

NextGen FICO® User's Guide

November 2000



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Introduction

NextGen is a credit risk assessment tool developed by Fair, Isaac & Company, Inc. (Fair, Isaac). NextGen analyzes consumer credit bureau file information and produces numeric scores that are indicative of the risk associated with extending credit to an individual consumer. NextGen is available online as a component of a credit report, or batch for account management or prescreen applications.

NextGen was developed to help credit grantors who are looking for stronger risk assessment tools, especially for use in the highly competitive specialty markets such as bankcard or sub-prime lending. NextGen is a more refined tool that provides superior rank-ordering of prospects, applicants and customers. NextGen allows lenders to book better credit quality and improve their target marketing and portfolio management programs. The added refinement across the entire risk spectrum facilitates better credit decisions and provides a substantial benefit for lenders offering tiered pricing.

NextGen provides a choice to lenders who are looking for improvements in risk assessment. The NextGen design blueprint unlocks new layers of predictive power embedded in the Credit Reporting Agency (CRA) databases. However, since many lenders rely on the Classic FICO¹ models for their operation and strategies, Fair, Isaac will continue to update and support the Classic FICO risk models. By offering both NextGen and Classic FICO, lenders have a choice between two powerful solutions to meet their credit risk management needs.

The information in this manual is intended to help NextGen subscribers maximize the benefits offered by the model, as well as provide background, technical information and implementation ideas. It can also serve as a reference and training manual for those new to NextGen.

¹Classic FICO risk models include EMPIRICA® from Trans Union, BEACONSM from Equifax and the Experian/Fair, Isaac Risk Model from Experian.

How to Use this Guide

This User's Guide is provided to assist you in understanding the technical aspects and implementation issues associated with NextGen. The features and benefits of NextGen are outlined in Chapter 1. A more technical explanation of the new design is contained in Chapter 2.

Instructions for transitioning to and using NextGen are in Chapter 3. Credit grantors upgrading to NextGen from the Classic FICO models will need to re-evaluate their score cutoffs and make some system changes to take advantage of the more predictive power of NextGen. These changes are also included in Chapter 3.

Chapter 1: About NextGen

NextGen is a broad-based credit bureau scoring system that was designed and developed for major credit reporting agencies (CRAs). Each NextGen model that is developed is designed to maximize the unique data elements that are characteristic to the CRA where it will be deployed. As such, each NextGen model is individual by nature, but shares a common architectural thread. NextGen models are currently available at Equifax (known as PinnacleSM) and Trans Union (known as PRECISIONSM). We are working with Experian to develop a similar NextGen model that will be available in the very near future.

NextGen converts information provided to the CRA which was gathered from all reporting credit grantors, collection agencies, public record information, and inquiries that are found on a consumer's credit report to a numeric score that is indicative of future payment behavior. The score is particularly valuable if knowledge of the associated performance history is utilized within the framework of an individual credit grantor's own decision-making process. Armed with a NextGen score and knowledge of the relationships between score, past credit decisions and performance, credit grantors can make significantly better credit management decisions with NextGen.

New Design Features

There are 3 key design modifications behind NextGen's sharper risk assessment as compared to Classic FICO risk models: 1) significantly more complex predictive variables, 2) an expanded segmentation scheme and 3) a more refined performance outcome.

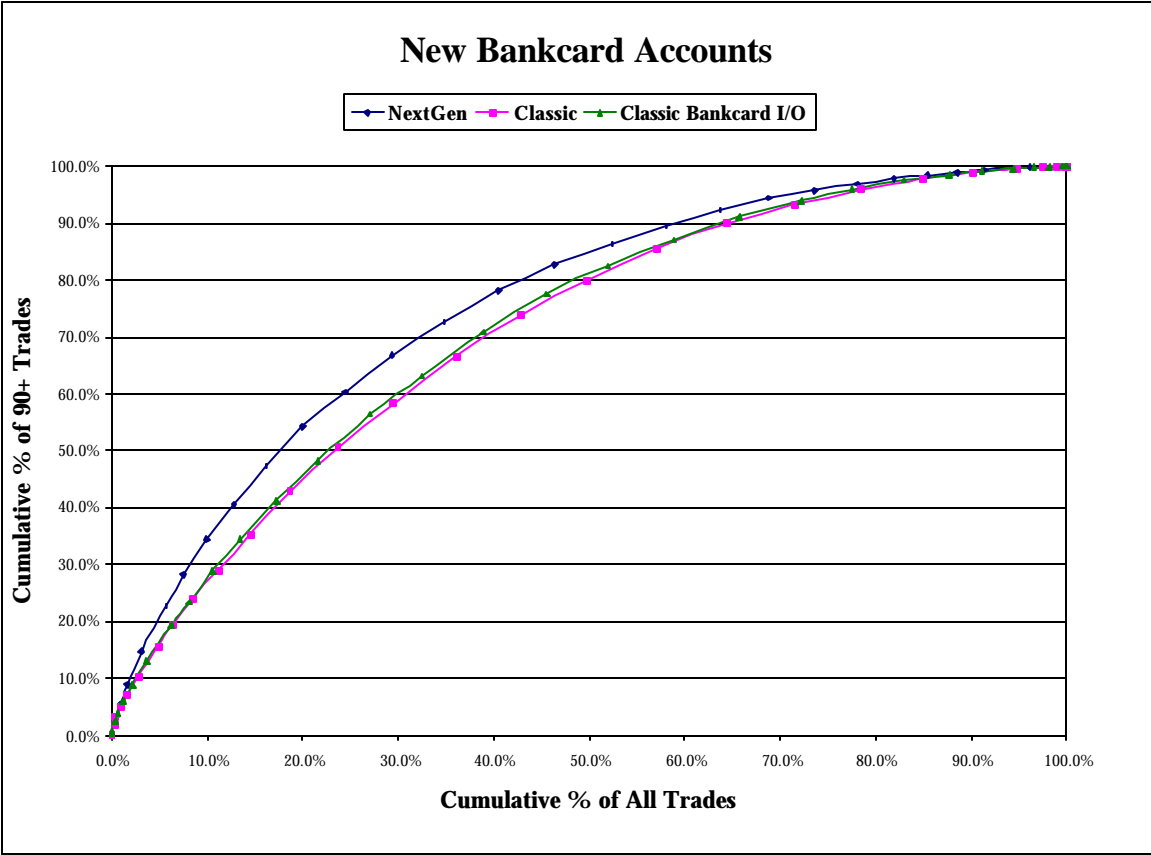
1. The NextGen models utilize more than 80 complex predictive variables, many of which are multi-dimensional "*mini-models*" that capture key interactions within the data. These predictors evaluate the relationship between the various elements of a consumer's credit report. For example, examining payment performance on new accounts (# of new accounts and delinquencies on those accounts) to distinguish between those opening new accounts to expand their credit availability versus those taking advantage of attractive credit offers. See Chapter 2 for a more in-depth explanation of these types of predictive variables. In total, there are more than double the number of predictive variables in NextGen compared to Classic FICO.

2. NextGen also incorporates an expanded segmentation scheme to analyze consumers across a *broader risk spectrum*. There are now *18 scorecards* employed by NextGen, compared to 10 scorecards used in the Classic FICO models. The primary difference between the segmentation schemes is a more refined look at credit history across the full range of credit experience. Classic FICO initially segments consumers into “derogatory” versus “non-derogatory” categories depending on the presence or absence of any serious delinquency or derogatory references in a consumer’s credit history. Then it further segments by time in file, depth of file and search for new credit. NextGen goes beyond two primary initial groups to evaluate consumers in various categories across the full risk spectrum -- those with very clean credit histories, those with mild forms of prior delinquency and those with more severe derogatory history. The NextGen segmentation scheme also uses some of the traditional factors used in the Classic FICO risk models such as file thickness and file age.

