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Missouri Petroleum Storage Tank Insurance Fund
Review of Liabilities and Loss Projections
as of December 2002

Prepared by:
Lee Bowron, ACAS, MAAA
Hayden Burrus, FCAS, MAAA
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LEE M. BOWRON, ACAS, MAAA
410 Euclid Avenue · Birmingham, Alabama 35213 · *Phone* 205.870.0595 · *Cell* 205.422.5184
Fax 205.870.0148 · *Email* lbowron@matthewsactuarial.com · www.matthewsactuarial.com

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Review of Liabilities and Loss Projections
Performed by: Matthews Actuarial LLC

1. Executive Summary

This report makes an actuarial estimate of liabilities at December 31, 2002 of 175,795K for the Missouri Petroleum Storage Tank Insurance Fund. Details of the operation of the fund are noted in Section 4.

This includes an estimated 97,279K of case reserves and 78,498K of IBNR (see term definitions below). Data was adjusted approximately one month to estimate year-end data as of December 31, 2002.

Projections were also made on a calendar year cash flow basis from 2003 until 2012. Projections include anticipated revenue from transport load fees and expected expenses and claims payments. Claims payments are projected for both existing claims and new claims reported in the future. The program sunsets on December 31, 2010 and no revenue is projected after this date.

These projections consisted of two separate scenarios. First, it was assumed that additional funding of "remedial claims" (as described below) would occur. With additional funding of remedial claims, the balance of the fund at 2010 is projected to be at (4,565) K.

The second projection assumed no additional funding of remedial claims. This forecast estimated a balance of 29,740K in 2010. However, the projection shows a deficit two years after the sunset date.

The variance of these forecasts in the outlying years was analyzed and found to be large. This is due to the high amount of loss development on these program, and uncertainty in the future years on the frequency, severity and payout pattern of the fund.

Our simulations show that the range of possible outcomes increase the further into the future we perform projections of fund balances. As an example, we note that under "Projection A" (funding of remedial claims), there is a 10% probability of having a fund deficit of more than $41 million in 20 10 even though the expected fund deficit is only $2.4 million (Exhibit V.A, Page 1 of 9).

Projection "A" (Includes Remedial Funding)

- The current fund balance of over $40 million will probably be depleted before 2010 (over 52% probability).
- There is a reasonable possibility the current fund balance will be depleted as soon as 2007 (10% probability).
- We expect the fund balance to be depleted in 2010. Our expectation of the fund deficit on December 3 1, 2010 is approximately $4.6 million (50% probability).

Projection "B" (No Remedial Funding)

- There is a small but not remote possibility that the current fund balance of over $40 million will be depleted before 2008 (10% probability).
- There is an 18% possibility the current fund balance will be depleted as soon by 2010.
- We expect the fund will remain solvent through 20 10. Our expectation of the fund balance as of December 31, 2010 is approximately $29 million (50% probability).

A further source of uncertainty is the expected introduction of "Risk Based Guidance" in 2003. The impact of this is unclear but it is expected that claims settlement under this standard will cause certain costs to shift.

2. Purpose of Study

The purpose of this study is to review the reserves and loss projections for the Missouri Petroleum Insurance Fund. The fund's Board of Trustees contracted with Matthews Actuarial LLC to perform this storage tank review. Loss projections have been made for the years 2003 through 2012.

Actuarial data and guidance for this study were provided by both the Board's staff and Williams and Company (the third-party administrator of this program).

3. Limitations

Actuarial projections rely on extrapolating past trends to make assumptions about future development and emergence of claims. Since these claims are subject to significant random deviations as well as changes in the legal and regulatory climate, it is possible that the actual results may differ significantly from the projections that have been made.

Consistency - The conclusions are predicated on the assumptions that the selected reporting, reserving, and payment patterns, frequency and severity trends, and claim distributions apply, and will continue to apply, to the program. The risk exposure covered by the program as well as the claim management and settlement practices are assumed to be consistent over time, except as noted.

Entire Document - The study conclusions are developed in the accompanying text and exhibits, which together comprise the report.

Data Reliance - the PSTIF Board of Trustee's staff and Williams and Company provided the data for this study. In the study, we relied on the accuracy and completeness of this data without independent audit. If the data is inaccurate or incomplete, our findings and conclusions may need to be revised.

Management Reliance - the PSTIF Board of Trustee's staff and Williams and Company provided information concerning the program structure and risk exposure. In the study, we relied on the accuracy and completeness of this information without independent verification. If the information is inaccurate or incomplete, our findings and conclusions may need to be revised.

