



Employment Verification

Efficiency

Debt Recovery

» White Paper

## Improving Collections Recovery Rates with Employment Data Integration

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July 2008

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## **Executive Summary**

The use of credit data for late-stage recovery scoring is a well-established and widely accepted practice, as it provides external consumer behavioral insight for augmenting the collections process. The use of income data for assessing consumer credit applications is, similarly, one of the three established pillars of credit risk assessment – capacity, credit and collateral. However, many standard collection and employment verification processes currently in use in the marketplace are highly manual and costly. As a result, collection and verification of employment and income information is precluded from all but the most substantial of loan products, and would certainly prove cost-prohibitive for collections and recovery operations.

With the acquisition of TALX – a data repository of consumer employment verification and income data – Equifax sought to evaluate the impact automated access to employment verification might have on collections recovery rates. In performing the study, Equifax retrospectively appended Employment Indicators to a sample of charged-off credit card accounts to determine whether incorporating this indicator would provide added separation above and beyond using only a credit-data-driven custom recovery score.

This paper summarizes the analysis Equifax performed to validate the degree to which the Employment Indicator separates collection performance within the various ranges of a statistically valid recovery score. The results quantify the relationship of employment verification data to consumer credit card portfolio recovery efforts, clearly correlating verified employment with higher collections recovery rates. The correlation itself is very intuitive – certainly people who are employed are more likely to repay outstanding balances – and linked to the credit-data-based recovery score itself, but the data does afford the opportunity to better segment the most widely worked recovery score intervals. The outcome of this analysis shows the clear advantage of using employment data in conjunction with traditional credit data when developing strategies for the collection of charged-off debt.

## **Background**

In late 2007, Equifax Analytical Services developed a custom recovery model for a major nationwide collector of charged-off credit card debt. Equifax tested the model on credit card

debt portfolios purchased by the collections agency in early 2005. An account is considered to be “good” if at least \$50 was recovered within twelve months. The final model performed well, achieving a maximum KS<sup>1</sup> of 43 on the validation sample.

After completion of the recovery model, Equifax appended an Employment Indicator to the model validation sample. The Employment Indicator is a binary indicator that shows whether an individual is, or has been, reported as “employed.” Equifax’s hypothesis was that individuals with a charged-off account would be more likely to respond to collections efforts if they are confirmed as being presently employed. In addition, we believed that this information could be leveraged to further segment the population for improved collections efficiency.

## **Methodology**

To test this relationship and its strength, Equifax began by appending the Employment Indicator as of the recovery model validation sample’s observation point on March 2005. Since the database is populated by a finite number of participating U.S. employers, those individuals who are not found in the database are not necessarily unemployed. It may be they are merely not being reported to Equifax.

Using this employment indicator subject file, Equifax compared the performance of those individuals who were reported as “employed” with the performance of those individuals who were not by each recovery model score decile. Equifax assessed the performance metrics “Percent Good Accounts,” “Percent of Original Balances Collected,” and “Average Payment Amount.”

<sup>1</sup>KS, short for “Kolmogorov-Smirnov,” is a simple statistical measurement that quantifies a model’s ability to separate “good” and “bad” performing accounts. In general, the higher a model’s KS, the more predictive the model. KS values range from zero to 100.

## Observations/Conclusions

In comparing the performance of those individuals listed as “employed” with those *not* listed as “employed,” Equifax found that those individuals known to be employed consistently demonstrated significantly higher recovery propensities across nearly all score deciles. The only exception was found in the highest scoring (best performing) decile, where there is little difference in collection rates between employed individuals and those with an unknown employment status. This is likely due to generally high rates of employment found throughout this decile of individuals.

The following chart shows, by recovery model score decile, the performance statistics for both “employed” and “not listed” individuals in the model’s validation sample. The performance metrics were defined as:

- *Percent Good* – Interval percentage of individuals meeting the model’s “good” definition: “\$50 or more collected within the twelve-month performance period.”
- *Total Dollars* – Interval total balances associated with charged off accounts sent for collection.
- *Dollars Collected* – Interval total amount collected by the collection agency after taking possession of the charged off accounts.
- *Percent Collected* – Interval Dollars Collected divided by Interval Total Dollars.
- *Average Payment Dollars* – Interval Dollars Collected divided by Interval Number of Accounts.

