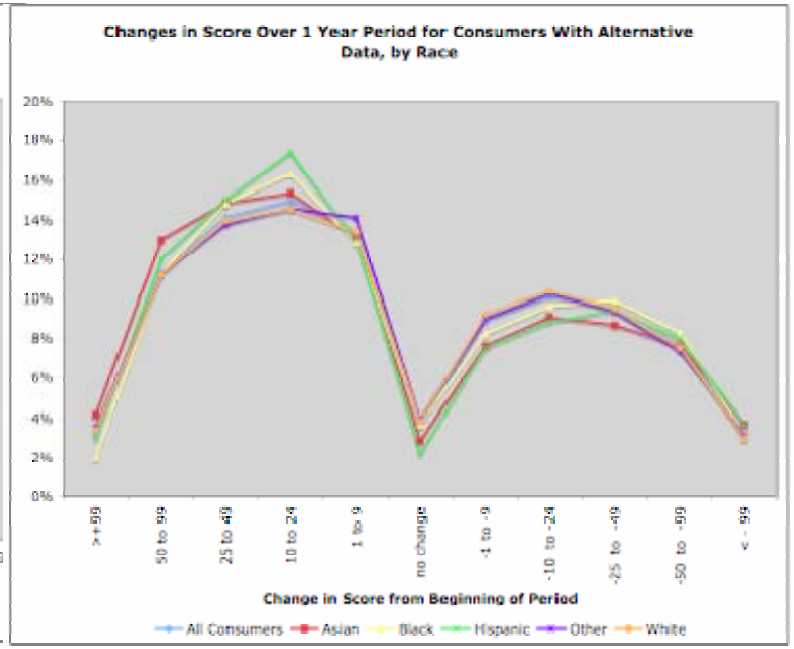
Those with alt data added don't see worsening score over time

Change in score at end of observation period over beginning, by income and race/ethnicity





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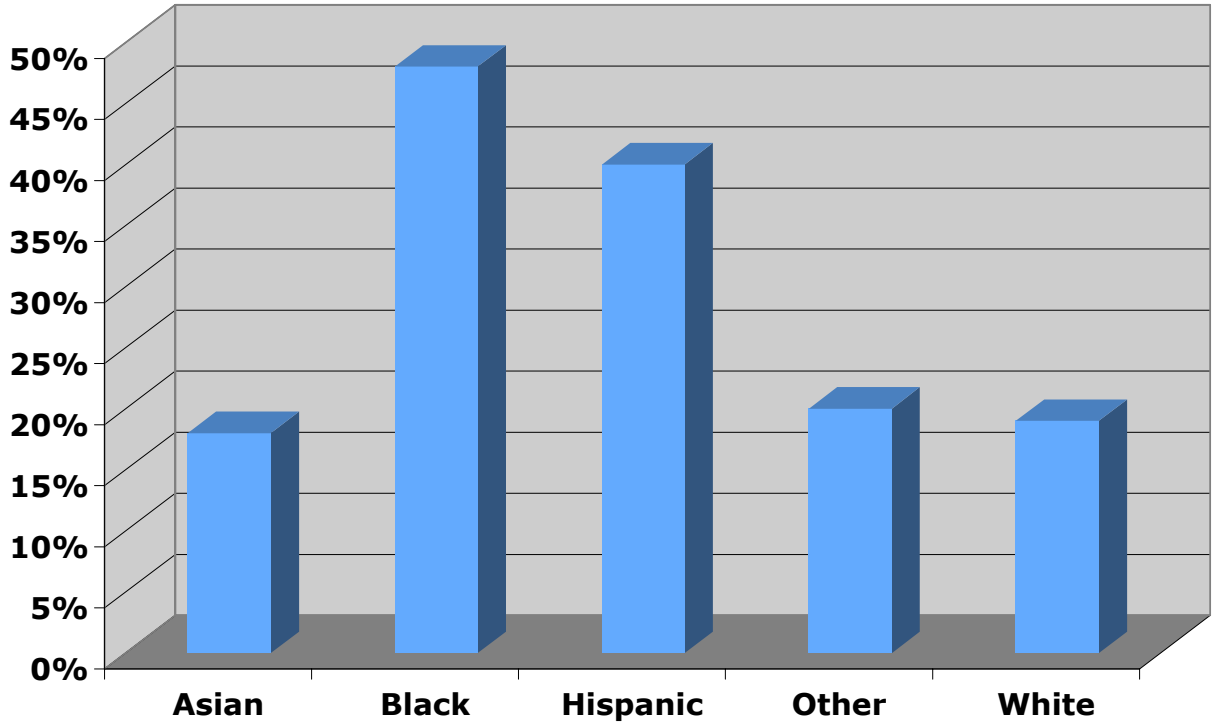
Thin-file with Telecoms: Ethnicity