Underlying Assumptions - In addition to the assumptions stated in the report, numerous other assumptions underlie the calculations and results presented herein.

Study Foundations - The study conclusions were based on analysis of the available data and on the estimation of many contingent events. Future costs were developed from the historical claim experience and covered exposure, with adjustments for anticipated changes.

Significant Digits - Numbers in the exhibits are generally shown to more significant digits than their accuracy suggests. This has been done to simplify review of the calculations.

Interpretation of Conclusions - Some of the assumptions, methods, and conclusions in this report are of a significantly technical nature. The recipient should understand the assumptions, methodology and possible variability in results that are inherent in our conclusions. We are available to discuss our assumptions, methodology and conclusions in greater detail.

Assets - We have assumed that valid assets, which have appropriate maturities and sufficient liquidity to meet the cash flow requirements of the Missouri Petroleum Storage Tank Insurance Fund, support the reserves. We make no guarantee that Missouri Petroleum Storage Tank Insurance Fund funds will prove sufficient.

Uncertainty - Due to the uncertainties inherent in the estimation of future costs, it cannot be guaranteed that the estimates set forth in the report will not prove to be inadequate or excessive and actual costs may vary significantly from our estimates.

Unanticipated Changes - Unanticipated changes in factors such as judicial decisions, legislative actions, claim consciousness, claim management, claim settlement practices, and economic conditions may significantly alter the conclusions.

Best Estimate - These caveats and limitations notwithstanding, the conclusions represent our best estimate of the actuarial status and funding requirements of the program as of the date of this report.

4. Terms used in Study

IBNR. IBNR stands for claims Incurred But Not Reported. In general, IBNR refers to both development on known claims ("Incurred but Not Enough Reported") and unknown claims ("Incurred but Not Reported"). However, these liabilities are generally known quickly after an incident, or the incident date underlying these claims is not easily determinable. Therefore, the vast majority of IBNR is for known claims.

Loss. The use of the term loss without modification includes loss and allocated adjustment expense (ALAE) but do not include unallocated loss adjustment expense (ULAE).

ALAE. Allocated Loss Adjustment Expense. For this report, the term ALAE refers only to legal expenses.

ULAE. Unallocated Loss Adjustment Expenses. These are claims settlement expenses. There is no provision in the IBNR for claims settlement provisions. However, the cash flow projections include a provision for these.

Case Reserves. These are loss reserves set for individual claims by the adjuster.

Indicated Loss Reserve. This is IBNR + Case Reserves. This is the estimated total amount to close all claims at December 3) 1, 2002.

Cash Flow Projection. This is the projected increase or decrease in cash flow during a calendar year. It is the difference between the projected revenue and the projected losses and expenses.

5. Background Information (This has been provided by the Missouri Petroleum Tank Insurance Fund)

The Petroleum Storage Tank Insurance Fund was established by the Missouri Legislature in 1989, (at the time. it was called the "Underground Storage Tank Insurance Fund"). It was originally housed in the Office of Administration. In 1991, the Missouri General Assembly substantially amended the law governing the Petroleum Storage Tank Insurance Fund. A new revenue mechanism - the "transport load fee" - was established, and responsibility for managing and operating the Petroleum Storage Tank Insurance Fund was transferred to the Department of Natural Resources. Petroleum distributors, licensed by the Department of Revenue, paid the transport load fee. It was a "self-reported fee" paid monthly by these distributors and collected by the Department of

Revenue for deposit into the Petroleum Storage Tank Insurance Fund. Collection of the fee began on October 1, 1991.

In 1992, after receiving a report and recommendations from Milliman & Robertson, Inc., the Department of Natural Resources engaged an outside contractor to provide third-party
administration services (currently Williams and Company) and began operation of the Petroleum Storage Tank Insurance Fund.

In 1992, the Petroleum Storage Tank Insurance Fund had a single purpose: to insure owners and operators of underground storage tanks which contained petroleum for risks associated with cleanup of spills and leaks, and third-party damages which might result from such spills or leaks.

The first insurance policies were issued by the Department of Natural Resources third-party administrator in May 1992. "Participation fees" were collected and deposited into the Petroleum Storage Tank Insurance Fund by the third party administrator.

The first claims were filed later in 1992, and the first claim payment was made in June 1991).

In 1993, the Petroleum Storage Tank Insurance Fund cash balance passed $20 million, triggering cessation of collection of the transport load fee on September 30, 1993.