3. Finally, NextGen utilizes a new *refined performance outcome classification* that distinguishes between varying degrees of future credit performance. In developing Classic FICO, Fair, Isaac classified consumers as “high risk” or “low risk” based on their worst level of delinquency on *any* credit obligation (or trade line) in the two years after the date of scoring. For the NextGen risk model development, Fair, Isaac classified consumers according to their *degree* of positive or negative performance *across all credit obligations*. For instance, a consumer who went delinquent on two out of ten obligations was categorized differently than one who went delinquent on eight out of eight obligations.

This new performance outcome classification better reflects the current lending environment. Lenders today are more willing to extend credit to applicants with some past credit trouble providing they can price their offering relative to the risk of default. The NextGen risk scores will assist lenders in risk-based pricing and will enable more confident decisions across the entire risk spectrum, from prime to non-prime.

As a result of this new “design blueprint,” the predictive ability of NextGen is significantly greater than that of Classic FICO or any Classic FICO Industry Option as the following graph illustrates:



Data provided by Equifax

NextGen is more predictive than Classic FICO or Classic FICO Bankcard I/O. For example, at 10% of the lowest scoring trade lines, NextGen identifies approximately 35% of the trade lines that go bad versus 28% for Classic FICO Bankcard I/O and 26% for Classic FICO.

Chapter 2: NextGen Development

Overview

The NextGen models were developed using the CRAs' extensive national credit file databases and Fair, Isaac's sophisticated model development techniques that capitalized on the latest research into population segmentation analysis, data exploration and predictive variables. NextGen converts the data contained in the CRA credit report to a numeric score.

NextGen is a more advanced tool that all types of lenders can use to evaluate consumer risk across the entire risk spectrum. The model incorporates a new design blueprint that unlocks new layers of predictive power embedded in the CRAs' consumer credit data.

By using NextGen, lenders will be able to book and manage better credit quality portfolios or increase booking volumes and the number of other positive actions granted with little or no impact to credit quality. This more refined risk assessment will also allow lenders to more accurately establish and manage credit terms, including price for the risk each customer, applicant or prospect represents. NextGen is ideal for lenders whose profitability depends on the most cutting-edge risk prediction available and are willing to make the operational and system changes necessary to adopt the new scores. See Chapter 3 for more information on transitioning to NextGen.

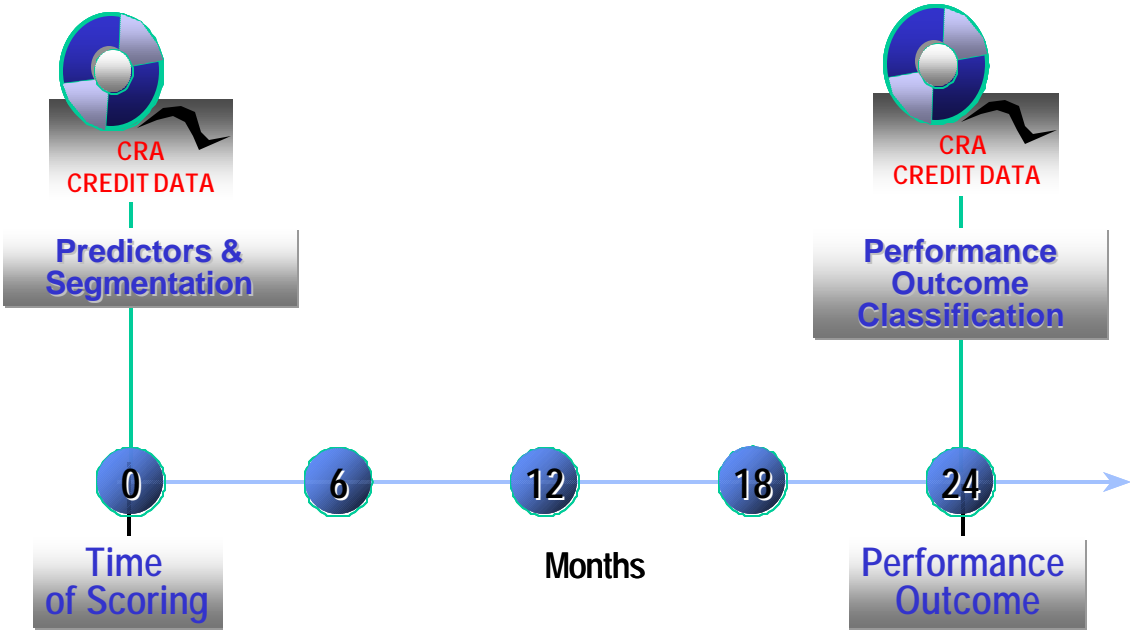
NextGen scores range from a low of 150 to a high of 950. It is important to remember that with NextGen (like Classic FICO scores), the *higher* the score, the *better* the credit risk.

Performance Period

As with Classic FICO, each NextGen model was developed with two credit reports for each consumer from a large national data sample of over 1 million names from a specific CRA. For each consumer, two snapshots of credit history from two different points in time were utilized. The earlier report simulates the time of scoring and is used to generate the predictive variables and segmentation schemes.

The latter report is used to determine the payment performance of each consumer during the 24-month performance window. This concept is illustrated below:

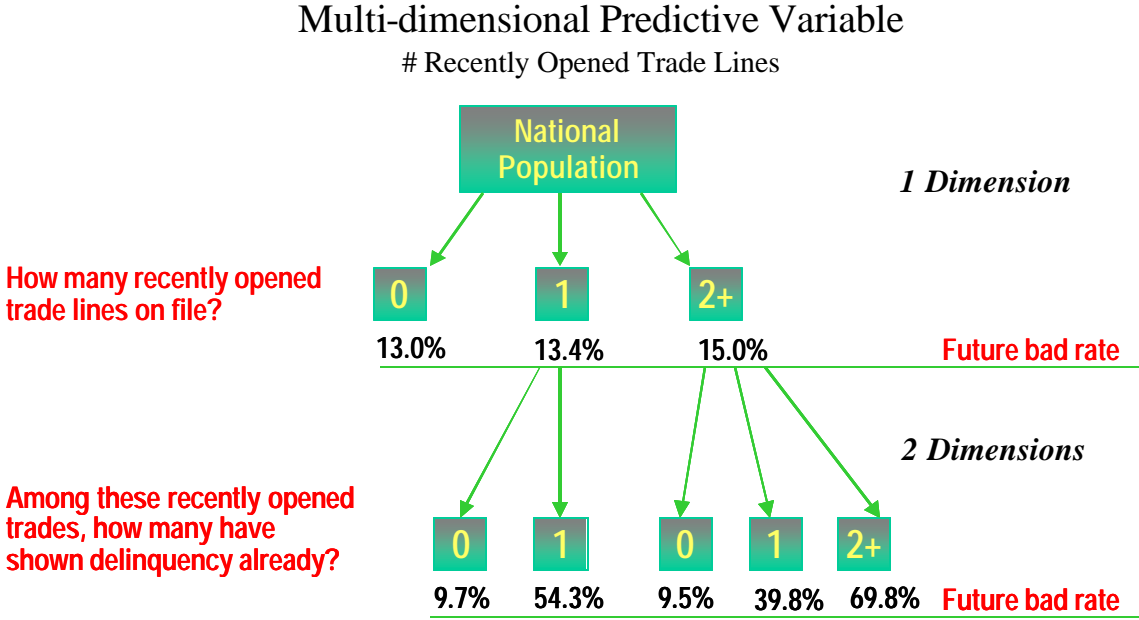
NextGen Performance Period



Predictive Variables

Based in part on insights gained from Fair, Isaac’s research and development of bankruptcy, revenue and attrition models, Fair, Isaac evaluated many new predictive variables for use in the NextGen models including many multi-dimensional variables. These complex “mini-models” capture key interactions in the credit data and evaluate the relationship between the various elements of consumer credit reports. For example, rather than evaluating payment performance and balance separately, a multi-dimensional predictive variable examines data elements in tandem. The benefit of this approach is that the predictive variable can better assess consumer behavior suggestive of either taking on too much credit or simply responding to attractive offers for lower rates.

