Avoiding the risk of subcontractor default requires a thorough review of subcontractor qualifications prior to subcontract award. This article will provide a methodology to help manage subcontractor risk by developing and using your own scoring formula.

**Current Surety Trends**

One of the first things to do when assessing the risk of subcontractor default is to turn to the surety industry, the source for data relating to insolvency risk in construction.

**Construction Loss Severity**

The Surety & Fidelity Association of America published a Construction Loss Severity Study in 2010, which analyzed 1,820 contractor defaults from 1997 to 2008. The losses incurred by the sureties included the loss reduction from salvage obtained through the surety’s exercise of its indemnity rights against a defaulted contractor. Therefore, losses related to defaults from a surety may be less than losses related to an unbonded subcontractor default, since GCs rarely obtain personal guarantees on security agreements that are common sources of recovery in the surety industry.

The study revealed that subcontractors and specialty contractors had loss levels that averaged 35-40% of the bond amount (normally 100% of the contract value), which reinforces the severe loss exposure that can be incurred when a subcontractor defaults. For a $10 million unbonded subcontract, a GC’s loss from a subcontractor default could approach $3.5-4 million.

In today’s economic environment, rising subcontractor defaults are increasing the risk of project cost overruns.

Defaults can also cause contractors to suffer profit erosion, leading to a weakened financial position and impacting surety capacity. What’s more, a defaulting subcontractor can adversely affect relationships between contracting parties if a project is delayed.
Other Recent Trends

While the surety industry continued to be highly profitable in 2011 and the first quarter of 2012, surety underwriters anticipate diminishing profitability for the remainder of 2012 and 2013 due to a significant increase in surety loss frequency and severity, particularly as a result of contractor defaults.

Prime contractors and their surety companies are keenly aware of the risk a defaulting subcontractor poses. Sureties want to know details of the prime’s subcontractor prequalification process and routinely expect them to secure their subcontractor default risk with bonds, subcontractor default insurance (SDI), or other means.

Based on discussions with several sureties, here are the top 10 items that contributed to subcontractor defaults:

1) Substantial spread between subcontractor’s price and the next several bidders (greater than 10-15%), which could be indicative of underestimated contract cost
2) Project is of greater size (more than double) and complexity than those previously completed
3) Different type of construction work than previously experienced
4) Work is outside normal geographic area
5) Uncollected receivable on another job caused liquidity crisis
6) Bank line of credit has been called or not renewed and new outside financing is not available (cov- enant violations leading to frozen or terminated bank capacity)
7) Job borrow (using payments on a job to pay the bills on another project)
8) Significant decrease in volume and no decrease in overhead; consistently excessive or inelastic overhead
9) Surety company lost, limiting the market options for new work
10) Project lasting longer than 18 months

Develop a Scoring System to Meet Your Company’s Needs

One contractor we interviewed scores years in business, bid difference, working capital to backlog, net worth to backlog, bank line, credit reports, cash flow, and job size/type. This contractor believes, based on its history and analysis, that these are prime default predictors.

While these indicators work for one contractor, the key is to find the right scoring areas for your operation.

Interviews with Contractors & Sureties

Based on the state of the economy, general rise in subcontractor defaults, and surety market forecast, contractors are asking how their subcontractor prequalification system can be improved.

Many companies indicated that they are generally good at assessing a subcontractor in the following areas:

- Ability to do the work
- Safety
- Quality assurance/quality control
- Past performance
- Management and organization
- Individuals assigned to the job

However, when it came to having specific metrics that could support their decisions beyond individual opinions, they were not confident that their prequalification system was emphasizing the right things to prevent subcontractor defaults. For example, having a better statistical approach toward financial analysis was cited several times.

Surety Underwriting Then

Twenty-five years ago, sureties underwrote using the 3 Cs methodology: Character, Capacity, and Capital. The main ratios in the Capital area included analyzed working capital to work program, tangible net worth to work program, and unearned profit on uncompleted contracts. Sureties then made their underwriting decision.

Surety Underwriting Today

Many sureties have developed their own internal metrics and formulas that compute a score and benchmark a contractor against peer accounts. Underwriters then add their 3 Cs knowledge to the metrics data to make an informed underwriting decision.

