Information Sheet

Fair Isaac Small Business Scoring Service™ (SBSS℠) 6.0

Small Business Scoring Service (SBSS) 6.0 from Fair Isaac is the latest release of the most advanced empirically derived small business analytic service available. The sixth generation of SBSS is the culmination of cutting edge analytics combined with the experience of Fair Isaac and top small business credit grantors. SBSS has long been recognized as the premier service to aid in assessing the risk of small business credit risk. SBSS 6.0 takes it to the next level, providing not only unprecedented predictive power but also greatly expanding the scope of transactions that can be assessed. SBSS 6.0 offers new tools, such as an empirically derived startup business score and a Credit Offer Index, which gives small business credit grantors improved tools for identifying additional profit opportunities. Table 1 provides a summary of the improvements made with the development of SBSS 6.0.

Table 1: SBSS Comparison

Fair Isaac joined forces with over 30 leading small business credit grantors to build a superior suite of models based on Fair Isaac's most advanced model building technologies, including Adaptive Random Trees and Model Builder. Over one million small business applications were included in the model development process from the time period 2001-2004, ensuring an accurate reflection of today's small business environment. The data contributed mirrors SBA type distributions and represents all regions of the U.S., SIC codes, credit grantors of different size, and product offerings.

Model Suite Version	SBSS 5.0	SBSS 6.0
Records assessed	250,000	1,000,000+
Institutions participating	25	32
Models available	20	66
Model types	Term Loan, Line of Credit, Commercial Card, Leasing	Term Loan, Line of Credit, Commercial Card, Leasing, General Credit Terms
Leasing models	Not rebuilt	Rebuilt
Application data time period	1994-1999	2001-2004
Validated for Credit Amounts Up to	$250,000	$750,000
Data combinations supported specific models	Some data options not available	Coverage for all situations – with and without application, and/or consumer data, and/or financial, and/or business bureau data
Startup business specific models	No	Yes
Credit Offer Index	No	Yes

SBSS 6.0 still has many of the proven features of previous versions of SBSS, including

- Multiple data source options, including consumer and business bureaus, application data, and financial data
- The inclusion of industry experience and input into the model development process to give a real world perspective on usability and effectiveness of the score
- Scaled the same as SBSS 5.0 for easy transition
- Fair Isaac expertise, including 15 years of experience focused on small business analytics

More Than Just Improved Risk Benefits

The combination of advanced scoring techniques with the experience and insight of these top small business credit grantors enabled Fair Isaac to produce a suite of small business credit risk models that outperforms the risk assessment ability of previous versions of SBSS. But that is only part of the story. SBSS 6.0 also provides small business credit grantors with the flexibility, ability, and confidence to apply risk based services for different types of situations.

Evaluating larger transaction sizes

Previous versions of SBSS were statistically validated up to credit request amounts of $250,000. However, because of the robustness of the SBSS 6.0 development data set, Fair Isaac has been able to build a set of models that is now validated for transactions up to $750,000. As a result, small business credit grantors will be able to more consistently and objectively evaluate the credit risk of larger dollar loans by using the SBSS 6.0 score in the decision process.

Data flexibility of SBSS 6.0 model suite

SBSS allows small business credit grantors to use different combinations of data to evaluate the credit risk of a small business - for instance, the ability to use application data with principal owner data, and the choice to use or not use business bureau data from one of the business bureaus. However, previous versions of SBSS did not easily lend themselves to scoring 100% of applications because situations would occur where some of the data elements required would not be present or would be difficult to collect. This shortcoming goes away with SBSS 6.0. SBSS 6.0 has models that will support all combinations of data – with and without application data, with and without financials, with and without consumer bureau data, and with and without business bureau data. In fact, SBSS 6.0 now includes a model that can generate a statistically valid small business score using just application and financial data (which some small business credit grantors may find as useful to more objectively underwrite non-profit applications).

Empirically derived scores focused on startup business populations

Accurately assessing a new business has traditionally been a risky, difficult, expensive and time consuming process for small business credit grantors. As a result, many small business credit grantors tend to shy away from startup businesses or use rigid, labor intensive processes to find low hanging fruit. SBSS 6.0 can help to change this situation by making it easier for small business credit grantors to more confidently purse this large pool of potential customers. Because of the size of the SBSS 6.0 development data set, Fair Isaac was able to evaluate a specific population of startup businesses (in business 2 years or less) and develop empirically derived models for new business risk. Leveraging the talents of its world class Corporate R&D analytic staff, Fair Isaac mined business owner(s)' consumer data and application data, and in certain cases business bureau data, and correlate this information with risk patterns in business behavior for different industries to create a set of models specifically designed for new businesses. The net result of these modeling efforts - the Divergence of the SBSS 6.0 startup score was found to be 50% better than using the base SBSS 6.0 score and over 100% better than using either the SBSS 5.0 or a FICO score to predict startup small business credit risk based on the development data set.