32% African Americans Unscoreable Without Telecoms Trade



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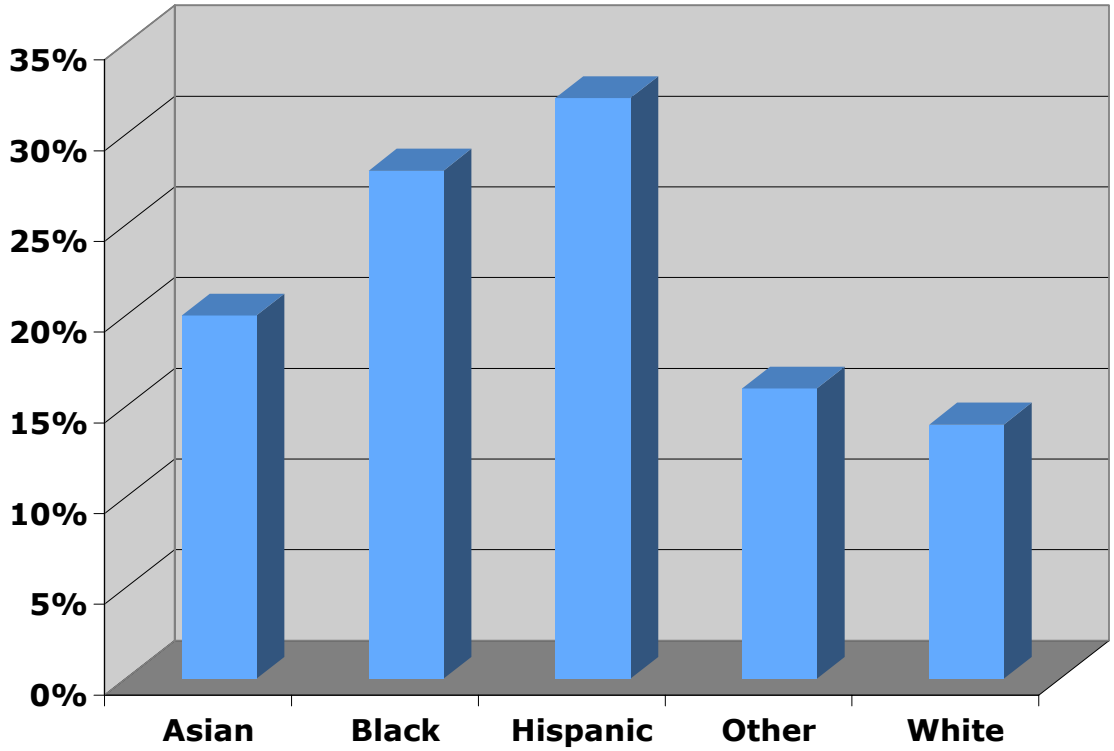
Energy Utility Thin-file: Ethnicity

15% African-Americans Unscoreable without Utility Trades
22% Hispanics Unscoreable without Utility Trades



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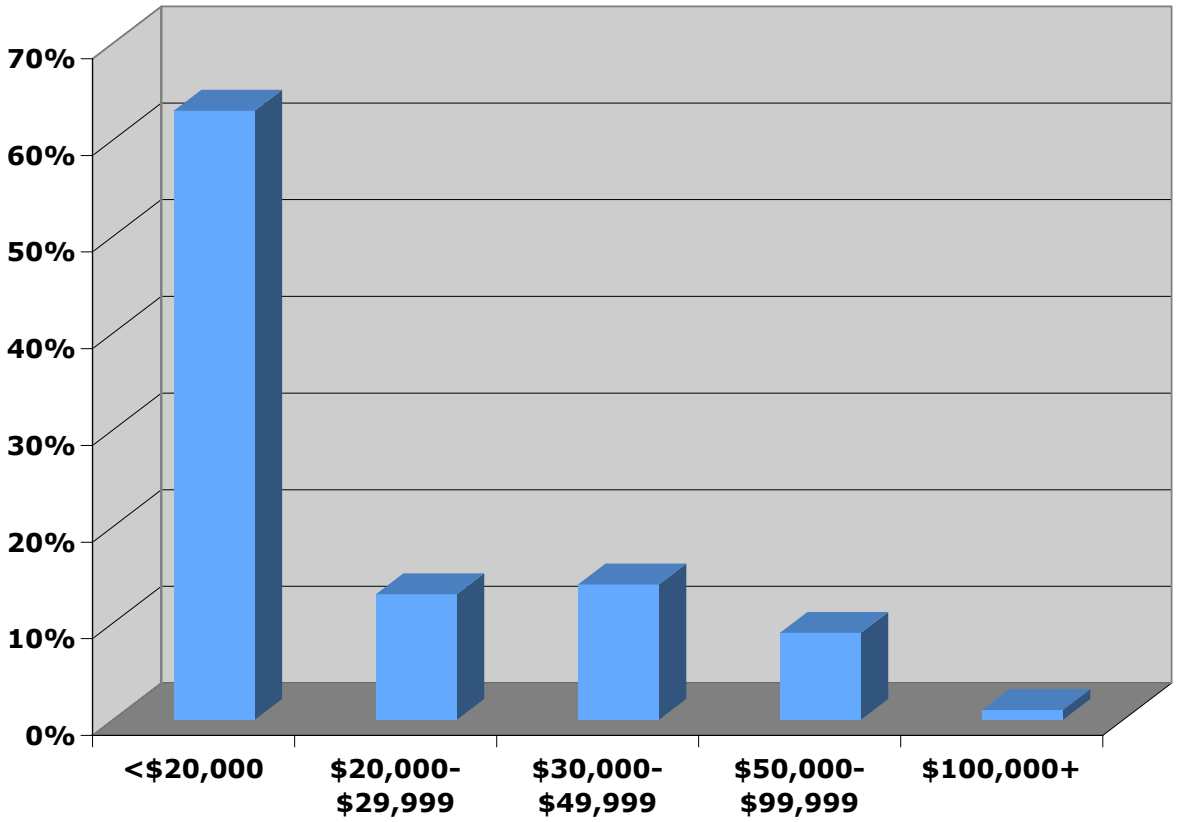
Energy Utility-Only Thin-file: Income Distribution Among Blacks