Surety Underwriting for the Future

The future of subcontractor default analysis will continue to be driven by designing metrics that can be used to make better underwriting decisions.

Once a formula has been determined and computed, judgment of character, capital, and capacity underwriting components can then be added to make a decision about the
subcontractor. At that time, the construction team can determine the appropriate risk management method for loss mitigation based on the individual subcontractor’s risk profile.

**CREATE & USE A SCORING SYSTEM**

The following is a step-by-step process on how to create a scoring system and use it to make subcontractor decisions.

**Step 1: Determine What You Already Know**

One of the first things to do is figure out what your company does not need to measure (e.g., general qualifications, history/background, management, contract terms/conditions, labor relations, and labor agreement term).

**Step 2: Select What You Want to Score**

Pick the items that are the most meaningful default predictors based on your company’s history and type of business, along with the resources listed in Step 3. For example, your company might find the following most important to score:

- Certain financial ratios
- Cash flow
- Job size to previous largest job
- Years in business
- Bank line of credit vulnerability
- Project duration

**Step 3: Utilize Resources for Designing Your Own Scoring Formula**

When figuring out your own formula, it is prudent to consider such available scoring formulas/resources as:

- Surety basic rule-of-thumb financial ratios
- Surety company calculations and underwriting emphasis
- Comparative data found in CFMA’s *Construction Industry Annual Financial Survey*
- Bankruptcy scores
- Dun & Bradstreet, Inc. (D&B)
- Risk Management Association’s *The Annual Statement Studies: Financial Ratio Benchmarks*

**Step 4: Implement a Scoring System**

From your analysis of the preceding items, you then are ready to pick your areas to score. For example, you could score 10 items, each from 0-5 for a total score range of 0-50; a score of 25 or higher might be your acceptance range.

Based on the subcontractor score (from 0-50) for these key areas, you will then have the metrics to make your business decision about the credit quality of a subcontractor. Keep in mind that the metrics you select should be the chief indicators you think would help you measure the potential for a subcontractor default.

After you score a subcontractor, you will have:

- An in-depth analysis of the subcontractor’s risk situation, which will enable you to better manage default risk.
- A report that measures subcontractor factors to identify if it presents a high risk for potential default.
- Individual scores on each subcontractor that can be inserted into an overall portfolio score and report to determine how the credit quality of the subcontractor compares to other subcontractors.

The following are areas we believe are important predictors for subcontractor defaults.

**Quality of Financial Reporting**

When determining the creditworthiness of a subcontractor, a key consideration is the external CPA audited financial statement quality. While audited financials are not required, they are preferred. Financial statements that include complete footnotes, schedules, disclosures, and supplementary information on open and closed projects are leading indicators the subcontractor has strong internal and external accounting and controls.

**Liquidity Tests**

Working capital in relation to a subcontractor’s backlog or work program under consideration is another important area
to analyze. Subcontractors need working capital to finance operations and unforeseen events that often occur during the course of a construction project. The scoring could be adjusted for type of subcontractor, with less working capital required for capital-intensive subcontractors and more required for labor-intensive trade subcontractors.

**Equity Evaluation**
The subcontractor’s shareholder equity is an indicator of historic retained earnings, shareholder capital commitment, and potential borrowing power. It’s standard for sureties to measure tangible shareholder equity (excluding goodwill or other intangible assets) in relation to backlog or work program under consideration to determine if sufficient surplus is available to finance operations.

Subcontractors with a low working capital but high shareholder equity may have significant borrowing power in their fixed asset base that can be used to finance operations when needed. Conversely, subcontractors with low shareholder equity and a high degree of leverage through bank or vendor financing may present a higher insolvency risk to creditors that rely on assets as security for debt. Scoring in this area could be adjusted depending on type of subcontractor (heavy engineering or trade).

**Cash Flow**
Operating cash flow indicates a subcontractor’s quality of earnings. Over time, operating cash flow should equal net income plus depreciation for most companies.

During a growth period, subcontractors may report cash flow lower than earnings, while those with declining sales may report cash flow much higher than net income. Some subcontractors consume cash in the early stages of a project since mobilization, fabrication, and early labor costs may not be paid for 60-90 days from the start of a project.