Each NextGen risk model contains more than 80 predictive variables, including many multi-dimensional variables or “mini-models.” The following graphic illustrates the mini-model advantage:



The number of trade lines recently opened was counted on the first credit report snapshot, and the bad rates were calculated using the second credit report snapshot, 24 months later. The bad rate was calculated as the percentage of the sub-population with a 90 day past due account or worse during the 24-month performance period.

Based on the number of recently opened trade lines, the future bad rate is slightly differentiated between the possible outcome values (0, 1, 2+, also called “attributes”), with the range between 13.0% and 15.0%. This means more recent openings corresponds with slightly higher risk.

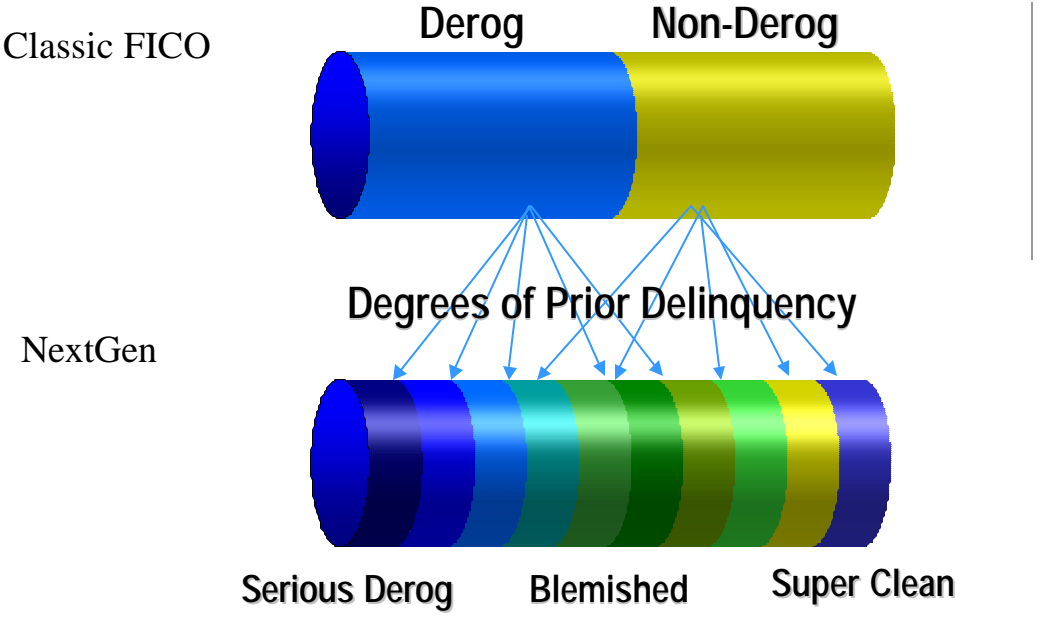
When a second dimension is added – the delinquency history on those recently opened trade lines – the difference between the future bad rate between outcome values increases. The future bad rate for this mini-model ranges from 9.5% to 69.8%. As illustrated, the group of consumers who opened only one trade line recently is a combination of two different groups. Those who opened one trade line and kept it current are less risky than what we saw with only one dimension (9.7% compared to 13.4%), and even less risky than those who didn’t open any new accounts! Those who opened one trade line and have shown delinquency by the performance date are now identified as much more risky (54.3% compared to

13.4%). This example illustrates the predictive value that two-dimensional variables or mini-models add to the NextGen models.

Subpopulation Selection

While the Classic FICO models utilize 10 scorecards (2 derogatory and 8 non-derogatory), the NextGen models utilize 18 individually targeted scorecards across a wider spectrum of risk profiles, each with more segmentation variables. The NextGen scorecards dramatically refine consumer delinquency history, grouping consumers into categories based on their credit profile at the time of scoring. These categories range from very clean to mildly delinquent to severely derogatory. The new segmentation scheme also uses some conventional segmentation variables such as file thickness and file age, and some new variables such as credit usage.

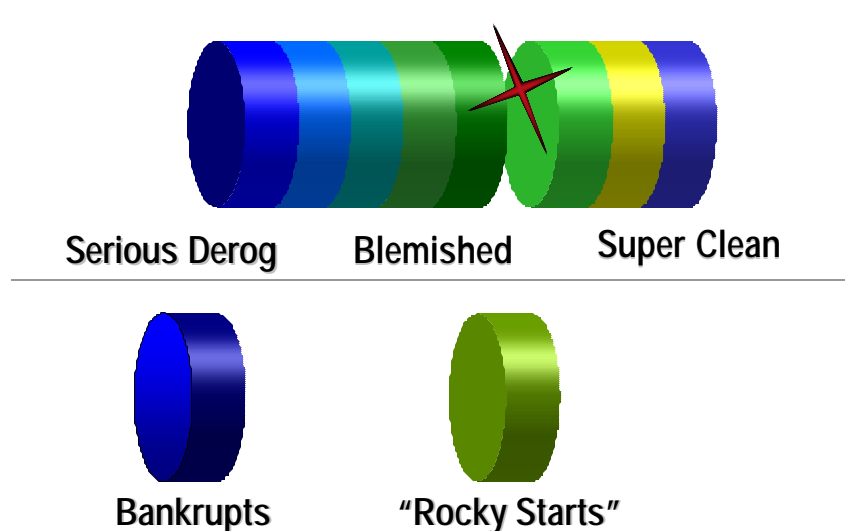
NextGen Segmentation



This new segmentation scheme creates a broader spectrum of risk profiles and more homogeneous subpopulations, which adds to the more refined risk assessment. For each of the 18 scorecards used in each NextGen model, the predictive variables were chosen for their ability to *tease* out subtle differences in the risk profiles for each respective group.

The graphic below illustrates how the expanded segmentation scheme in the NextGen models addresses two types of consumers: bankrupts and “rocky starts.” Each NextGen model development sample was so large that a sufficient sample of consumers with prior bankruptcy was evaluated separately to ask more pertinent questions of them versus the general population. For example, it makes little sense to inquire whether someone with a prior bankruptcy was ever delinquent. It makes more sense to ask questions about how long ago the bankruptcy occurred and whether there is evidence the consumer has gotten back on their feet or if they have gotten back into debt and are headed back to bankruptcy court.

NextGen Segmentation Examples



Another example of one of the new segmentation groups is consumers with a newly opened credit obligation who have exhibited some delinquency on this account. We refer to these consumers as “rocky starts” - however they may be some of your most profitable customers since they are all credit users without any major derogatory references. By separating these consumers into a unique sub-population, the predictive variables can be selected to best separate those who have only a nuisance delinquency from those who are headed for much worse payment performance.

Performance Outcome Classification

Classic FICO was developed with a performance classification that defined “poor payers” as all consumers with at least one 90 day derogatory or worse on any credit obligation over the 24 months following the scoring date. This definition represented a worst-case scenario for an individual lender because the consumer classified as a “poor payer” may or may not have been delinquent with that lender.

This conservative approach was well suited for the credit environment of the 1980s and 1990s, but as lenders move toward extending credit to higher risk consumers and rely more on tiered pricing, this conservative approach is no longer ideal. NextGen utilizes a more refined methodology of determining performance that more closely reflects the anticipated performance of any individual lender who grants credit to a consumer. An example of the new performance outcome classification is illustrated below:

Performance Outcome Classification Example

2 Consumers with Negative Performance



★ = GOOD PERFORMER OVER OUTCOME PERIOD

✘ = 90+ DPD ON THE TRADE OVER OUTCOME PERIOD

Consumer A has nine credit obligations with various lenders. During the outcome period, Consumer A reached 90 days past due or worse on one bankcard and the retail charge card. Consumer B on the other hand, reached 90 days past due or worse on all nine obligations.