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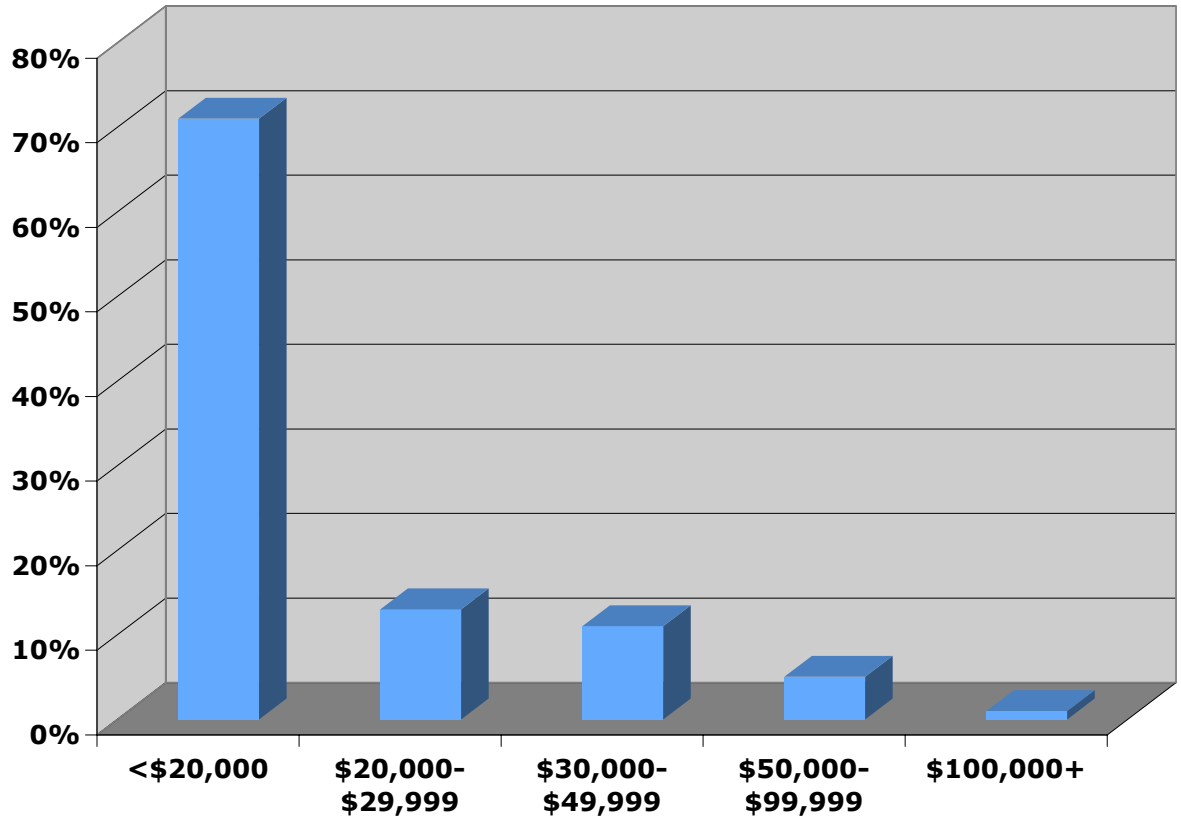
Telecom-Only Thin-file: Income Distribution Among Blacks



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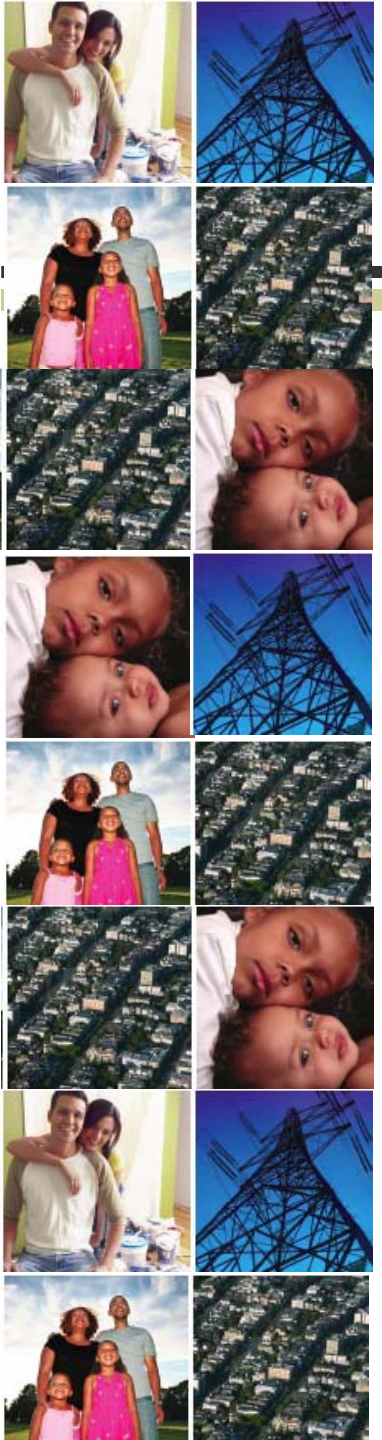

Key Finding
Little Information Is Not High Risk

Risk profile shows promise

- Score distribution of thin-file sample similar to general population
- Nearly 40% of Black unscoreable population have credits scores above 620 when energy utility and telecoms data included
  - 1 tradeline matters
  - Multiple tradelines is better

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Key Findings

Better Predictions with Alternative Data

Using the VantageScore Model, we see the following improvements in model fit with inclusion of alternative data.

- **KS rises 9.8% with utility data, 8.5% with telecom data.**
- **Among only those scoreable with and without alt. data, we see respective rises of 2.2% and 1.2%.**

For the thin-file consumers…

- **KS rises 329% with utility data, 428% with telecom data.**
- **Among only those scoreable with and without alt. data, we see respective rises of 7.8% and 2.1%.**