Score		Total		EMPLOYED					EMPLOYMENT STATUS UNKNOWN					PERFORMANCE DIFFERENCE EMPLOYED v. UNKNOWN		
Min	Max	Interval #	Interval %	% Good	Total \$	\$ Collected	% Collected	Avg Pmt \$	% Good	Total \$	\$ Collected	% Collected	Avg Pmt \$	% Good	% Collected	Avg Pmt \$
177	638	4,659	10%	29.5%	\$ 2,129,386	\$ 301,353	14.2%	\$ 356.86	27.0%	\$ 9,223,246	\$ 1,365,018	14.8%	\$ 357.85	9.1%	-4.4%	-0.3%
97	176	4,588	10%	15.0%	\$ 1,310,000	\$ 110,125	8.4%	\$ 150.91	10.9%	\$ 7,237,085	\$ 376,115	5.2%	\$ 97.48	37.8%	61.8%	54.8%
65	96	4,784	10%	9.4%	\$ 784,889	\$ 39,766	5.1%	\$ 53.29	7.2%	\$ 4,996,790	\$ 174,891	3.5%	\$ 43.32	30.7%	44.8%	23.0%
49	64	4,636	10%	7.6%	\$ 551,576	\$ 27,762	5.0%	\$ 35.60	5.7%	\$ 3,179,502	\$ 105,593	3.3%	\$ 27.38	34.3%	51.6%	30.0%
39	48	4,773	10%	4.4%	\$ 441,684	\$ 20,618	4.7%	\$ 27.42	4.4%	\$ 2,727,796	\$ 79,568	2.9%	\$ 19.79	-0.7%	60.0%	38.6%
32	38	4,713	10%	3.8%	\$ 435,983	\$ 13,021	3.0%	\$ 17.52	3.3%	\$ 2,598,396	\$ 60,344	2.3%	\$ 15.20	13.9%	28.6%	15.2%
27	31	4,230	9%	2.9%	\$ 345,639	\$ 13,152	3.8%	\$ 19.27	1.9%	\$ 2,111,186	\$ 28,920	1.4%	\$ 8.15	51.5%	177.8%	136.4%
22	26	4,822	10%	2.4%	\$ 404,902	\$ 16,333	4.0%	\$ 23.57	2.0%	\$ 2,392,180	\$ 33,068	1.4%	\$ 8.01	21.0%	191.8%	194.3%
17	21	4,700	10%	3.0%	\$ 430,022	\$ 9,571	2.2%	\$ 12.92	1.6%	\$ 2,360,703	\$ 22,955	1.0%	\$ 5.80	85.9%	128.9%	122.8%
2	16	4,287	9%	1.4%	\$ 317,882	\$ 3,144	1.0%	\$ 5.91	1.2%	\$ 2,510,821	\$ 17,870	0.7%	\$ 4.76	16.7%	39.0%	24.1%
Total		46,192	100%	8.5%	\$ 7,151,964	\$ 554,846	7.8%	\$ 76.59	6.5%	\$ 39,337,705	\$ 2,264,343	5.8%	\$ 58.14	30.9%	34.8%	31.7%

The last three columns of the chart highlight the veracity of the employment flag relationship to improved collections results. Specifically, the results show that:

- The percentage of “good” consumers is almost always higher.
- The percentage of dollars collected is always higher, and by substantial amounts.
- The average payment amount is always higher, save for the first decile.

These findings indicate that using an employment indicator in conjunction with a strong recovery model, and a set of strong internal master file and external credit attributes, can help collectors better leverage valuable resources, which will ultimately improve recovery rates.

### **About the Author:**

Richard Heath, Senior Consultant, has been with Equifax Analytical Services since July 2003. Prior to joining Equifax, he held several risk management positions, as well as operations and systems positions, in the consumer and commercial private label credit card industry, including Sears Credit Card Group. Richard also developed underwriting policies and monitored portfolio performance for Associates’ Commerce Solutions’ Consumer and Commercial Private Label Credit Card portfolios. More recently, he developed underwriting and account management policies for HSBC’s Retail Services Commercial Private Label Credit Card portfolios.

Richard graduated from the University of Florida in 1988, with a Bachelor of Science in Mathematics.

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