Understanding the Italy D&B Failure Score

THIS DOCUMENT IS INTENDED TO ADDRESS THE FOLLOWING QUESTIONS:

- What is the Business Failure Score?
- What is the Availability of the Business Failure Score?
- What does the Business Failure Score Predict?
- How is the Business Failure Score Developed?
- How is the Business Failure Score Validated?

OVERVIEW

D&B's Business Failure Score predicts the likelihood that a company will cease operations within the next 12 months based on the information in D&B's files. Rather than use bankruptcy as the definition for ceasing operations, the Business Failure Scorecard also looks at the onset of failure such as Moratorium, Bankruptcy, Liquidation and Dissolution among other legal events. In Italy, recent changes to the bankruptcy laws made it more difficult for small businesses to file for bankruptcy. As a result, a disproportionate number of small businesses ceased operations leaving unpaid bills behind. In this model, data analysis was employed to target such businesses in addition to the above events.

The Business Failure Scoring System uses statistical methodology to assign each Italian business a score measuring the likelihood of Business Failure.

The Business Failure model utilizes the combined power of D&B's vast information database on over 1,9 million Italian businesses including D&B proprietary payment information, demographic, financial statements and derogatory information such as Protested Bills or Court Judgements.

AVAILABILITY OF THE BUSINESS FAILURE SCORE

A Business Failure Score is available on approximately 1,9M Italian-based companies. Business Failure scores are not available on business files that fall into the following categories:

- Unknown registered business address
- Unknown registered business name
- Unknown Principal name
- Businesses where the Headquarters is based in another country
- Businesses which are no longer trading
- Unknown SIC codes
- Companies with SICs 91-97 (Public administration - Government SIC)

WHAT THE BUSINESS FAILURE SCORE PREDICTS

The Business Failure Score predicts the likelihood that a company will obtain legal relief from its creditors or cease operations with unpaid obligations over the next 12 month period.

This score is based on observed characteristics of hundreds of thousands of businesses in D&B's Italian database, and the relationship these characteristics have to the probability of a business experiencing failure over a period of 12 months following the score calculation.

D&B defines a business that is likely to fail as one that has at least one of the following legal events:

- Ceased operations following assignment or bankruptcy
- Ceased operations with loss to creditors
- Voluntarily withdrew from business operation leaving unpaid obligations
- Is in receivership, reorganization, or has made an arrangement for the benefit of creditors.
- Has a lead up event to Bankruptcy

Note: Voluntary discontinuance involving no loss to creditors is not defined as business failure.

The Business Failure model assigns three measurements of risk:

1. **A Score of 1,001 – 1,999,** where a 1,001 represents businesses that have the highest probability of business failure, and a 1,999 which represents businesses with the lowest probability of business failure. This score provides a direct relationship between the score and the level of risk. The marginal odds of being good doubles for each 40 point increase. For example, a score of 1,200, on a marginal basis, represents twice the risk of business failure as a score of 1,240. This score enables a customer to utilize more granular cutoffs to drive their automated decision-making process.
2. **A Percentile Score of 1 – 100,** where a 1 represents businesses that have the highest probability of business failure, and a 100 which represents businesses with the lowest probability of business failure. The Percentile Score shows where a company falls among businesses in the D&B information base, and is most effectively used by customers to rank order their portfolios from highest to lowest risk of Business Failure.
3. **A Risk Indicator of 1 - 4,** where 1 represents the 'lowest risk' group and 4 represents the highest risk group. The Risk Indicator is most appropriate for decisioning on relatively small portfolios, where more granular score would not be possible.