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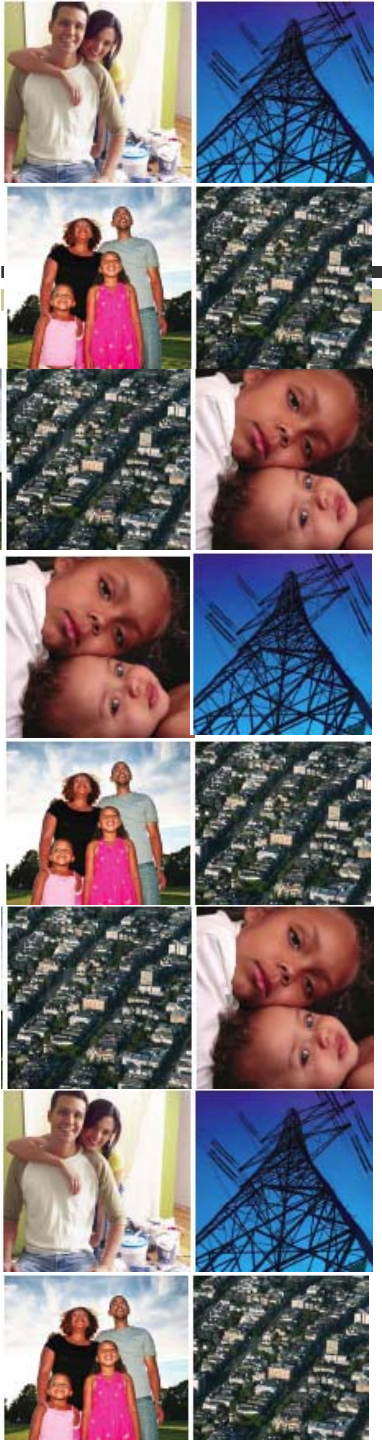

Key Findings-- Greater Access for All

Considerable increases in acceptance rates for a given performance level. For utilities, an increase of 6 percentage points for a 6% delinquency level.

Acceptance Rates by Targeted Delinquency Rates

	Consumers with Utility Trades	
Delinquency Rate %	Including Utilities (#1)	Excluding Utilities (#2)
2	52.4	47.2
3	60.4	54.9
4	65.4	59.6
5	69.1	63.1
6	72.0	65.7

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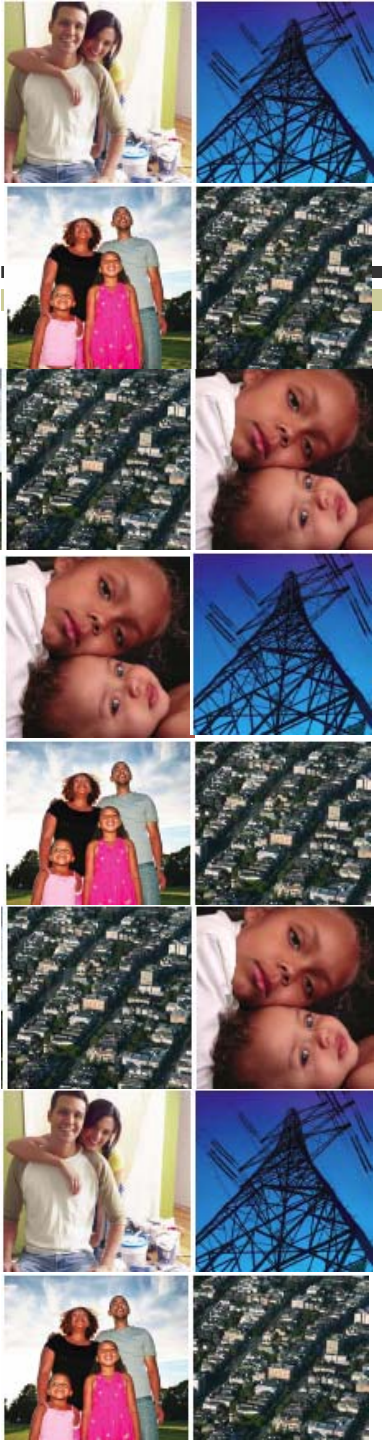

Key Findings-- Better Loan Performance

At a 70% acceptance rate, the rate of serious delinquencies drops by a third with the inclusion of utility data.

Delinquency Rates by Targeted Acceptance Rates

	Consumers with Utility Trades	
Acceptance Rate	Including Utilities (#1)	Excluding Utilities (#2)
30%	0.90%	1.10%
40%	1.20%	1.50%
50%	1.80%	2.30%
60%	3.00%	4.20%
70%	5.40%	8.10%
80%	9.50%	13.80%
90%	13.80%	17.70%

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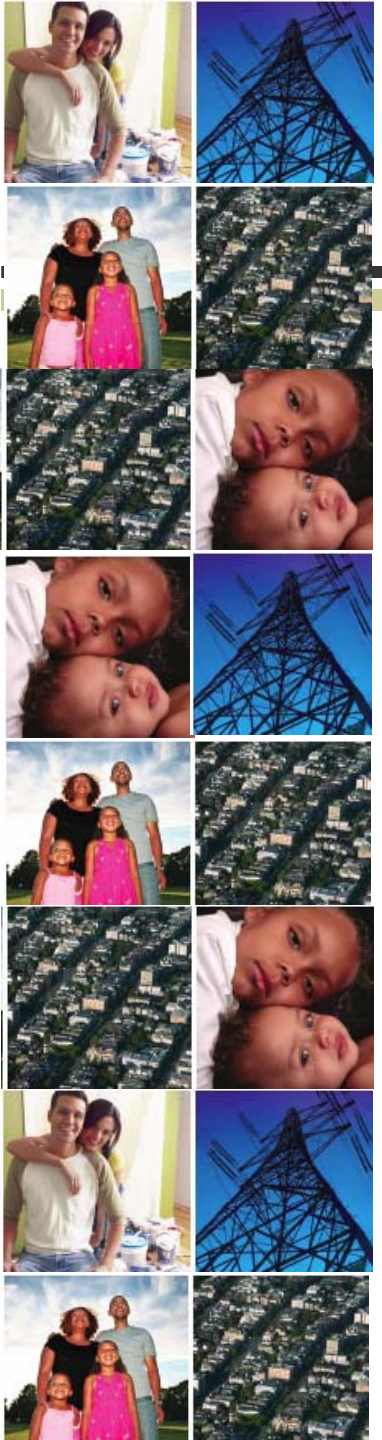

Key Findings-- Greater Observed Access

Access is not merely hypothetical but seen in the share of the thin-file population for which alt data is reported.