Credit Offer Index – evaluating more than just propensity to repay

Measuring the capacity for a business to take on debt has always been a challenge and generally has been a function of financial ratios derived from income statements, balance sheets, or subjective measures. Often, these financial statements aren't audited, fully completed or readily available – thus creating roadblocks in quickly assessing the risk of many businesses. To help overcome these challenges, Fair Isaac's Corporate R&D staff was called into action. Leveraging years of past efforts in working with clients to evaluate capacity measures, they have helped to create a new tool, the SBSS 6.0 Credit Offer Index, using application, financial, consumer bureau and business bureau data collected during the SBSS 6.0 model development process. The Credit Offer index is a benchmark against what businesses of similar risk profiles have requested in the past. It returns the percentile ranking of the current request versus other small businesses of similar profile as well as the mean amount requested for those types of small businesses. The index can be utilized whether financial data is supplied as part of the application process or not – which is particularly beneficial since many times financial data is not available or collected. Small business credit grantors can use the index as an initial check to see if the request is in line with industry experiences for this type of small business. Credit requests that are flagged as higher than industry standard may warrant closer scrutiny or result in offering a lower, more secured loan amount. For example, credit grantors can avoid potential delinquencies/losses by reducing the amount of financing extended where a business requests an amount that is in the 80-90% percentile for businesses of its type, or asks for a dollar amount significantly higher than the mean. On the other hand, credit requests that are identified as lower than industry standard may create an opportunity to increase the business relationship by offering more credit. For example, a small business grantor may offer increased amounts to requesters when the Credit Offer index result is in the 10-20% percentile, or lower than the mean, to enhance revenues. Either way, the SBSS 6.0 Credit Offer Index provides small business credit grantors with greater comfort that the dollar amount requested falls within or is outside of normal industry ranges.

The Most Predictive Small Business Models Available

So how much better is SBSS 6.0? Several statistics can be used to measure a score's effectiveness. In general these statistics measure a score's ability to separate good accounts from bad accounts (e.g. accounts that went 60 days or more delinquent). Two commonly used statistics to assess the predictive power of a score are Divergence and Kolmogorov-Smirnoff (K-S). Divergence is a summary measure of the separation between distributions of two groups of accounts (e.g. good versus bad accounts) by score. It measures across the entire score distribution and takes into account the separation of the two groups and the variances of the distributions. Because of this, Fair Isaac prefers Divergence. K-S, on the other hand, is a measure of the maximum difference between the cumulative percentage of two groups of accounts (e.g. good versus bad accounts) by score. K-S measures the point of maximum separation between two distributions. The higher the value of each statistic, the greater the tendency for good accounts to score high and bad accounts to score low. Table 2 is just one example of the increased predictive power of the SBSS 6.0 Term Loan/Line of Credit models based on known good/bad accounts in the development data set and how this translates into dollar benefits for small business credit grantors. Similar percentage improvements were also seen in the remaining SBSS 6.0 models (i.e. leasing, commercial card, etc.) over prior versions of SBSS, with some improvements exceeding 70%. And when comparing SBSS 6.0 to generic FICO scores and business bureau scores, the results were just as strong or even better. The point is, SBSS 6.0 is a much better predictor of small business risk.

Table 2: Summary Statistics

Criteria	SBSS 5.0	SBSS 6.0	Improvement
Divergence	0.801	1.109	38%
KS	35.59	40.34	13%
$ Saved on 10,000 applications – 60% approval rate of 6.0 over 5.0			$860,000*

* excludes additional benefits which can be realized from increasing approval rates and/or productivity of the underwriting process.

In addition to using Summary Statistics, another way to understand the effectiveness of a score is through use of trade-off curves. Trade-off curves are pictorial representations of a score's robustness and are a useful way to compare one score to another. Trade-off curves plot the ascending cumulative percent of good accounts versus bad accounts for a given score. A score with a trade-off curve that is more arced than another is a stronger predictor of risk. As you can see from the Trade-off curve in Chart 1, SBSS 6.0 is the strongest predictor of small business credit risk relative to alternative scores.

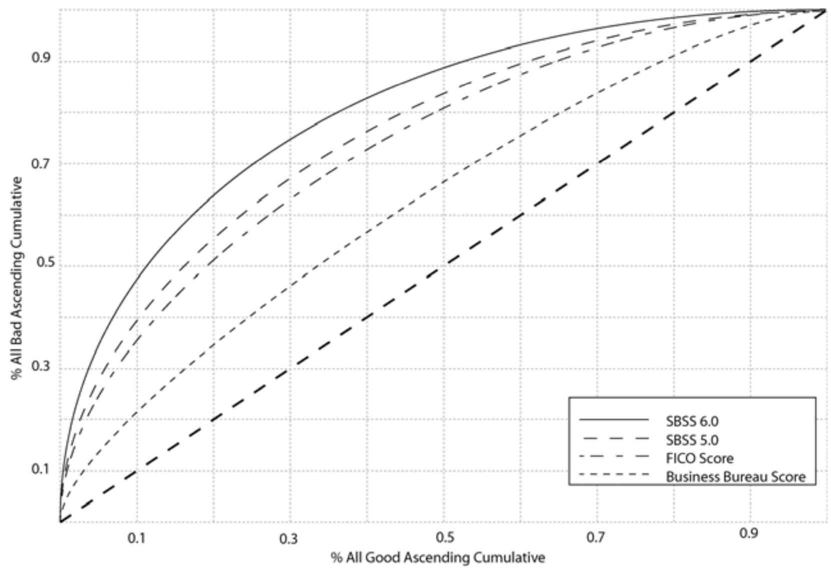

Chart 1: Trade-off curves

SBSS 6.0 will be available in late August 2005 through Fair Isaac's LiquidCredit service. For current LiquidCredit clients, migration to SBSS 6.0 should be fairly seamless since most of the changes are occurring within the LiquidCredit technology. And to make the transition even easier Fair Isaac is offering a service to rescore historical Liquid Credit transactions with the SBSS 6.0 model suite. These rescored transactions can be used to compare distributions to older versions as an aid in making strategy adjustments should they be necessary.

Bottom Line

The SBSS 6.0 model suite gives small business credit grantors the best tools for assessing the risk of all their small business applications. The depth and variety of data incorporated into building these models has allowed Fair Isaac to build the most advanced set of Small Business risk analytics ever created – resulting in double digit improvements in summary statistics such as Divergence. The combination of experience, data, and advanced analytics will allow small business credit grantors to expand their markets, improve risk assessment, and ultimately increase the profitably of their small business portfolio.