HOW THE BUSINESS DELINQUENCY SCORE IS DEVELOPED

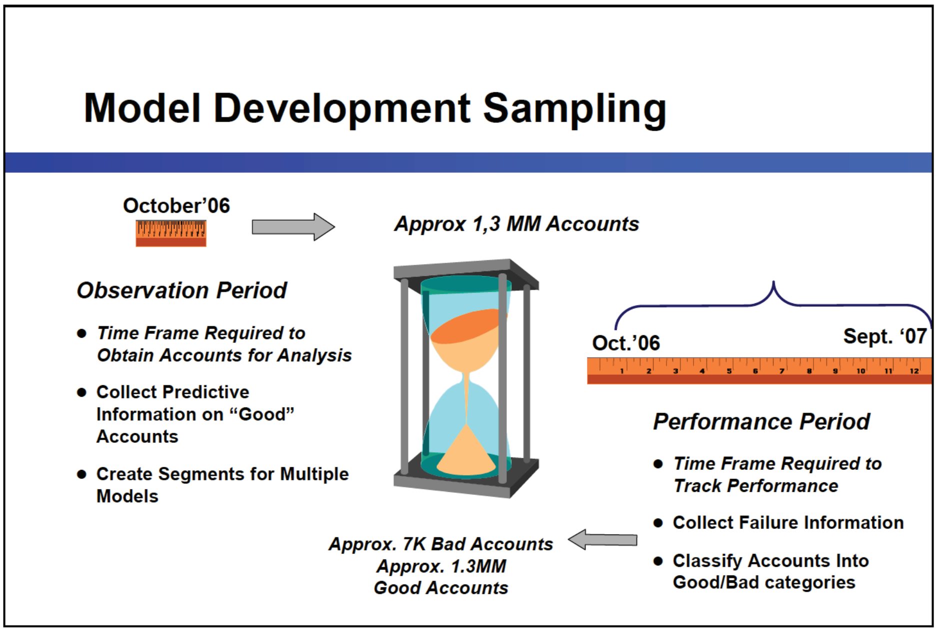
The Business Failure Scoring System was developed using state of the art statistical and modeling techniques to select and weight the data elements that are most predictive of Business Failure. The resulting Business Failure Models are mathematical equations that consist of a series of variables and coefficients (weights) that have been calculated for each variable.

Historic data (predictors) is collected from the time frame designated as an observation point. Data needed for good/bad classification is collected during the performance window.

- The observation point defines the sample used in the model and all identification and characteristic data are collected from this time period. For this model the observation point was October 1, 2007
- The performance window defines the length of time (12 months) during which the accounts performance is tracked. At the end of the performance period all accounts are classified as good (not failed) and bad (failed). Performance window for this model was the 12 month period from October 1, 2006 through September 30, 2007

Chart 1, below, illustrates the model development sample for the Business Failure Score.

Chart 1: Model Development Sampling



An un-weighted total of approximately 1,3 MM businesses were used to develop the Business Failure Score Model.

- All companies in the file were active as of October 1, 2006
- Approximately 7K failed in the following 12 month period

D&B analyzed all available information and identified the data elements, which are statistically the most significant factors for predicting Business Failure. D&B, with its access to a vast database, is uniquely qualified to demonstrate this impact.

Sample data elements used in the model include:

- Payment performance information
- Company demographics (industry, size, structure, directors information, business age)
- Public records (Derogatory information from Chamber of Commerce - Protested bills)
- Balance sheets for companies that are required to file financials.

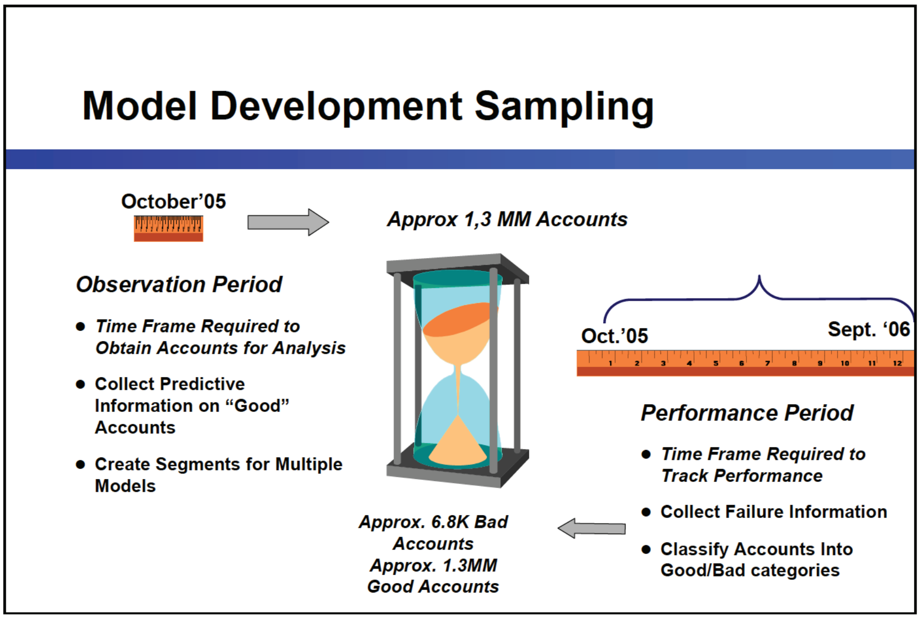
A more comprehensive list of elements appears in Appendix A.

HOW THE BUSINESS FAILURE SCORE IS VALIDATED

In the model development stage, rigorous modeling standards were adhered to. Each segment was validated on a control group of 'hold back' accounts the model had not seen before.

Once the model was built and validated, a new data sample, from a different time frame, was used to perform "out of time" validation. This is typically done in modeling engagements to ensure stability of the model over time.

Chart 2: Out of Time Validation Sample



An un-weighted sample of approximately 1,3 MM businesses were used to validate the Business Failure Score Model.