("Validation sample" = no alt data)

Table 4.1. New Credit Accounts Opened February 2005 to January 2006

	All Borrowers			Thin-File (<3 *Traditional* Trades)		
	Consumers with Utility Trades (#1)	Consumers with Telecom Trades (#2)	Validation Sample (#3)	Consumers with Utility Trades (#4)	Consumers with Telecom Trades (#5)	Validation Sample (#6)
Pct with new accounts	50.92%	48.73%	42.21%	16.44%	16.42%	4.61%
Ave. no. trades opened	1.14	1.07	0.93	0.27	0.26	0.05
_ Total outstanding balance	+ $3956	+ $1466	+ $8489	+ $1972	+ $891	- $402
_ Total available credit	+ $6973	+ $3192	+ $12309	+ $2466	+ $1094	- $382
Sample size	6,211,323	504,481	3,785,681	1,036,396	113,240	1,030,357

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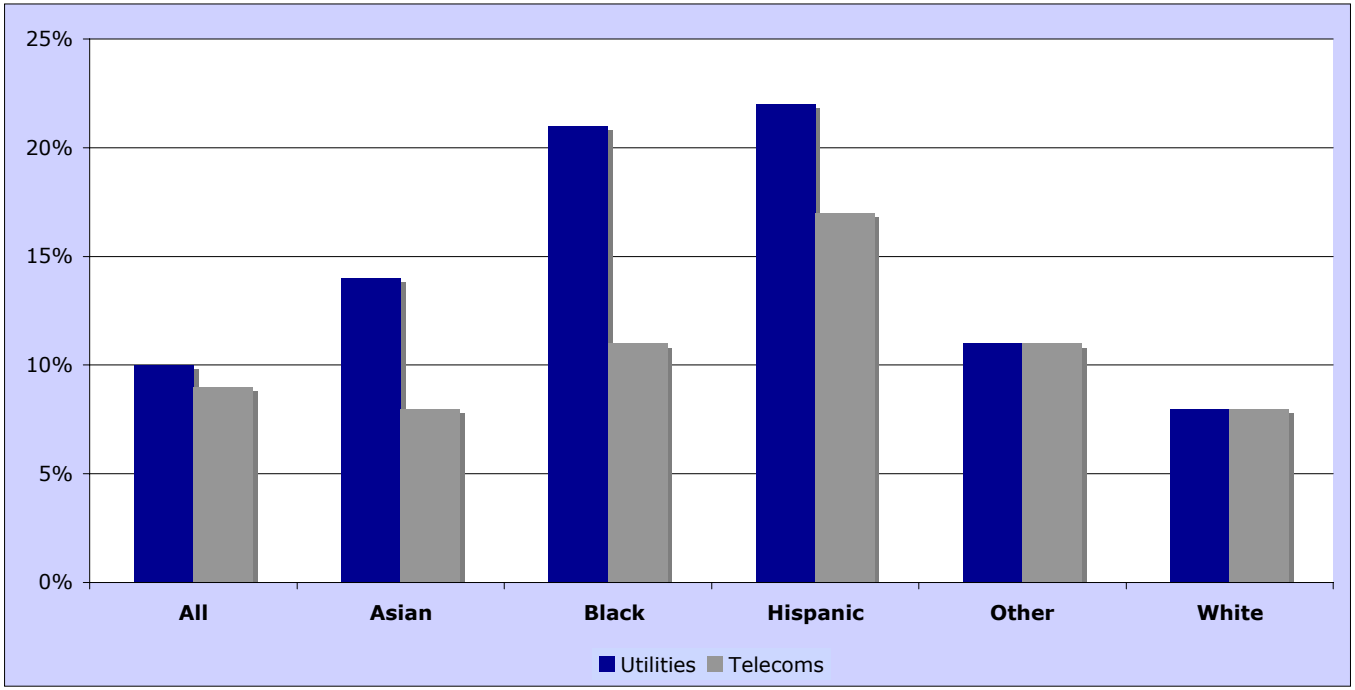
Key Findings-- Access by Race/Ethnicity