In the current lending environment, many lenders would classify Consumer A and Consumer B differently. The lenders that Consumer A had remained current with would probably not consider Consumer A as a “poor payer.” However, the other two lenders whom Consumer A had some delinquency with would probably consider Consumer A as a “poor payer.” On the other hand, all lenders would likely view Consumer B as a “poor payer.” If one were to consider these two consumers total payment performance, most lenders would consider Consumer A an overall better credit risk than Consumer B.

The approach used in developing the Classic FICO risk model classifies consumers based on their worst performance on any trade line. In the above example, Consumer A and Consumer B would be treated the same. The NextGen approach reflects the new lending environment and categorizes these two consumers according to their respective “degree” of positive and negative performance across all credit obligations – which adds to NextGen’s predictive capability.

Scorecard Development

The CRA credit files contain a significant amount of consumer credit data including trade line, inquiry, public record, collection and bankruptcy information. During the development of the NextGen models, over 300 predictive variables were evaluated by Fair, Isaac to maximize the predictive power of each new model. These variables analyze various aspects of the consumer’s credit profile which include:

- Past credit history and performance
- Current debt level
- Length of credit history
- New credit
- Types of credit in use

After extensive analysis of the CRAs’ credit file data, the most predictive variables and related attribute values were derived for each of the NextGen models’ 18 scorecards. The number of variables utilized for each individual scorecard ranges from 10 to 15, with more than 80 different variables utilized in all. Score weights were then developed by optimizing the most predictive combination of values for

each variable in each scorecard to maximize the overall effectiveness of each NextGen model.

Scaling

NextGen scores range from a low of 150 to a high of 950, with the higher the number indicating the lower the credit risk. Furthermore, the 18 scorecards in each model were calibrated so that the probability of a negative performance within each score range was consistent across all 18 scorecards. For example, a credit record that is routed to one scorecard and receives a score of 700 has the same probability of subsequent negative credit performance as a credit record routed to another scorecard that also receives a score of 700.

The NextGen risk scores have also been aligned so that a NextGen score of 700, for example, represents the same level of risk as a Classic FICO score of 700. This same odds-to-score relationship means that the odds at a specific score range are designed to be the same. However, because NextGen is a more advanced scoring system with a broader score range, score distribution shifts should be anticipated. Therefore, it is likely that an individual consumer's NextGen risk score will most likely be different from their Classic FICO risk score (either higher or lower).

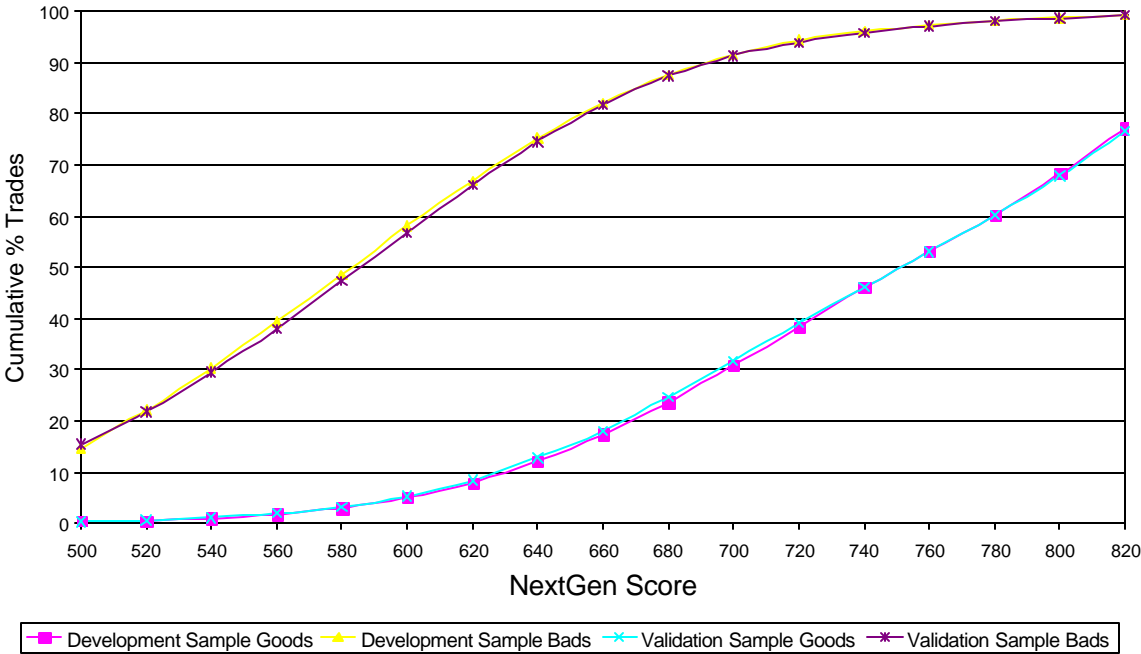
The actual numbers of consumers migrating above or below a specific cutoff will vary by lender and be based on the portfolio, product offer, marketing strategy and population segment in question. The impact to score distributions (the number of consumers scoring above or below a given cutoff) will likely be larger than what is typically experienced with a Classic FICO redevelopment. Therefore, lenders wanting to maintain booking volume will need to evaluate at a minimum, score distributions on their own portfolios to determine whether changes are necessary.

Validation

After NextGen was developed at each CRA, a separate sample was scored to ensure that it operated effectively. A portion of the credit records were removed from the NextGen development sample and saved as a separate data set, known as the validation sample. The validation portion was approximately 50% of the entire sample and was excluded from scorecard development.

The ability of the score to distinguish future “good payers” from future “poor payers” was compared between the development and validation samples to verify consistency. The chart below indicates how close the development and validation results were for one of the NextGen models:

**Comparison of Validation Sample to Development Sample
Trade Line Level Performance Definition**



Data provided by Trans Union

Your Fair, Isaac representative can help you measure NextGen’s performance on your own portfolio by conducting a retrospective analysis. Credit grantors can get customized odds validations by using this service that examines actual accountholder credit performance reported to the CRA by NextGen score. This service can help lenders gauge the incremental lift and score distribution shifts that will occur when switching to NextGen from Classic FICO. Ask your Fair, Isaac representative for more information on this valuable service.

Chapter 3: Using NextGen

Transitioning from Classic FICO to NextGen

As with any new scoring product, changes to bureau access for the on-line inquiry will be required since the inquiry-invoking logic for NextGen is different than it is for Classic FICO. Contact your respective CRA representative for this information. In addition, application systems will need to be modified to accommodate the new alphanumeric score reason codes and letter generating systems and customer service screens will need to translate these codes into the appropriate narrative explanations.

NextGen scores will be accompanied by up to four reason codes that indicate why the score is not higher. The score reason codes – which are now two-digit alphanumeric – and the associated reason statements provide the necessary detail for use in complying with adverse action notification requirements as well as in supporting customer service needs. More NextGen reason statements should make the scores easier for consumers to understand when used for customer service.

System changes will generally be required to accommodate the new alphanumeric score reason codes and broader score range. For example, if your system has a hard-coded check for valid score ranges, you will want to ensure that the expanded score range (150 to 950) is accepted as valid. In addition, lenders in some cases may wish to post NextGen scores in a new field for risk management systems or customer databases. Lenders are encouraged to develop an implementation plan prior to the transition from Classic FICO to NextGen to determine the nature and extent of system modifications that will be required. Various steps to consider include:

- **Assess overall business impact.** Determine all aspects of how you are currently using credit bureau risk scores including specific decision areas, functional areas and portfolios. Changing scores will impact your structural systems (i.e., underwriting systems, prospect and customer databases and collections).
- **Validate NextGen on your portfolio.** A retrospective analysis can help you evaluate the boost in predictiveness by portfolio and decision area, test the impact on implementation strategies (i.e., changes to score cutoffs, acceptance rates, delinquency rates), understand interactions of the new

score with other tools, evaluate score conversion impact on customers, etc. Please contact your CRA or Fair, Isaac for more information.