- All companies in the file were active as of October1, 2005
- Approximately 6.8K failed in the following 12 month period

APPENDIX A

KEY DATA ELEMENTS IN THE BUSINESS FAILURE MODEL

Following is a sample of the key data elements used in the Italian Failure Scorecards.

Demographic Information

FACTOR	IMPACT ON MODEL
Line of Business (SIC4)	More protected industries such as agriculture, forestry and fishing or public administration have less risk.
Region	Different regions Italy have different levels of risk. This may happen due to cultural, historical, business structure or even government support on the different regions.
Years in Business	Older companies have lower risk than younger ones
Company Legal Form	The model takes into account the level of risk from different legal forms.
Number of Employees	In general, the larger the number of employees, the lower the risk.

Financial Information (if present)

FACTOR	IMPACT ON MODEL
Overdue Financials	Overdue financial statement indicates higher risk.
Debt-to-Income Ratio	Obligations exceeding Sales (Income) are a sign of increased risk
Return on Assets	Company profitability is measured in relation to it's assets
Net Worth	Low, especially negative, net worth is a high risk factor

Payment Information (if present)

FACTOR	IMPACT ON MODEL
Recent Overdue Balance	High value indicates higher risk.
Percent of Trades Paid Promptly	The higher the percentage of prompt payments, the lower the risk.
Paydex®	Paydex® stands for "payment index," which is based on an analysis of past payment behavior as reported to D&B. The higher the Paydex® values, the lower the risk.
Paydex® Variance over the last 12 months	Stable Paydex® trend, especially with an upward direction indicates lower risk.

Derogatory Information

FACTOR	IMPACT ON MODEL
Protested Bills	Existence of protested bills is a high risk factor

APPENDIX B

12 MONTH FAILURE: PROJECTED PERFORMANCE TABLE

Projected Performance Table – Risk Indicator

Cumulative Failure Risk Score Performance						Failure Risk Score Performance Within Range				
RISK INDICATOR	SCORE RANGE	PCTILE RANGE	% OF ACCTS	FAILURE RATE	% OF FAILURES ELIMINATED	SCORE RANGE	PCTILE RANGE	% OF ACCTS	FAILURE RATE	% OF FAILURES ELIMINATED
1	1537 - 1999	91 - 100	10%	0.04%	99%	1537 - 1999	91 - 100	10%	0.04%	1%
2	1491 - 1999	45 - 100	56%	0.58%	89%	1491 - 1536	45 - 90	46%	0.12%	10%
3	1380 - 1999	6 - 100	95%	1.04%	47%	1380 - 1490	6 - 44	39%	0.56%	42%
4	1001 - 1999	1 - 100	100%	4.92%	0%	1001 - 1379	1 - 5	5%	4.92%	47%

EXPLANATIONS

CUMULATIVE FAILURE RISK SCORE PERFORMANCE

- **% of Accounts:** To set an approval rate, select the appropriate percentile range that yields the desired approval rate. For example, to develop a credit policy that approves a projected 95% of all customers requires accepting accounts scoring at or above 1380 (or 6-100 percentile). Businesses scoring below the cutoff score (1001 - 1379) are reviewed, declined, etc.
- **Failure Rates:** The failure rate represents those businesses that score between the lowest value in the score range (or percentile) and 1999 (or 100 percentile). For example, the failure rate for a credit policy which approves all businesses with a score at or above 1380 (or 6-100 percentile) is expected to be 1.04%.
- **% of Failures Eliminated:** The percentage of total failed businesses that score between 1001 and the cutoff point for the approval rate. For example, approving businesses with a score above 1380 (or 6-100 percentile) is expected to eliminate 47% of the bad accounts.

FAILURE RISK SCORE PERFORMANCE WITHIN RANGE

- **Failure Rate within Range:** The incidence of failure for those businesses that score within the score range. For example, the failure rate for companies scoring between 1380 and 1490(or 6-44 percentile) is expected to be 0.56%.
- **% Of Failures Identified:** The percentage of total failed businesses within the score range. For example, 42% of failed companies are expected to score between 1380 and 1490 (or 6-44 percentile).

Notes: Each Failure Risk Score classification has an incidence of failure associated with it that is compared to the national average for all companies. The Percentage of Accounts, Percentile Ranges, and Percent within Range are approximated. From the projected Failure rates predicted by the scorecard

This Projected Performance Table is based on a Standard model reflecting entire Italian database. Performance may vary based on individual customer portfolios.