**Earnings Test**
Bottom-line net income is one of the best measures of a subcontractor’s profitability. While there may be extraordinary or nonrecurring items that have a negative impact on a subcontractor’s profitability, this bottom-line measure over time is one of the most important measures of a subcontractor’s success. Sureties normally look at net income rather than EBITDA, operating profit, or other factors of earnings.

Subcontractors that have not realized a profit in at least one of the past two years, show a history of project profit fade, or have an unfavorable earnings outlook based on backlog may be considered to be a higher credit risk in this area.

**Credit Score**
Credit references impact the scoring for this factor. D&B Paydex® Scores outside industry norms may also indicate cash flow issues.

**Bank Line of Credit**
Having an adequate bank line of credit upon which to rely is essential in today’s construction economy. Subcontractors with fully secured and substantially borrowed credit facilities could be flagged and scored lower for this measure. Generally, subcontractors with less than 50% of their available bank line of credit and consistently in need of outside financing to support their business also present a higher risk profile.

**Total Debt to Equity**
This measure looks at a subcontractor’s total debt in relation to its analyzed net worth compared to surety-type standards. Subcontractors with a debt to equity ratio of more than four to one could be scored in the high risk category, as the high liability balance may reflect overtrading (too much volume for the size of the balance sheet) or too much funded debt in relation to the shareholder’s equity.

**Project Capacity**
A subcontractor’s ability to staff and manage projects of similar size and scope is key to its successful completion of work. This measure compares the subcontractor’s historic largest single project size of completed work to the size of your company’s project.

**A/R & Underbillings Review**
Evaluating A/R turnover ratios and other information to identify the potential for uncollectable receivables is an important step in determining a subcontractor’s liquidity. Underbillings should also be closely examined; large underbillings on jobs that are at or near completion may indicate the possibility of a claim or an uncollectible item.

**Step 5: Add Other Important Factors**
Once you have designed and implemented a scoring system, make a list of all of the other items that can affect your decision to accept or reject this subcontractor. This may include those items you didn’t have to measure, such as:

- General qualifications
- Background
- Management
- Ability to do the work
- Past work performed for your company
Step 6: Use Metrics & Judgment to Make Your Decision

As part of the decision-making process, determine the appropriate loss mitigation techniques that could be used to make the subcontractor a better risk based on its risk score.

Many contractors will separate their subcontractor portfolio into high, medium, and low risk categories based on single and aggregate work program parameters. Subcontractors that are identified as high-risk are evaluated with careful scrutiny, and if it is ultimately decided by senior management that a high-risk subcontractor will be engaged, special risk mitigation options must be implemented.

A subcontractor that poses medium risk on one subcontract can pose high risk on another. A sample risk mitigation checklist is shown at left.

This risk scoring system allows GCs to identify high-risk subcontractors and focus their efforts on managing their exposure for these potentially insolvent subcontractors. This process may lead to requiring bonds on subcontractors that present a higher risk profile or establishing an SDI program that covers both high-risk and all other subcontractors of an agreed-upon criteria (e.g., more than $250,000 in contract value).

The SDI underwriters evaluate the prequalification procedures established by their clients. Having a financial scoring system with risk mitigation factors intact will improve the terms and conditions of proposals received from the SDI markets.

Now it’s time to take the subcontractor score from your formula, include the other important factors, and then make a decision based on the metrics and your team’s experience/judgment.

Summary

While subcontractor default can lead to financial loss for all parties involved, managing this risk can result in an opportunity to gain a competitive advantage. Using your own or tapping into existing scoring formulas to benchmark your subcontractor portfolio will help you:
• Identify subcontractors that may present a high risk so that you can take proactive measures to address any concerns and avoid poor earnings on a contract due to selecting a weak subcontractor, and

• Improve job performance and ultimately profit margins by managing subcontractor default risk more effectively.

Authors’ Note: This article is not intended to be taken as advice regarding any individual situation and should not be relied upon as such.

Any statements concerning accounting or legal matters are based solely on our experience as insurance brokers and risk consultants and are not to be relied upon as accounting or legal advice, for which you should consult your own professional advisors.