- Develop an implementation plan. Determine which decision areas to focus on first for immediate versus longer-term benefits. Define policy, training and programming requirements.
- Determine strategy design. Consider how to evaluate and modify each strategy relative to factors such as score cutoffs, volume impacts, account-level score changes, operations impacts, effects on other tools and bottom-line benefits.
- Monitor score performance. Score performance measurement and tracking systems are key to ensuring that the benefits are being derived across your organization.
- Implement on-site training. Conduct training to facilitate the general understanding of benefits and impacts from switching to NextGen as well as operational changes for each functional area.

Fair, Isaac and the CRAs can help you in each of these areas. We are familiar with the challenges of deploying a new score, and these experiences have shown us the value of advanced planning, training and a staged implementation. In addition, we are working with the major processors and third-party software vendors to facilitate your conversion to NextGen. Contact your Fair, Isaac representative or the Fair, Isaac Helpline at 1-800-777-2066 for conversion planning assistance or help.

Validation Options

To gain the largest benefit from NextGen, it is ideal to analyze how the score performs on your portfolio in order to establish benchmarks for future use. This *calibration* process generally involves one of two approaches: a retrospective or prospective analysis. Both approaches are very reliable at determining the performance of the NextGen score on a given portfolio.

A retrospective analysis, also referred to as a historical validation, involves validating the score's performance on a set of existing accounts. It is accomplished by obtaining NextGen scores on your customers and determining actual performance associated with each account. This calibration provides a benchmark to help guide decisions until actual performance using NextGen can be measured. Examples of performance categories that are evaluated include:

- Bankruptcy
- Charge-offs
- Major delinquency (90 – 150 days)
- Delinquency (60 – 89 days)
- Minor delinquency (30 days)
- No delinquency

The validation begins with the selection of a group of accounts that have been on your books for at least 12 – 18 months. The CRA will score each account's credit bureau record, extracted from the CRA's archive file (generally 12 – 18 months earlier), and calculate NextGen and other requested scores based on the information contained in the archived credit file.

By analyzing the distribution of NextGen scores that were calculated at the observation date for each performance category, customized odds summaries are developed for each performance category. The results provide credit grantors with the observed performance odds on their portfolio and are useful for establishing initial score cutoffs.

If a retrospective analysis is not feasible because of insufficient volume or archive data is not available, then an alternate approach is to test the score prospectively. Two methods are recommended:

- Append NextGen scores to accounts and monitor their subsequent performance to evaluate results. Generally, this type of tracking requires a sufficient amount of time (i.e., 12 months) before preliminary results are known.
- Append NextGen scores to accounts and test scores on a small segment of accounts and/or make strategy decisions using the scores on a portion of the accounts from various score ranges. Monitor account performance for the next 12 months.

Because prospective methods do not provide the lender with an understanding of performance within a given score range before using the score, a conservative

strategy is recommended. For example, if used for new account booking purposes, the new strategy should not differ much from current business policy and existing approval rates should remain fairly consistent. It takes a fair amount of time before the performance measures are available when utilizing the prospective approach.

An examination of early account benchmarks, such as delinquent behavior and usage, in conjunction with score distributions, can approximate those performance measures that take time to manifest.

Regardless of whether a retrospective or prospective analysis is conducted, the results should be evaluated as part of an ongoing effort to track the performances of and any changes to the portfolio population. For assistance interpreting your performance results, contact your Fair, Isaac representative or Fair, Isaac's Credit Bureau Helpline at 1-800-777-2066.

Using Validation Charts

Fair, Isaac risk score validation charts (previously referred to as odds charts) display the performance for consumers represented in the national development sample. The charts reflect the combined experience of many lenders in the aggregate, and do not provide a precise prediction of the actual odds that a given lender will experience. The validation charts should be used to demonstrate that the scores rank-order risk for a variety of industries, applications and performance outcomes. They may also be used as evidence of *general performance expectations*, and to compare portfolio performance to general industry performance.

Each set of validation charts is specific to a scoring model (i.e., Classic FICO or NextGen FICO), an industry (i.e., Real Estate Loans) and an application (acquisition or account management). Lenders should choose the industry that best reflects their portfolio. The validation charts for account management include all consumers with trade lines in the base category opened prior to the observation date. The validation charts for acquisitions include only consumers with "new" trade lines opened within the 6 months following the observation date. Within each set of charts are four pages with different negative performance categories:

- 60 days delinquent or worse
- 90 days delinquent or worse

- Charge-off/Major derogatory
- Bankruptcy

Report Versus Trade Line

The new NextGen validation charts evaluate performance in two different ways – by report and by trade line. The left side of the chart (Evaluating Performance By Report) evaluates performance using the same methodology as prior Classic FICO validation charts. It represents a worst-case scenario because a consumer with negative performance on one trade line in the base category is treated the same as a consumer with negative performance on several trade lines in the base category.

SCORE RANGE		EVALUATING PERFORMANCE BY REPORT						EVALUATING PERFORMANCE BY TRADE LINE					
		BASE CATEGORY		NEGATIVE PERFORMANCE		%	REPORT ODDS	BASE CATEGORY		NEGATIVE PERFORMANCE		%	TRADE ODDS
		# OF CONSUMER REPORTS	CUMULATIVE %	# OF CONSUMER REPORTS	CUMULATIVE %	NEGATIVE TO BASE (REPORTS)	(VALUE to 1)	# OF TRADES	CUMULATIVE %	# OF TRADES	CUMULATIVE %	NEGATIVE TO BASE (TRADES)	TRADE ODDS (VALUE to 1)
<500		776	0.4	419	3.9	54.0	0.9	874	0.4	466	3.4	53.3	0.9
500-519		670	0.8	276	6.5	41.2	1.4	760	0.7	296	5.6	38.9	1.6
520-539		941	1.4	345	9.8	36.6	1.7	1,071	1.2	387	8.4	36.1	1.8
540-559		1,587	2.3	519	14.7	32.7	2.1	1,889	2.0	595	12.8	31.5	2.2
560-579		2,454	3.7	709	21.3	28.9	2.5	2,988	3.3	831	18.8	27.8	2.6
580-599		4,195	6.2	969	30.5	23.1	3.3	5,190	5.5	1,174	27.4	22.6	3.4
600-619		5,991	9.6	1,100	40.8	18.4	4.4	7,861	8.9	1,377	37.5	17.5	4.7
620-639		8,765	14.7	1,281	52.9	14.6	5.8	11,838	14.0	1,657	49.6	14.0	6.1
640-659		10,652	20.9	1,158	63.8	10.9	8.2	14,814	20.4	1,547	60.9	10.4	8.6
660-679		13,143	28.5	1,075	73.9	8.2	11.2	18,290	28.3	1,451	71.6	7.9	11.6
680-699		13,686	36.4	808	81.5	5.9	15.9	19,545	36.8	1,149	80.0	5.9	16.0
700-719		14,664	44.9	608	87.2	4.1	23.1	20,699	45.7	855	86.2	4.1	23.2
720-739		13,611	52.8	435	91.3	3.2	30.3	18,986	53.9	630	90.8	3.3	29.1
740-759		13,373	60.5	295	94.1	2.2	44.3	18,732	62.0	426	93.9	2.3	43.0
760-779		13,007	68.0	222	96.2	1.7	57.6	17,593	69.6	305	96.2	1.7	56.7
780-799		13,747	76.0	170	97.8	1.2	79.9	18,288	77.5	217	97.8	1.2	83.2
800-819		12,280	83.1	104	98.8	0.9	116.6	15,761	84.3	135	98.8	0.9	116.1
820-839		12,927	90.6	83	99.5	0.6	155.3	16,371	91.4	107	99.5	0.7	151.8
840+		16,220	100.0	50	100.0	0.3	326.0	19,907	100.0	63	100.0	0.3	313.1
TOTAL		172,688	100.0	10,626	100.0	6.2	15.3	231,458	100.0	13,668	100.0	5.9	15.9

Note: This chart represents the performance of accounts in the base category that were opened within 6 months following the observation date.