In 1995, the Legislature expanded the purposes of the Petroleum Storage Tank Insurance Fund by enacting legislation which authorized the Petroleum Storage Tank Insurance Fund to pay, in certain circumstances, the costs of cleaning up contamination which had occurred when underground tanks containing petroleum leaked in past years. This legislation was called House Bill 251 (HB251). In particular, this bill authorized payment of cleanup costs for properties where:

- Underground storage tanks containing petroleum had been operated in the past, but were taken out of use before August 28, 1995; and
- The existence of such property was reported to or documented by the Department of Natural Resources by August 28, 1995; or
- A leak or spill had occurred in the past from an underground storage tank; and
- The owner or operator of that tank - if it was still in use - applied for an insurance policy from Petroleum Storage Tank Insurance Fund by August 28, 1995, and was ultimately insured.

This legislation triggered the receipt, in August 1995, of over 700 additional applications for insurance coverage on sites where there were underground storage tanks in use. In addition, it triggered thousands of communications to the Department of Natural

Resources about tank sites, some of which were already known to the Department of Natural Resources.

Overnight, the known liabilities of the Petroleum Storage Tank Insurance Fund grew from liability for about 300 claims made by insured storage tank sites to liability for about 1, 100 claims, most of which were for old releases that occurred before the Petroleum Storage Tank Insurance Fund was established. In addition, the Petroleum Storage Tank Insurance Fund became liable for future claims at an unknown number of "out-of-use tank sites" which were "known" to the Department of Natural Resources by August 28, 1995. Because of the increased liabilities, collection of the transport load fee began again on April 1, 1996 and has continued uninterrupted since. The transport load fee was increased from $25 to $40 per 8,000-gallon transport load of petroleum on January 1, 2002.

In 1996, the state legislature again amended the law, and "reopened the window of opportunity" for persons to obtain Petroleum Storage Tank Insurance Fund benefits. The August 28, 1995 deadline established by HB251 was extended to December 31, 1997. Again, owners/operators of tank sites with known, pre-existing leaks or spills, who were still doing a cleanup, who applied for insurance coverage from Petroleum Storage Tank Insurance Fund and were ultimately insured, could get benefits for their ongoing costs of cleanup. Also, owners of properties with "out-of-use tanks" could report those properties to the Department of Natural Resources and in so doing, make the property eligible to receive benefits from Petroleum Storage Tank Insurance Fund, if a cleanup was required some time in the future.

The 1996 legislation further expanded the Petroleum Storage Tank Insurance Fund by extending the same two purposes for certain aboveground storage tanks (ASTs). AST owners whose tanks were in service could now apply for and receive insurance coverage, and sites where ASTs were out of use by December 31, 1997 could receive benefits for cleanup, if the site was reported to the Department of Natural Resources by that date.

The 1996 legislation, known as Senate Bill 708 (SB708), also established a board of trustees to manage the Petroleum Storage Tank Insurance Fund, effectively moving administration and responsibilities from the Department of Natural Resources to the board of trustees. The board of trustees took over management of the third party administrator contract, employed an Executive Director, and has managed the Petroleum Storage Tank Insurance Fund since.

A review of the Petroleum Storage Tank Insurance Fund operations and an actuarial study was performed by Milliman & Robertson in 1996.

In 2001, the state legislature again amended the law, extending the "sunset date" of the program to December 31, 2010. The legislation (HB453)) also gave the Petroleum Storage Tank Insurance Fund board of trustees the authority to raise the transport load fee to a maximum of $60.00, with no annual increase in excess of $15.00.

Today, the Petroleum Storage Tank Insurance Fund insures 8,031 underground storage tanks at 2,752 sites. It also insures 1,839 aboveground storage tanks at 428 sites.

Claims filed by persons who are or were insured at the time the contamination was discovered are called "Insurance claims". Many of the insurance claims involve cleanup of historical contamination released into the environment during a lengthy period of operation of the storage tanks, including operation prior to implementation of today's environmental standards.

The insurance protection provided by the Petroleum Storage Tank Insurance Fund to active tank owners includes coverage for up to $1 million per occurrence, $2 million annual aggregate, for costs of cleanup, third-party property damage, and third-party bodily injury. There is a deductible of $10,000 per occurrence.

Claims filed to clean up a "pre-existing" leak/spill at an insured site, or an "out-of-use" tank site, are called "remedial claims."