Considerable lift for Blacks and Hispanics

Change in Acceptance Rates by Race/Ethnicity at 3% Delinquency Target



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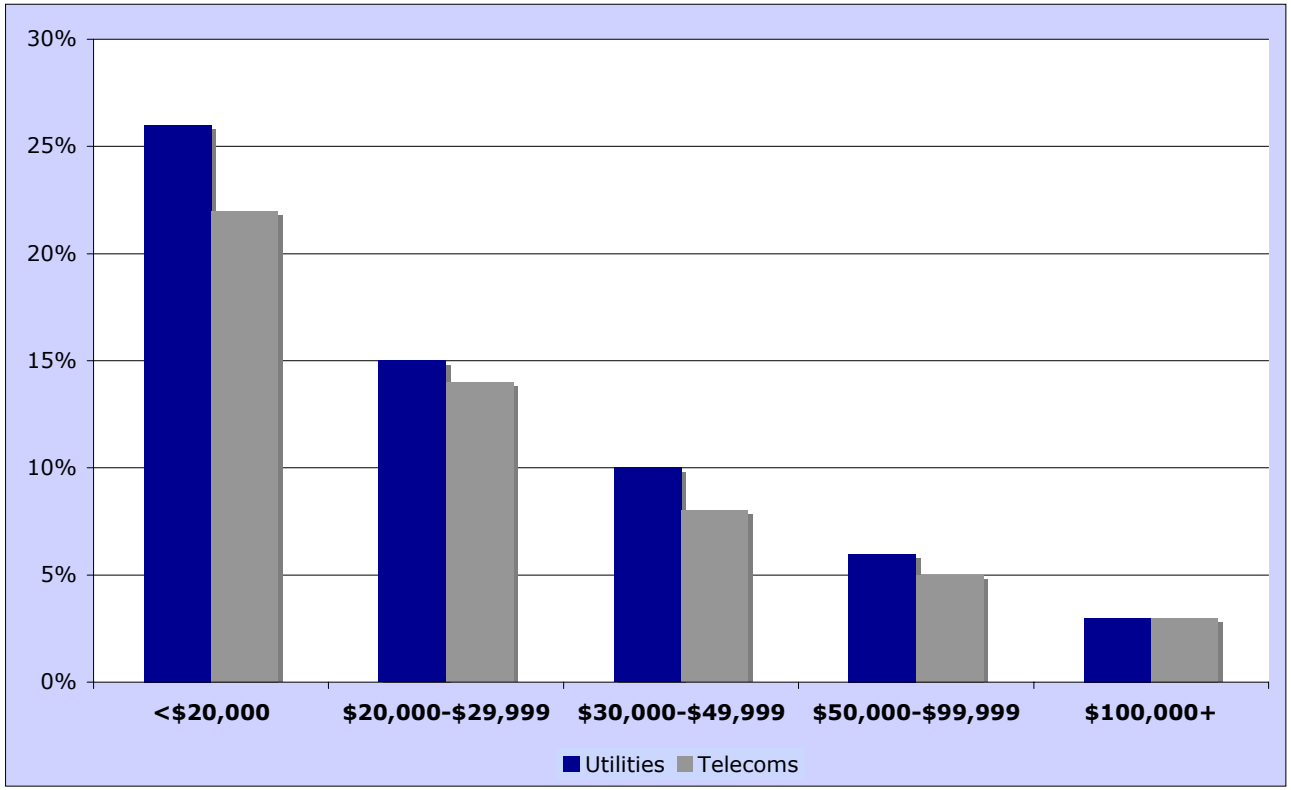
Key Findings-- Access by Income

And a greater lift for lower income consumers

Change in Acceptance Rates by Income



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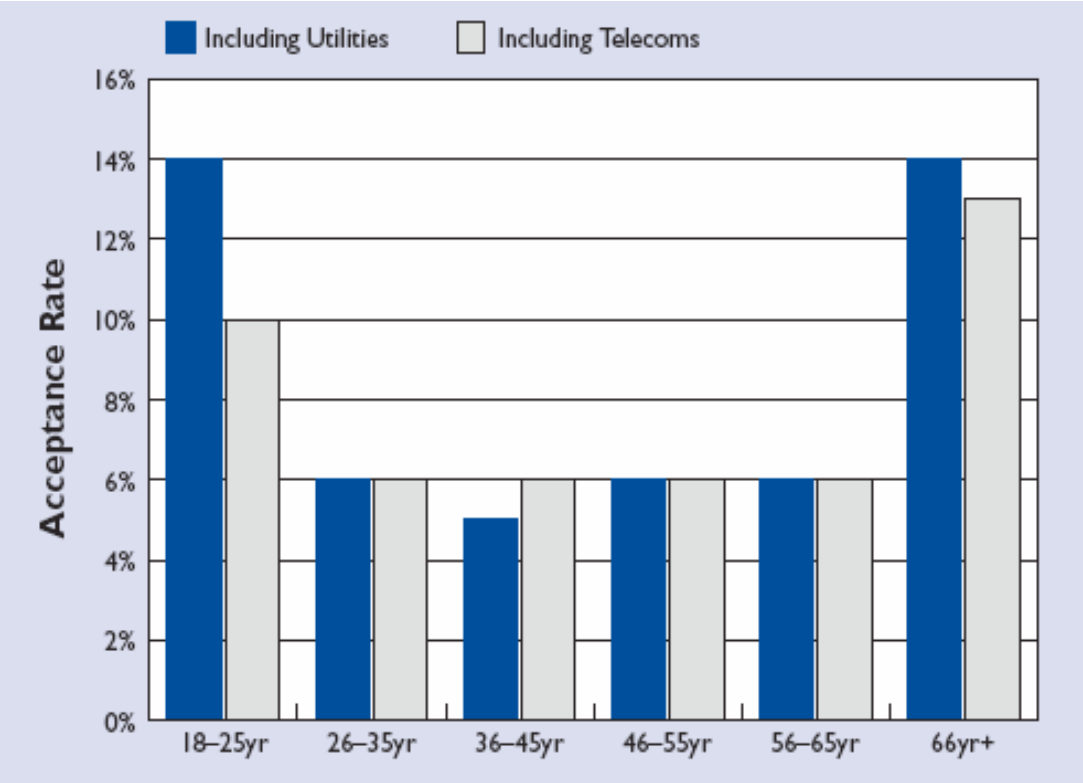
Key Findings-- Access by Age

A greater lift for the younger and older.