JAMES L. BLY, AFSB, CPA, CPCU, is Managing Director, Regional Construction Practice Leader of Marsh USA, Inc., in Pittsburgh, PA, where he helps clients maximize their surety capacity and develop innovative solutions to manage risk. Jim has provided risk management and surety services for construction clients for more than 30 years.

J. ANDREW BRACH is Managing Director, U.S. Surety Practice Leader of Marsh USA, Inc., in Grand Rapids, MI. He is responsible for the U.S. Surety Practice and has 35 years’ construction surety experience.

An active member of CFMA’s Greater Pittsburgh Chapter and previous author for CFMA Building Profits, he is a regional and national speaker on surety and risk management issues. Jim is also involved with the Pennsylvania Institute of Certified Public Accountants (PICPA) and the Contractors Association of Western Pennsylvania (CAWP).

Phone: 412-552-5028
E-Mail: james.l.bly@marsh.com
Website: usa.marsh.com

JAMES L. BLY, AFSB, CPA, CPCU, is Managing Director, Regional Construction Practice Leader of Marsh USA, Inc., in Pittsburgh, PA, where he helps clients maximize their surety capacity and develop innovative solutions to manage risk. Jim has provided risk management and surety services for construction clients for more than 30 years.

J. ANDREW BRACH is Managing Director, U.S. Surety Practice Leader of Marsh USA, Inc., in Grand Rapids, MI. He is responsible for the U.S. Surety Practice and has 35 years’ construction surety experience.

An active member of CFMA’s Greater Pittsburgh Chapter and previous author for CFMA Building Profits, he is a regional and national speaker on surety and risk management issues. Jim is also involved with the Pennsylvania Institute of Certified Public Accountants (PICPA) and the Contractors Association of Western Pennsylvania (CAWP).

Phone: 412-552-5028
E-Mail: james.l.bly@marsh.com
Website: usa.marsh.com

Phone: 616-304-0307
E-Mail: joseph.a.brach@marsh.com
Website: usa.marsh.com

JAMES L. BLY, AFSB, CPA, CPCU, is Managing Director, Regional Construction Practice Leader of Marsh USA, Inc., in Pittsburgh, PA, where he helps clients maximize their surety capacity and develop innovative solutions to manage risk. Jim has provided risk management and surety services for construction clients for more than 30 years.

J. ANDREW BRACH is Managing Director, U.S. Surety Practice Leader of Marsh USA, Inc., in Grand Rapids, MI. He is responsible for the U.S. Surety Practice and has 35 years’ construction surety experience.

An active member of CFMA’s Greater Pittsburgh Chapter and previous author for CFMA Building Profits, he is a regional and national speaker on surety and risk management issues. Jim is also involved with the Pennsylvania Institute of Certified Public Accountants (PICPA) and the Contractors Association of Western Pennsylvania (CAWP).

Phone: 412-552-5028
E-Mail: james.l.bly@marsh.com
Website: usa.marsh.com

Phone: 616-304-0307
E-Mail: joseph.a.brach@marsh.com
Website: usa.marsh.com

JAMES L. BLY, AFSB, CPA, CPCU, is Managing Director, Regional Construction Practice Leader of Marsh USA, Inc., in Pittsburgh, PA, where he helps clients maximize their surety capacity and develop innovative solutions to manage risk. Jim has provided risk management and surety services for construction clients for more than 30 years.

J. ANDREW BRACH is Managing Director, U.S. Surety Practice Leader of Marsh USA, Inc., in Grand Rapids, MI. He is responsible for the U.S. Surety Practice and has 35 years’ construction surety experience.

An active member of CFMA’s Greater Pittsburgh Chapter and previous author for CFMA Building Profits, he is a regional and national speaker on surety and risk management issues. Jim is also involved with the Pennsylvania Institute of Certified Public Accountants (PICPA) and the Contractors Association of Western Pennsylvania (CAWP).

Phone: 412-552-5028
E-Mail: james.l.bly@marsh.com
Website: usa.marsh.com

Phone: 616-304-0307
E-Mail: joseph.a.brach@marsh.com
Website: usa.marsh.com