For" remedial claims," the Petroleum Storage Tank Insurance Fund pays up to $1 million for cleanup costs per site; there is no coverage for third-party property damage or third-party bodily injury. The person doing the cleanup must pay the first $10,000 of cleanup costs.

A claim reserve is established for each instance where a release is confirmed and the site is eligible to receive benefits from the Petroleum Storage Tank Insurance Fund. The claim reserves are adjusted on an ongoing basis as more information about the site, the extent of contamination, and the planned cleanup is available. No claim reserve for future claims is currently maintained.

A balance sheet and income statement are prepared monthly, using information provided by the State Accounting System and data maintained by the Petroleum Storage Tank Insurance Fund board of trustees' third party administrator under the provisions of its contract.

In 1998, the Legislature significantly changed the way various fees and taxes on petroleum are collected. As part of House Bill 619, the point of payment of the Petroleum Storage Tank Insurance Fund transport load fee was transferred from the petroleum distributor to the petroleum supplier, resulting in fewer payers.

All claim files of the Petroleum Storage Tank Insurance Fund are maintained at offices located in Jefferson City, MO.

The board of trustees' third-party administrator provides services in the following four areas:

Underwriting, including the receipt and review of initial insurance applications and annual insurance renewal applications. This process includes a compliance review of the

facility's operating records, including review of leak detection records, maintenance documents, logs of cathodic protection system readings, etc.

Inspections, including, physical review of a minimum of 10% of the properties insured by the Petroleum Storage Tank Insurance Fund annually.

Claims management, including the receipt of notices of claims, claims investigation and adjusting services, eligibility determinations, receipt and review of cost estimates from owners and/or their consultants for characterizing and cleaning up contamination, review of invoices, and preparation of payment recommendations.

Record-keeping and other administrative services, including design and maintenance of software for maintaining official records of the Petroleum Storage Tank Insurance Fund, maintenance of the Petroleum Storage Tank Insurance Fund web site, receipt of and response to public inquiries, technical assistance to tank owners, and other support services for the Executive Director and the board of trustees.

The Attorney General's Office (AGO) annually receives approval from the board of trustees for an appropriation from the Petroleum Storage Tank Insurance Fund to support one-half an FTE. This person provides legal advice and counsel to the board of trustees and the Executive Director.

The board of trustees has also engaged outside counsel to defend insured tank owners/operators when a third-party claimant files litigation against the tank owner/operator. Four such cases are currently underway.

The Department of Revenue annually receives approval from the board of trustees for an appropriation from the Petroleum Storage Tank Insurance Fund to pay for its services collecting the transport load fee.

The Department of Natural Resources annually receives approval from the board of trustees for an appropriation from the Petroleum Storage Tank Insurance Fund to support its regulatory activities. This is an ongoing administrative expense.

6. Impact of "Risk Based Guidance" on Actuarial Results

Because the standards for "risk based guidance" have not been approved and the limited data on which to evaluate these standards, it is not currently practical to provide an estimate for the impact of "Risk Based Guidance."

Exhibit IV shows the historical distribution of payments by budget codes. The implementation of "Risk Based Guidance" may impact this distribution.

7. Actuarial Methodology

Data

Loss data was developed from a transactional pull from Williams and Company claims systems. Loss data was from inception until December 5, 2002. Data was analyzed on a calendar year basis. Since the 2002 calendar year was not complete, an adjustment was made to the 2002 data to project this data until December 31, 2002. This adjustment was not material and does not impact the conclusions in this report.

Revenue was generated from reports provided by the MPSTIF. These exhibits showed the transport fees, initial tank fees, and policy premiums.

Data was analyzed for the following 4 categories:

1. Insurance UST claims
2. Insurance AST claims
3. Remedial UST claims
4. Remedial AST claims

The data was organized on a "report year" or "claims made" basis. The reason for this is that there is not usually credible data on when a leak takes place.

At this time, an analysis of the "tail coverage" liability for AST sites has not been done.

Projection Methods

Each of these categories was analyzed for past patterns of loss development. In some cases, data was combined to perform a more credible projection. Because of the volatility of these claims, loss development was often not consistent. Loss development was not credible for the later periods, and significant judgment was utilized in selecting loss development for later periods.

These losses are developed in Exhibit II.. All 4 categories utilized the first two methods, while only the insurance claims were appropriate for the Bornhuetter-Ferguson method.