Change in Acceptance Rates by Age

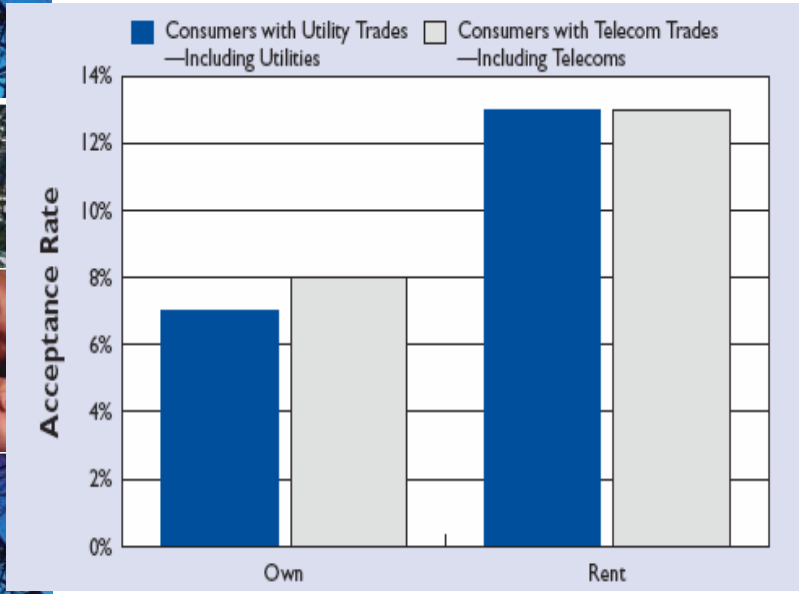


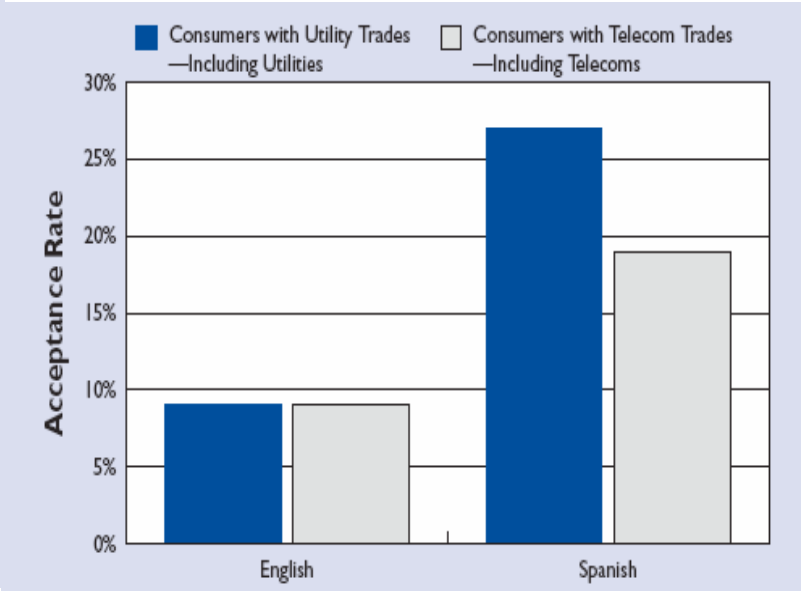
Key Findings--

Access by Language, Home Ownership

And greater lift for renters and Spanish speakers.

Change in Acceptance Rates





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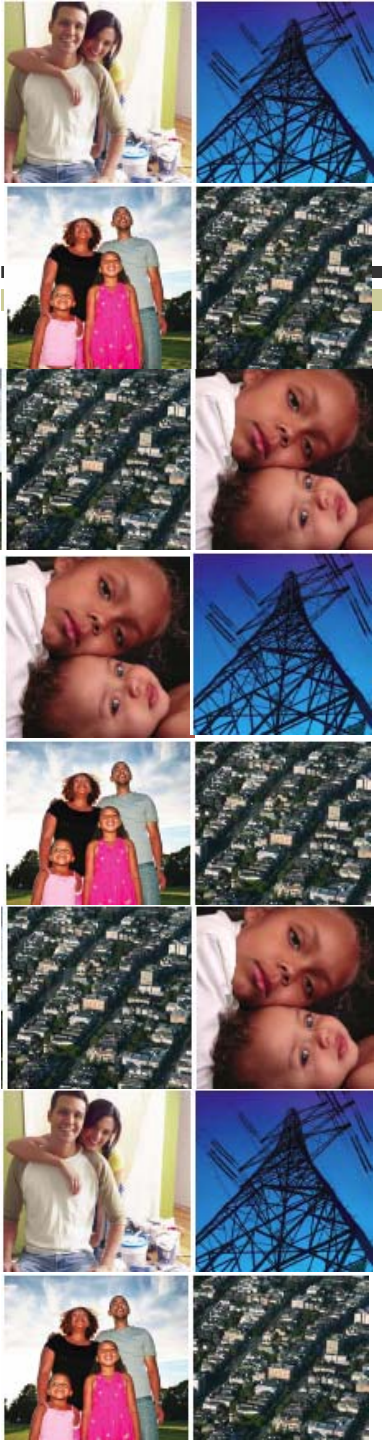

Key Findings--Lenders Are Interested

Lenders are testing alternative data

- **Testing across lines of business**
- **Results are promising (GE Money--40% thin file borrowers could be profitably booked with competitive mainstream rates using alternative data).**

SYSTEMIC CHANGE--Pervasive reporting of alternative data could change the way banking is done in under-served markets.

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Benefits of Using Non-Financial Data in Colombia

Full sample (3.1 million files)

Non-Financial Acceptance Rates, by Scenario (Colombia)				
Share of tradelines consisting of both positive and negative information				
Target Default rate	***100%***	***75%***	***50%***	***25%***
5%	5.50%	4.00%	2.95%	1.96%
7%	37.30%	29.95%	17.96%	10.07%
10%	61.03%	49.36%	43.14%	36.01%
12%	69.75%	63.27%	57.70%	50.43%

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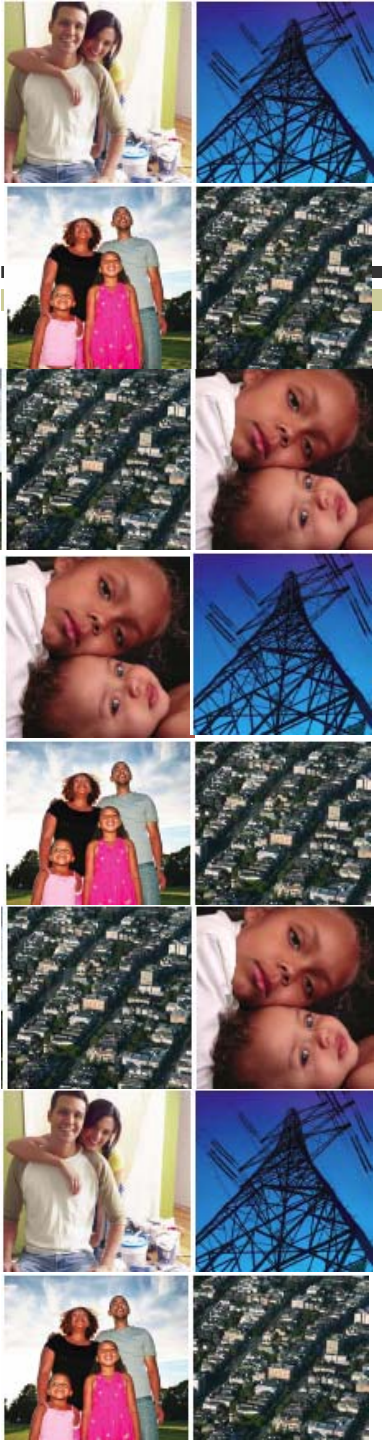

