

Credit Scoring for Leasing

How Leasing Models Differ from Bank Lending Models

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Summary

This article examines how application credit-scoring models for leasing differ from models developed for bank lending. Models for bank lending measure a client's likelihood to repay a credit obligation. Models for standard equipment leasing assess client repayment risk, but also should consider asset worth and vendor relationships, both of which affect the overall risk of a lease contract. Expert models for leasing can automate a sophisticated, yet easy to use, gap analysis of the difference between outstanding principle and market resale value, facilitating a tighter control of risk exposure for each leasing contract.

Differences between Lending and Leasing Models

Bank lending scoring models quantify an applicant's likelihood of defaulting on a credit obligation. Statistically derived models output an applicant's probability of default, or of being "bad" enough to be unprofitable to the bank. Expert (judgmental) models rank applicants from low to high risk. Both types of models draw on past experience to try and predict future payment behavior.

In terms of risk, bank loans and standard equipment leases differ in at least the following ways:

1. **The leasing company (lessor) legally owns the financed asset** and thus has title to the equipment. A bank generally takes a lien or pledge against the financed asset and, in many cases, additional assets as security.
2. **Leasing companies work closely with selected vendors** to finance considerable volumes of standard equipment (such as trucks, trailers, fork lifts, etc). Some vendors provide buy-back guarantees, which can reduce the risks of working out a "bad" deal.
3. **Standard equipment generally has a liquid secondary market**, allowing leasing companies to estimate, with reasonable certainty, the likely sale price for a given asset over the term of finance. Repossession of leased assets is generally quicker and easier than seizing collateral, and leases can thus be structured so that deals that go bad are still likely to be profitable.

These differences in the nature of loan and lease risk suggest that scoring models focus not only on the client's likelihood of repaying, but also on the transaction costs and expected income from selling repossessed assets.

The remainder of this paper suggests some best practices for building scoring models for leasing transactions. A well designed scoring model can help a leasing companies capture its client and market knowledge in a user-friendly computer program that enables less experienced sales people, and possibly even vendors, to:

- consistently deploy company expertise
- efficiently process the majority of standard equipment deals (thus offering better service)
- closely control the risk taken on each transaction.

Balancing Client, Vendor and Asset Risk

The three key risk areas for leasing transactions are:

1. Client Risk – the client’s willingness and ability to repay a lease.
2. Vendor Risk – good vendors tend to bring good customers, and a good vendor will willingly or contractually help dispose of the asset if a deal goes bad.
3. Asset Resale Risk – the actual sale price of a repossessed asset in the secondary market.

Scoring models for leasing should strike a balance between the likelihood of default (client risk) and the likely profit or loss from asset sale in the event of default (a combination of vendor and asset resale risk). Somewhat unlike traditional bank lending, many leases that go “bad” may still yield a healthy profit for the leasing company, and as such need not be categorically avoided.¹ The leasing scorecard should output not only the likelihood of going bad, but also some measure of how “bad” things are likely to be.

Building a Scoring Model for Standard Equipment Leasing

The best type of scoring model, of statistical, expert, or a combination of the two (hybrid), depends on the quality and quantity of data available and the business strategy for the segment to be scored.² Regardless of the modeling techniques used, the model should include the following factors:

Client Risk

Client risk factors will be similar to those used in bank-lending models: a combination of demographics, financial statement and credit history information.

Vendor Risk

Vendors can be periodically rated on a five-point scale. The vendor rating is a subjective estimate, based on gut feeling and experience, of the vendor’s affect on the risk of standard transactions.

Asset Resale Risk

The sale price of a repossessed asset can make the difference between a profit or loss on a “bad” deal. Market knowledge, experience, and price guides (such as SHWACKE) can be used to build depreciation tables that drive gap analysis, described below.

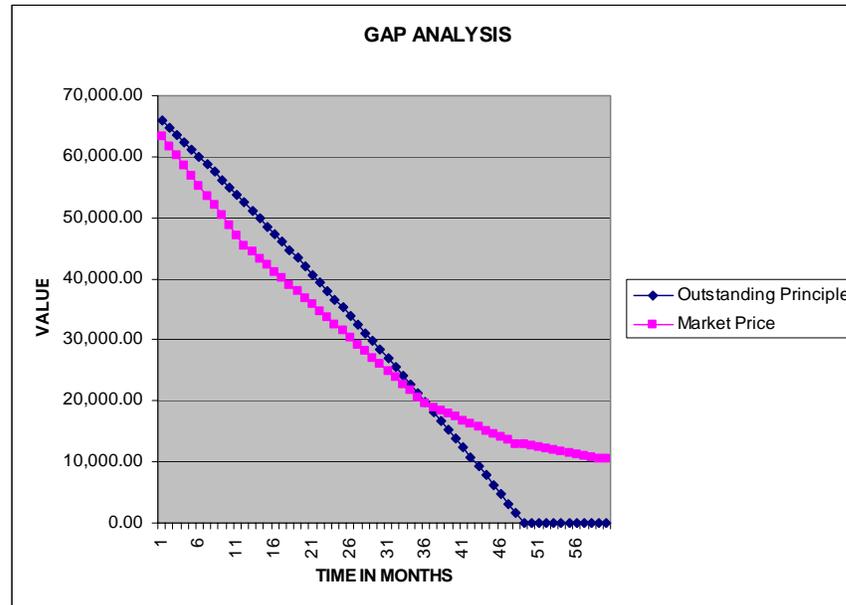
¹ The risk of fraud is separate and, as in lending, is generally be controlled for with checks outside of the scoring model.

² For a fuller discussion, please see *Building Credit Scorecards for Small Business Lending in Developing Markets* (http://www.microfinance.com/English/Papers/Scoring_SMEs_Hybrid.pdf)

Gap Analysis

Gap analysis is the graphic examination of the difference between an asset's principal outstanding and market value. Plotting the depreciation curve against the outstanding principal curve graphically illustrates, by the distance between the two curves, the amount of money a lease company would lose or gain if it reposed and sold an asset for its estimated sales price at any point during the finance term. Such simple, but visually powerful gap analysis can facilitate tighter risk management: credit policy can be set to accept a negative gap for the best, or least risky, customers, while any gap should be eliminated for riskier client segments. An example of such gap analysis is shown in picture one below.

Picture 1: An Example of Gap Analysis



In the above illustration, there is a negative gap between the outstanding principal and the market price. There are several possible ways to measure the gap, such as total negative gap over the lease term, maximum negative gap over the lease term, months in negative gap. Primarily we are interested in controlling the negative gap rather than maximizing a positive gap. The gap can generally be removed by an increased initial payment or by a shorter lease term.

Putting the Pieces Together

In summary, scoring for standard equipment leasing differs from scoring for small business lending. The role of the vendor and the lessor's title to the asset require a more complex measure of overall deal risk than the probability of a client defaulting on payment obligations alone. The risk of a client not paying is more important for assets with weak secondary markets, whereas this risk is markedly less pronounced when a strong vendor is likely to help dispose of the asset. Gap analysis allows us to measure principal at risk and decide how best to control for it: for example, eliminate it for riskier clients, but accept it, within certain limits, on less risky clients. User-friendly software can perform the scoring calculations and provide customer-facing staff with sophisticated, yet easy-to-use graphic analysis of the potential exposure of any deal.

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