Performance Date: July 1997
Observation Date: July 1995

Publication Date: May 2000

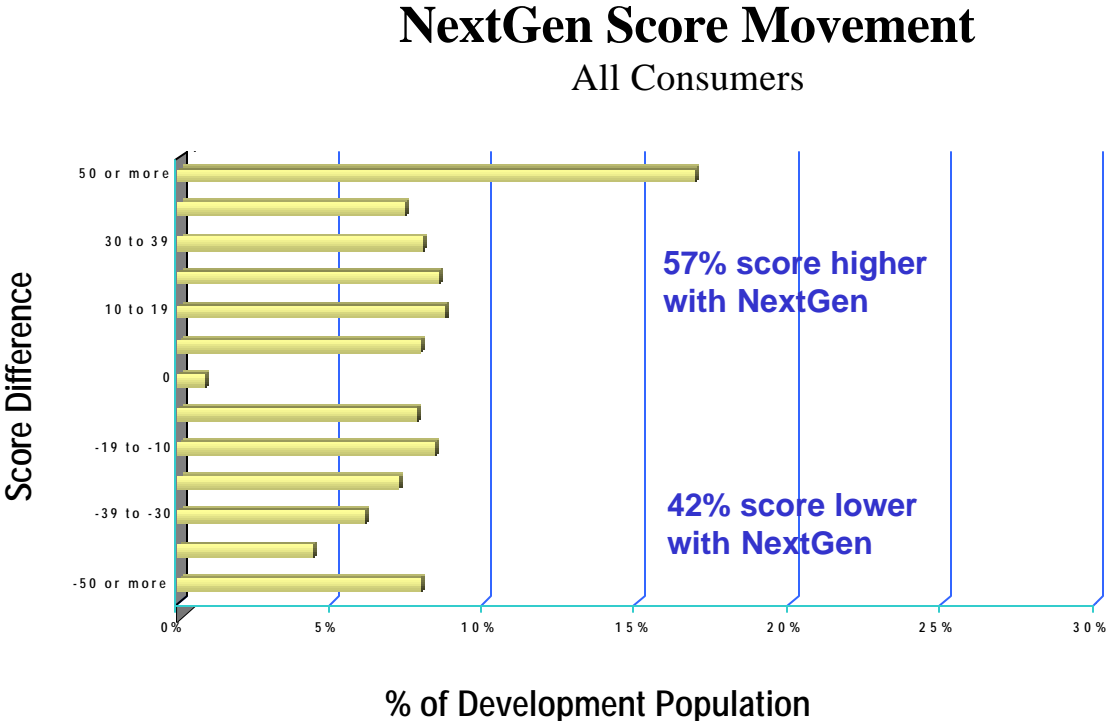
The right side of the validation chart (Evaluating Performance By Trade Line) evaluates performance by trade line and represents the *degree* of consumers' positive or negative credit performance. As lenders move toward extending credit to higher risk consumers, this more refined method of evaluating performance may more closely resemble lenders' performance expectations. This new method of measuring performance matches the performance outcome classification used to develop NextGen, although lenders may use either performance measure with Classic FICO or NextGen.

Fair, Isaac recommends that lenders perform ongoing tracking and evaluation of their portfolios to gain insights into performance expectations on each portfolio.

Once actual performance expectations are understood by score range, actual score distributions on applicants, prospects or customers may be evaluated in connection with these performance expectations for each score range to select score cutoffs and design strategies.

Revising Score Cutoffs

When transitioning from Classic FICO to NextGen, score distribution shifts are inevitable due to the new design blueprint. Based on the development samples, less than 1% of the consumer files received the same score. Some files scored much higher with NextGen and some scored significantly lower. Overall, 57% of the consumers scored higher and approximately 42% scored lower as the following chart indicates:



Data provided by Equifax

This chart also demonstrates that the overall score distribution will be different for NextGen. If a lender expects a certain number of accounts or applicants to score above a given Classic FICO score cutoff (or within a given score range), the

number will most likely differ when the lender transitions to NextGen. As a result, lenders will need to re-evaluate score cutoffs if they are focused on maintaining approval rate or booking volumes.

There are two approaches to gauge the impact of NextGen score movement. One is to obtain live scores and track volumes for a short period of time (3 to 6 months) and adjust score cutoffs as warranted. Fair, Isaac recommends ongoing tracking using this approach. The alternate method involves using archive data for a retrospective analysis. When scores are matched to the lender's masterfile performance, the lender can analyze portfolio-specific odds and/or bad rate, and then base cutoffs on these odds. Your Fair, Isaac representative can assist you in determining the appropriate score cutoffs to use with NextGen.

Minimum Scoring Criteria

To ensure that NextGen scores used by a credit grantor are based on sufficient and current information, certain types of files were excluded from the development process. As a result, NextGen only scores credit files having at least:

- One trade line opened for at least six months
- One trade line updated within the last six months
- The individual is not deceased

These requirements may be satisfied by a single trade line, provided the trade line does not contain disputed information or any indication on the credit file that the subject is deceased. When a credit file cannot be scored, NextGen returns an Exclusion Code that indicates the reason why. For a complete list of the NextGen Exclusion Codes, please refer to Appendix B. (Please note Exclusion Codes may vary slightly by CRA.)

Important Note: The minimum scoring criteria for the NextGen models are the same as the criteria for the Classic FICO models.

NextGen Reason Codes & Reason Statements

In order to provide consumers with specific reasons for any adverse action taken, up to four reason codes are provided with each NextGen score. The reasons associated with these codes are used to explain to consumers the specific reasons for any negative action taken or why a score was less than optimal. The reasons are defined on the credit report next to the score in either a narrative statement or as a code.

For a complete listing of the NextGen reason codes and their associated statements, please refer to Appendix A.

Two significant changes have occurred as a result of the predictive variables utilized in NextGen. First, due to the sheer number of variables used in NextGen, 2-digit alphanumeric reason codes are returned as opposed to 2-digit numeric only codes that were used in the Classic FICO models. Secondly, there are more score reasons since the variables are more complex - which should assist lenders from a customer service perspective. However, the alphanumeric codes may require minimal system changes to facilitate their usage. Contact your Fair, Isaac representative if you have questions regarding system changes.

As with Classic FICO, the reason codes are listed on the credit report in order of severity. In instances where the consumer is not denied credit, the reasons associated with the codes are not typically returned to the consumer. Score reasons are a benefit to the credit grantor because they are used to explain what items on the credit report most influenced the decision without requiring the specifics of the score computation. The details of the score computation are proprietary to Fair, Isaac and are not available to either the credit grantor or the consumer.

The reason codes are determined by identifying the variables where the consumer lost the most points versus the maximum amount of points possible. Statements relating to these variables are then returned. In the following example, the consumer lost the most points on the Number of Public Records variable. Since the maximum amount of points possible is 55 and the points achieved were zero, the difference is 55. Since no other variable had a difference from the maximum greater than 55, the first statement returned will be “Derogatory public record or collection filed.” The next statement returned relates to the Revolving Utilization variable, since this variable is associated with the second highest amount of points lost.

Variable	Attribute Value	Points Achieved	Maximum Points	Difference
Number of delinquencies	0	75	75	0
Number of finance trades	3	25	35	10
Number of recent inquiries	3	25	45	20
Revolving utilization %	75	15	65	50
Number of public records	2	0	55	55

Programming Implementation Issues

A change was made as a result of the predictive variables utilized in NextGen. Due to the sheer number of variables used, 2-digit alphanumeric reason codes are returned as opposed to 2-digit numeric only codes that were used in Classic FICO. The alphanumeric codes will likely require some system changes to facilitate their usage. For example, application systems may need to be modified to accommodate the new score reason codes and letter writing systems will need to translate the appropriate code into the narrative explanation. This change should result in fairly minimal programming for most application processors. Contact your Fair, Isaac representative or the Fair, Isaac Helpline at 1-800-777-2066 for any transition related assistance.