"Reported Loss Development" - Paid losses and case reserves (reported losses) are grouped by age and projected to ultimate

"Paid Loss Development Paid losses are grouped by age and projected to ultimate

In general, the "Paid Loss Development" produced unstable results and was ignored for the projections of ultimate losses. However, the results of this method are used in deriving the calendar year projections of liabilities (see below).

"Reported Bornhuetter-Ferguson Method" - This method applies reported loss development to the "expected losses" for a given year.

In this case, expected losses were derived in Exhibit VI by transport load revenue, initial tank fees, and participation fees. Revenue was divided between UST and AST based on the number of tanks. Revenue was "'normalized" for the first two years to be consistent with later results. This was only utilized for the insurance claims.

"Paid Bornhuetter-Ferguson Method" - This method applies reported loss development to the "expected losses" for a given year.

"FrequencylSeverity Method"- This method combines ultimate frequency and severity together. This method was used to project report year losses from 2003 - 2012. It does not yield different results than the reported method since there is no development on claims.

Current Case Reserving

Consistent case reserving is critical for actuarial projections. Exhibit III, Page 12 shows the average case reserve by age for the 4 categories analyzed. Given the volatility of this business, case reserving appears to be consistent.

Projected Ultimate Liabilities as of December 31, 2002

As noted above, this report makes an actuarial estimate of liabilities at December 31, 2002 of 175,795K for the Fund. This includes 97,279K of case reserves and 78,498K of IBNR.

Projected Calendar Year Results

Balance sheet and income statements were projected for two scenarios through 2012. It was decided to only project losses through 2012 since projections beyond this date are highly subjective.

Two scenarios were utilized for this projection. First, the projections assumed that 1,200 additional remedial claims would be funded by the MPSTIF. Williams and Company provided this assumption, but a review of the remedial claims data shows that this is a reasonable assumption given the current reporting patterns of remedial claims. The second assumption is that current remedial claims will be settled, but no new remedial claims will be funded.

In general, the Williams and Company projections were used as a basis for these projections. Specifically, we used the revenue and expenses provided by Williams with some minor changes. These changes include:

- Transport load fees are assumed to increase by 1.2% a year for increases in petroleum usage
- Interest income is calculated on the average of the prior and current year-end fund balances

Losses were derived from the ultimate loss selections as well as the frequency and severity of new claims in the years 2003 through 2012. These claims are paid out according to the selected payout pattern that is based on historical data. There is a significant amount of indicated payments beyond year 10. For payouts greater than 10 years from the report date, it was assumed that all remaining loss would be paid out over 4 years with a 25% allocation to each year.

8. Simulations

Actuarial modeling is a catchall phrase that usually means any type of activity where you use a large volume of historic data to create a representation of a business situation so you can analyze it. Your representation, or model, can be used to examine the situation, and help you understand what the future might bring.

Our analysis builds a model using a technique called "stochastic simulation" (also known as "Monte Carlo Simulation") to combine all the uncertainties in the model. Unlike traditional models, this technique does not force us reduce what we know about an uncertain future event (e.g. inflation, interment sales, etc.) to a single number. Instead, we include all we know about the variable, including its full range of possible values and some measure of likelihood of occurrence for each possible value. We use all this information to analyze every possible outcome. This model simulates 100 year-end balance sheets.

We apply this model to several "Input scenarios" and catalog the results of the model. The details of each input scenario are described in *Input Scenarios Used* later in this Section.

Each application of the model is run 1,000 times; it's as if we ran 1,000 "what-if" scenarios all at once. In effect, it's as if you could "live" through your situation over and over again, each time under a different set of conditions, with a different set of results occurring. All this added information sounds like it might complicate your decisions, but in fact, one of simulation's greatest strengths is its power of communication. Our analysis gives you results that graphically illustrate the risks you face. This graphical presentation is easily understood by you, and easily explained to others.

Description of Actuarial Model

The actuarial model shown in the exhibits included with this report is considered the most likely, "average" outcome. Our model calculated fund balances under 1,000 different claim payment scenarios, each scenario being equally likely as the prior. The results from each individual scenario are not shown, but rather summarized in the simulation graphs and tables in this report.

The most uncertain component affecting our projections of future MPSTIF fund balances are our projections of ultimate claim payments for each individual report year, and the dollar amount of claim payment occurring in each specific calendar year. These are the values we simulated. The process of using simulations to understand the range of likely outcomes is called a stochastic analysis.