D&B BUSINESS FAILURE SCORE – DETAILED PROJECTED PERFORMANCE TABLE

Cumulative Business Failure Score Performance							Business Failure Score Performance Within Range				
MINI SCORE	MAX SCORE	PCTILE RANGE	% OF ACCTS	FAILURE RATE	% FAILURES ELIMINATED	GOOD-BAD RATIO	MINI SCORE	MAX SCORE	PCTILE RANGE	% OF ACCTS	% FAILURES ELIMINATED
1553	1999	96 - 100	5%	0.03%	100%	3,405	1553	1999	96 - 100	0.03%	0.3%
1537	1999	91 - 100	10%	0.04%	100%	2,636	1537	1552	91 - 95	0.05%	0.4%
1529	1999	86 - 100	15%	0.05%	99%	2,007	1529	1536	86 - 90	0.07%	0.7%
1524	1999	81 - 100	20%	0.06%	99%	1,715	1524	1528	81 - 85	0.08%	0.8%
1519	1999	76 - 100	25%	0.07%	98%	1,496	1519	1523	76 - 80	0.10%	1.0%
1515	1999	71 - 100	30%	0.08%	97%	1,329	1514	1518	71 - 75	0.12%	1.1%
1510	1999	66 - 100	35%	0.08%	96%	1,239	1510	1513	66 - 70	0.11%	1.1%
1507	1999	61 - 100	40%	0.09%	95%	1,126	1507	1509	61 - 65	0.15%	1.4%
1503	1999	56 - 100	45%	0.09%	93%	1,130	1503	1506	56 - 60	0.09%	0.8%
1498	1999	51 - 100	50%	0.10%	92%	1,024	1498	1502	51 - 55	0.18%	1.7%
1493	1999	46 - 100	55%	0.10%	91%	957	1493	1497	46 - 50	0.17%	1.6%
1487	1999	41 - 100	60%	0.11%	89%	885	1487	1492	41 - 45	0.21%	2.0%
1481	1999	36 - 100	65%	0.12%	87%	829	1481	1486	36 - 40	0.21%	2.0%
1477	1999	31 - 100	70%	0.13%	85%	764	1477	1480	31 - 35	0.26%	2.5%
1471	1999	26 - 100	75%	0.14%	83%	726	1471	1476	26 - 30	0.23%	2.2%
1462	1999	21 - 100	80%	0.15%	80%	685	1462	1470	21 - 25	0.27%	2.6%
1448	1999	16 - 100	85%	0.16%	78%	610	1448	1461	16 - 20	0.45%	4.2%
1429	1999	11 - 100	90%	0.19%	74%	519	1429	1447	11 - 15	0.68%	6.5%
1380	1999	6 - 100	95%	0.30%	67%	337	1380	1428	6 - 10	2.16%	20.5%
1001	1999	1 - 100	100%	0.53%	47%	189	1001	1379	1 - 5	4.92%	46.7%

EXPLANATIONS

CUMULATIVE BUSINESS FAILURE SCORE PERFORMANCE

- **Approval Rate:** To set an approval rate, select the appropriate projected score or percentile cutoff that yields the desired approval rate. Approved businesses are companies scoring between the lowest value in the score range (or percentile) and 1999 (or 100 percentile). For example, a credit policy, which approves 70% of all accounts, requires accepting accounts between 1477-1999 (or 31-100 percentile). Accounts scoring below the cutoff (1001 - 1476) are reviewed, declined, etc.
- **Failure Rate:** The failure rate represents those businesses that score between the lowest value in the score range and 1999. For example, the failure rate for a credit policy which approves all businesses with a score at or above 1477 (or 31-100 percentile) is expected to 0.13%.
- **% of Failures Eliminated:** The percentage of total failed businesses that score between 1,001 and the cutoff point for the approval rate. For example, approving businesses with a score above 1477 (31-100 percentile) is expected to eliminate 83% of the bad accounts.
- **Good-Bad Ratio (Odds):** The ratio of "Good" accounts to "Bad" accounts among those businesses that score between the lowest value in the score range and 1999 (or 100 percentile). For example, a credit policy which approves all accounts scoring at or above 1477 (or 31-100 percentile) should result in a portfolio with 764 "Good" accounts for every "Bad" account in the portfolio.

BUSINESS FAILURE SCORE PERFORMANCE WITHIN RANGE

- **Failure Rate:** The incidence of failure for those businesses that score within the score range. For example, the failure rate for companies scoring between 1471 and 1476 (26-30 percentile) is expected to be 0.23%.
- **% of Failures Identified:** The percentage of total failed businesses within the score range. For example, 2.2% of all failed companies are expected to score between 1471 and 1476 (26-30 percentile).

Notes: Each Business Failure score classification has an incidence of Business Failure associated with it that is compared to the national average for all companies. The Percentile Ranges are rounded to the nearest whole and are classified as being approximated.

This Projected Performance Table is based on a Standard model. Performance may vary based on individual customer portfolios.