Appendix A – NextGen Reason Codes & Statements

Description	Reason Code
Account payment history is too new to rate	A0
Accounts last reported in delinquent status	A1
Amount of credit available on revolving accounts	A2
Amount owed on accounts is too high	A3
Amount owed on bank/national revolving accounts	A4
Amount owed on collections filed	A5
Amount owed on delinquent accounts	A6
Amount owed on recently opened accounts is too high	A7
Amount owed on recently opened bank/national revolving accounts is too high	A8
Amount owed on recently opened consumer finance company accounts is too high	A9
Amount owed on recently opened retail accounts is too high	B0
Amount owed on recently opened revolving accounts is too high	B1
Amount owed on recently opened sales finance company accounts is too high	B2
Amount owed on retail accounts	B3
Amount owed on revolving accounts	B4
Amount owed on revolving accounts is too high	B5
Amount past due on accounts	B6
Bankruptcy filing reported	D0
Date of last inquiry too recent	D1
Delinquency on accounts	D2
Delinquency on recently opened accounts	D3
Derogatory public record or collection filed	D4

Description	Reason Code
Frequency of delinquency	D5
Level of delinquency on accounts	D6
Serious delinquency	D7
Serious delinquency, and public record or collection filed	D8
Insufficient installment payment history	F0
Lack of recently established credit accounts	F1
Lack of recently established revolving accounts	F2
Lack of recent auto finance loan information	F3
Lack of recent auto loan information	F4
Lack of recent bank/national revolving information	F5
Lack of recent consumer finance company account information	F6
Lack of recent installment loan information	F7
Lack of recent reported mortgage loan information	F8
Lack of recent non-mortgage installment loan info	F9
Lack of recent retail account information	G0
Lack of recent revolving account information	G1
No mortgage loans reported	G2
No recent bank/national revolving balances	G3
No recent non-mortgage balance information	G4
No recent retail balances	G5
No recent revolving balances	G6
Length of time accounts have been established	J0
Length of time auto accounts have been established	J1
Length of time bank/national revolving accounts have been established	J2
Length of time consumer finance company loans have been established	J3
Length of time installment loans have been established	J4

Description	Reason Code
Length of time reported mortgage accounts have been established	J5
Length of time open installment loans have been established	J6
Length of time retail accounts have been established	J7
Length of time revolving accounts have been established	J8
Time since account activity is too high	J9
Time since delinquency is too recent or unknown	K0
Time since derogatory public record or collection is too short	K1
Time since most recent account opening is too short	K2
Time since most recent auto account opening is too short	K3
Time since most recent bank/national revolving account opening is too short	K4
Time since most recent consumer finance company account opening is too short	K5
Time since most recent installment loan account opening is too short	K6
Time since most recent retail account established	K7
Time since most recent revolving account established	K8
Time since most recent sales finance company account opening is too short	K9
Number of accounts currently in delinquent status	M0
Number of accounts with delinquency	M1
Number of accounts with recent delinquency	M2
Number of active bank/national revolving accounts	M3
Number of active retail accounts	M4
Number of adverse/derog public records	M5
Number of bank/national revolving accounts with balances	M6
Number of bank/national revolving accounts	M7
Number of bank/national revolving or other revolving accounts	M8
Number of collections filed	M9

Description	Reason Code
Number of consumer finance company accounts established relative to length of consumer finance history	N0
Number of consumer finance company inquiries	N1
Number of established accounts	N2
Number of open installment loans	N3
Number of recently opened consumer finance company accounts	N4
Number of retail accounts	N5
Number of retail accounts with balances	N6
Number of revolving accounts	N7
Number of revolving accounts with balances higher than limits	N8
Proportion of balance to limit on auto accounts is too high	P0
Proportion of balance to limit on delinquent accounts is too high	P1
Proportion of balance to limit on consumer finance company accounts is too high	P2
Proportion of balance to limit on retail accounts is too high	P3
Proportion of balances to credit limits on bank/national revolving or other revolving accounts too high	P5
Proportion of balances to credit limits on revolving accounts is too high	P6
Proportion of balance to limit on sales finance company accounts is too high	P7
Proportion of balances to loan amounts on mortgage loans is too high	P8
Proportion of loan balances to loan amounts is too high	P9
Proportion of revolving balances to total balances is too high	Q0
Proportion of balances to credit limits on bank/national revolving accounts is too high	Q1
Too few accounts currently paid as agreed	R0
Too few accounts with balances	R1
Too few accounts with recent payment information	R2

Description	Reason Code
Too few active accounts	R3
Too few bank/national revolving accounts	R4
Too few bank/national revolving accounts with recent payment information	R5
Too few consumer finance company accounts with recent payment information	R6
Too few installment accounts	R7
Too few retail accounts	R8
Too few retail accounts with recent payment information	R9
Too few revolving accounts	S0
Too few revolving accounts with recent payment information	S1
Too few sales finance company accounts with recent payment information	S2
Too many accounts recently opened	T0
Too many accounts with balances	T1
Too many bank/national revolving accounts	T2
Too many consumer finance company accounts	T3
Too many installment accounts	T4
Too many inquiries last 12 months	T5
Too many recently active accounts	T6
Too many recently active auto accounts	T7
Too many recently active bank/national revolving accounts	T8
Too many recently active consumer finance company accounts	T9
Too many recently active installment loan accounts	U0
Too many recently active retail accounts	U1
Too many recently active sales finance company accounts	U2
Too many recently opened accounts with balances	U4
Too many recently opened bank/national revolving accounts	U5

Description	Reason Code
Too many recently opened consumer finance company accounts	U6
Too many recently opened installment accounts	U7
Too many recently opened retail accounts with balances	U8
Too many recently opened revolving accounts	U9
Too many recently opened revolving accounts with balances	V0
Too many recently opened sales finance company accounts	V1
Too many retail accounts	V2
Too many revolving accounts	V3
Too many recently opened bank/national revolving accounts with balances	V4
Payment due on accounts	X0

Appendix B – NextGen Exclusion Codes

The following are the CRA exclusion codes identifying the reason for excluding a credit file from scoring:

Value	Definition
D	Subject deceased indicated
F	File unavailable for scoring
N	No trade lines
I	Insufficient or unknown trade line history
R	No recently reported trade line information (no trade line updates in last 6 months)
X	No trade lines recently reported without disputed information
Z	Record unable to be scored

Appendix C – NextGen Frequently Asked Questions

GENERAL QUESTIONS

Q: What are the primary features of NextGen?

- A. There are 3 key design modifications behind NextGen’s sharper risk assessment: 1) significantly more complex predictive variables, 2) an expanded segmentation scheme and 3) a more refined performance outcome.
1. Each NextGen model utilizes more than 80 complex predictive variables, including many multi-dimensional “*mini-models*” that capture key interactions within the data. These predictors evaluate the relationship between the various elements of a consumer’s credit report. For example, examining payment performance on new accounts (# of new accounts and delinquencies on those accounts) to distinguish between acquiring more debt or merely rate shopping. There are more than double the number of predictive variables in the NextGen models compared to Classic FICO models.
 2. The NextGen models also incorporate an expanded segmentation scheme to analyze consumers across a *broader risk spectrum*. There are now *18 scorecards* in each NextGen model, compared to 10 scorecards for the Classic FICO models. The primary difference between the segmentation schemes is a more refined look at credit history. Classic FICO segments consumers into “derogatory” versus “non-derogatory” categories depending on the presence or absence of any serious delinquency or derogatory references in a consumer’s credit history. NextGen groups consumers into various categories across the full risk spectrum -- those with very clean credit histories, those with mild forms of prior delinquency and those with more severe derogatory history. The NextGen segmentation scheme also uses some of the traditional factors used in the Classic FICO risk models such as file thickness and file age.
 3. Finally, the NextGen models utilize a new *refined performance outcome classification* that distinguishes between varying degrees of future credit performance. In developing the Classic FICO risk models, Fair, Isaac classified consumers as “high risk” or “low risk” based on their worst level of delinquency on *any* credit obligation (or trade line) in the two years after the date of scoring. For each NextGen risk model development, Fair, Isaac classified consumers according to their *degree* of positive or negative performance *across all credit obligations*. For instance, a consumer who went delinquent on two out of ten trades was categorized differently than one who went delinquent on eight out of eight trades. This new performance outcome classification better reflects the current lending environment. Lenders today are more willing to extend credit to marginal

applicants provided they can price their offering relative to the risk. The NextGen risk models will assist lenders in risk-based pricing and will enable more confident decisions across the entire risk spectrum.