Benefits of Using Non-Financial or "Alternative Data" Internationally

- Assists traditionally underserved segments in gaining access to credit.
- Allows for improved efficiency and competition in microfinance.
- Provides for easier transition from microfinance to more "mainstream" credit.
- With additional information being considered, better lending decisions should result in better loan performance.

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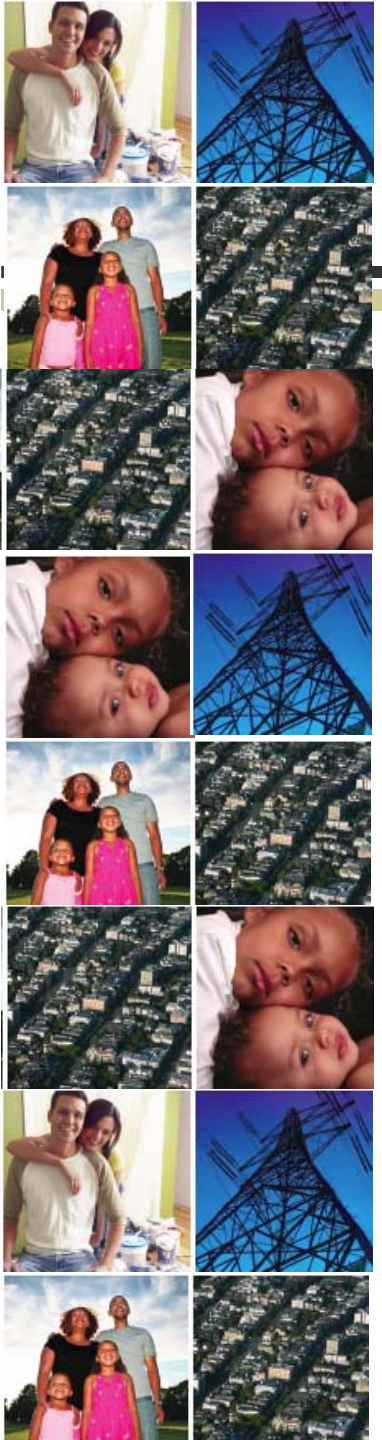

Next steps

With the benefits of alternative data now shown quantitatively, attention should be focused on getting such data reported in standardized fashion.

At the time ADI II began

- **Less than 1% of trades were alternative trades**
- **Less than 4% of consumers had an alternative trade**
- **Many credit scoring models were not optimized with respect to alternative data**

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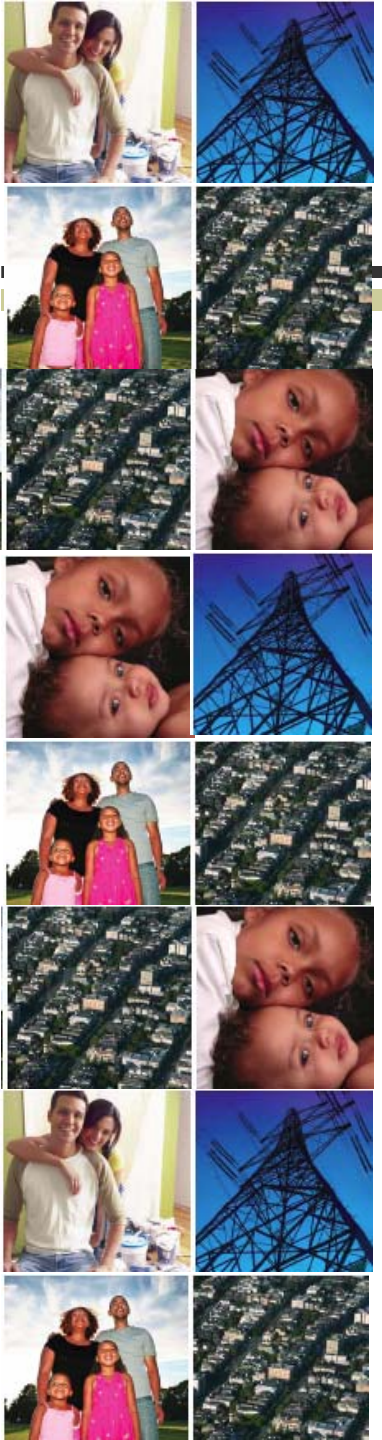

ADI Phase 3

- **Data Furnisher Track**
  - Research (PERC/CFSI)
    - Business case
    - Survey with bureaus
    - Best practices
    - Rental payment data
  - Education & Outreach
    - Exhort full reporting
    - ID strategic events (TRMA, RMA, EEI, AGA, USTA, CTIA)
    - Stand alone events
- **Lender & Policymaker Track**
  - Research (PERC/UMI)
    - Respond to questions and concerns from lawmakers, regulators, and media
    - State-specific reports
  - Education & Outreach
    - Federal level (led by Brookings UMI)
    - State level
    - Lenders (PERC/CFSI)
    - International
      - China
      - Brazil
      - South Africa

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