Specifically, the payment in each calendar year between 2003 and 2010 emanating from report years 1992 to 2010 (approximately 200 values) were separately simulated for the four types of claims in the study: 1) insurance claims from underground storage tanks, 2) insurance claims from above-ground storage tanks, 3) remedial claims from underground storage tanks, 4) remedial claims from above-ground storage tanks. A total of approximately 800 values (200 values times 4 claim types equals 800 values) were simulated in each scenario.

Based on the simulated claim payments in each scenario, the year-end fund balances for 2003 to 2010 were recorded. We then re-simulated claim payments for our next scenario, and again recorded, the year-end fund balances for 2003 to 2010. This process was repeated 1,000 times.

Technical Description of Simulation Distributions

In order to simulate the claim payments, a statistical distribution must be chosen in order to reasonably reflect the range of possible results. For the purposes of this study, we chose the lognormal distribution as the distribution type for the claim payments. For each simulated payment amount we used a separate lognormal distribution with separate parameters. The lognormal distribution is related to the Normal Distribution ("bell curve"). The main difference between the two distributions is the lognormal distribution is a lognormal distribution is equally likely to simulate a value 2x the expected value, as it is to simulate a value ½ the expected value, while the normal distribution is more likely to simulate a value ½ the expected value because it is closer to the expected value. The lognormal distribution is widely accepted as a representative distribution of financial information.

Each lognormal distribution contains two parameters: 1) the expected value and 2) the coefficient of variation. The expected value for each simulated payment is equal to the expected payment shown in the exhibits of the report. We selected a coefficient of variation of 1.0 for all claim payments.

1. DISCUSSION OF RESULTS

We produced 8 histograms and one distribution summary graph for each projection.

Our simulations show that the range of possible outcomes increase the further into the future we perform projections of fund balances. As an example, we note that under "Projection A" (funding of remedial claims), there is a 10% probability of having a fund deficit of more than $41 million in 2010 even though the expected fund deficit is only $2.4 million (Summary Graph, Projection "A"). Even though the range of possible outcomes is fairly wide, some of our projection conclusions we provide are fairly certain.

Projection "A"

- The current fund balance of over $40 million will probably be depleted before 2010 (over 52% probability).
- There is a reasonable possibility the current fund balance will be depleted as soon as 2007 (10% probability).
- We expect the fund balance to be depleted in 2010. Our expectation of the fund deficit on December 31, 2010 is approximately $4.6 million (50% probability).

Projection "B"

- There is a small but not remote possibility that the current fund balance of over $40 million will be depleted before 2008 (10% probability).
- There is an 18% possibility the current fund balance will be depleted as soon by 2010.
- We expect the fund will remain solvent through 20 10. Our expectation of the fund balance as of December 3 1, 2010 is approximately $29 million (50% probability).

GLOSSARY OF TECHNICAL TERMS

Coefficient of Variation -- A measure of relative variability of a statistical distribution. Mathematically it is equal to the standard deviation divided by the expected value. The larger the coefficient of variation, the larger the probability a simulated number will be a specified multiple of the expected value (i.e. a distribution with a coefficient of variation equal to 1.5 has a 25% chance of having a result twice the expected; a distribution with a coefficient of variation equal to 3 has a 25% chance of having a result three times the expected).

Histogram - A histogram is made from several rectangles plotted on the graph. The left and right position of each rectangle represents a range of possible results (e.g. a rectangle that spreads from $10 million to $20 million represents all scenarios that had an output between $10 million and $20 million). The height of each rectangle represents the percentage of scenarios with that result. The higher the rectangle, the more likely the result will occur.

Monte Carlo Simulation - A mathematical simulation of future results where unknown values are selected randomly based on their probability distribution and correlation.

Typically, hundreds, or even thousands of simulations are produced through computer analysis. A professional must then compile and analyze the results in order to determine reasonable conclusions. A series of Monte Carlo simulations can provide conclusions such as "There is a 5% chance that revenues will be less than $500,000", or "If the product launch in Denver is successful, there is still a 2% chance that revenues will be less than $500,000."

Normal Distribution - the traditional "bell curve". It is a statistical distribution that describes an incredibly wide range of sociological and business phenomena. Its application relies on a selection of the average value (mean) and the variance. The larger the variance, the more likely a value far from the average will be observed.

Statistical Distribution - A mathematical formula indicating the likelihood of a random number taking on a specific value.

Stochastic Analysis - A type of statistical analysis that relies on the use of statistical distributions of unknown variables rather than "best estimates" of those unknown variables. A stochastic analysis usually relies on Monte Carlo simulations