Q. Where can I get NextGen scores?

A. The NextGen scores are called PinnacleSM at Equifax and PRECISIONSM at Trans Union. Pinnacle is now available for prescreening and account review, and on-line in the U.S. PRECISION is in pilot mode through January 2001, and then generally available beginning February 2001. Experian is very excited about NextGen, and we are working with Experian to offer a similar product soon. The NextGen scores are also available through Fair, Isaac's PreScore[®] Service and ScoreNet[®] Service at both Equifax and Trans Union and will be available at Experian in the near future.

Q: Why did Fair, Isaac develop NextGen risk scores?

A: The ongoing changes in data reporting and credit usage in the United States have opened the door for advancements in risk prediction. To maintain standards for quality and innovation, Fair, Isaac believed the best way to capitalize on this opportunity was to develop NextGen. However, to ensure lenders have a consistent experience with the scores and to minimize the operational impact of adopting a new score, Fair, Isaac engineered the NextGen models to maintain a "look and feel" consistent with that of the Classic FICO models. The NextGen models were developed using a *new design blueprint* that capitalizes on the latest Fair, Isaac research into population segmentation analysis, data exploration and predictive variables as well as the ever-changing CRA databases. Like Classic FICO, the NextGen risk scores rank-order consumer credit risk -- serious delinquency, charge-off, repossession, foreclosure and bankruptcy. The NextGen models are a *more advanced tool* with which lenders can evaluate consumer risk, particularly for specialty markets such as loans to emerging credit users, nonprime and premier customers.

Q: Do the NextGen risk models replace the Classic FICO risk models?

A: The NextGen models provide a choice to lenders who are looking for improvements in risk assessment. The NextGen design blueprint unlocks new layers of predictive power embedded in the CRA databases. However, because many lenders rely on the Classic FICO models for their operation and strategies, we will continue to update and support them. By offering both NextGen risk models and Classic FICO risk models, we are giving lenders a choice between two powerful solutions to meet their credit risk management needs.

Q: Does the new performance outcome definition treat performance on different types of trade lines differently (i.e., mortgage trades versus bankcards)?

A: Just as in the Classic FICO risk models, performance on trades from different industries are treated the same. As we explore future enhancements, we may find cases where it makes sense to treat certain types of trade lines differently from other types of trade lines.

STRATEGY AND USAGE QUESTIONS

Q: Do the NextGen risk models differ from the Classic FICO risk models in what they predict?

A: The NextGen risk models, like the Classic FICO risk models, are designed to rank-order consumers according to the likelihood of default on credit obligations. The scores will be three digit numbers with the higher numbers indicating lower risk; however, due to the refined risk assessment, the range of possible scores is slightly greater for NextGen than Classic FICO. The new score range is 150-950, compared to the 300-850 for Classic FICO risk scores and 250-900 for Classic FICO industry option scores.

Q: Will I approve more applications at a given score cutoff with NextGen?

A: Lenders will have flexibility in setting NextGen score cutoffs to better meet their business objectives whether to increase booking volume, reduce risk or in some cases both. Among those customers who exhibit marginal risk behavior with Classic FICO, some of those scoring below the Classic FICO risk score cutoff will score higher with NextGen, and some with a Classic FICO risk score above the cutoff will score below the cutoff with NextGen. This score movement is due to the new design blueprint and the more refined risk assessment. The actual numbers of consumers migrating above or below a specific cutoff will vary by lender and be based on the portfolio. The impact to score distributions (the number of consumers scoring above or below a given cutoff) will likely be larger than what is typically seen with a Classic FICO model redevelopment. Therefore, lenders wanting to maintain booking volume will need to evaluate at a minimum, score distributions on their own portfolios to determine whether changes are necessary.

Q: Does a NextGen risk score mean the same thing as a Classic FICO risk score? Is a 700 still a 700?

A: The NextGen risk scores have been aligned so that a NextGen score of 700, for example, represents the same level of risk as a Classic FICO score of 700. This same odds-to-score relationship means that the odds at a specific score range are designed to be the same. However, because the NextGen models are a more advanced scoring system with a broader score range, score distribution shifts should be anticipated. Therefore, it is likely that an individual consumer's NextGen risk score will most likely be different from their Classic FICO risk score (either higher or lower).

Q: Will I need to re-evaluate all of my cutoffs/strategies?

A: Fair, Isaac has worked hard to make the transition as smooth as possible by developing the NextGen risk models with the same odds-to-score relationship as the Classic FICO risk models. Lenders choosing score cutoffs based on marginal risk (or marginal odds) should not need to adjust score cutoffs or strategies to maintain the same level of risk. The difference between the scores will be seen in the score distribution shifts that result from the more refined risk assessment. Lenders choosing score cutoffs based on volumes may need to make adjustments to their score cutoffs to maintain consistent volumes. Fair, Isaac recommends that lenders monitor the impact of converting to the NextGen risk scores on their portfolios and make any necessary adjustments. Monitoring will be especially important for lenders who set cutoffs based on volumes.

Q: How is consumer credit shopping behavior treated in the NextGen risk models?

A: When a consumer actively shops for credit, an inquiry is posted to the CRA database. The inquiry treatment for the NextGen risk models is consistent with that of the Classic FICO risk models. Only consumer-initiated, credit-related inquiries can impact a score. All mortgage and auto-related inquiries occurring within 30 days of the time of scoring are ignored. In addition, auto and mortgage-related inquiries occurring before the 30-day period are treated as a single inquiry if they occurred over a 14-day period.

Q: Will the NextGen risk models score more consumers?

A: The NextGen risk models use the same minimum scoring criteria as the Classic FICO risk models. The purpose of minimum scoring criteria is to avoid returning a score for files with data that is too outdated or insufficient for sound credit risk assessment.

Q: How will NextGen help me consult with consumers and comply with the Equal Credit Opportunity Act (ECOA) and its implementing regulation, Regulation B?

A. Just as the Classic FICO scores provide up to four reasons that indicate why the score wasn't higher, NextGen is also accompanied by up to four score reasons. These reasons may be provided to help the consumer understand what they need to do to improve their score over time and may also be used to satisfy adverse action notification requirements.

Q. What implementation information do I need to know to switch to NextGen?

A: As with any new scoring product, changes to bureau access for the on-line inquiry will be required. Contact your CRA representative(s) for such information. In addition, application systems will need to be modified to accommodate new score reason codes and letter generation systems will need to translate the appropriate code into the narrative explanation. The development of new score reason codes and associated explanations was necessary due to the large number of predictive variables that were utilized in the NextGen models. We have exceeded the number of 2-digit *numeric* code numbers and have therefore switched to 2-digit *alphanumeric* codes. This change should result in fairly minimal programming for most application processors. An example of a new score reason code is: "Amount owed on recently opened accounts is too high."

Q: How does the new performance definition impact odds charts?

A: The NextGen validation charts (previously known as odds charts) are primarily a way of showing that a score rank-orders risk in a given lending situation. For this purpose, the performance definition shown on the chart need not be the same as the performance definition used in development. In fact, Fair, Isaac has always produced validation odds charts with four different performance definitions (60+/any derog, 90+/any derog, charge-off/major derog and bankrupt) so that lenders could choose the definition most appropriate for their own performance measurement standard.

A more thorough description of how and why we are evaluating odds by report and by trade is included in a client education piece entitled "How to read Fair, Isaac risk score validation charts" which is provided with every NextGen validation odds chart. Please ask your Fair, Isaac representative for copies of the validation charts for the specific industries and applications you are interested in.