

# Methodology

## Q Score

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# Table of Contents

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TABLE OF CONTENTS	2
DEFINITIONS	3
OVERVIEW	6
<b>COMPASS</b>	6
<b>1Form</b>	7
<b>Q Score</b>	7
<b>Q Score Sections</b>	8
<b>Trade Rank</b>	8
<b>Non-Numeric Q Scores</b>	9
Q SCORE CALCULATION STEPS	10
<b>1. Ratios</b>	10
<b>2. Ratio Scoring</b>	10
<b>3. Q Score Calculation</b>	11
<b>4. Adjusting the Q Score</b>	11
MISCELLANEOUS	13
<b>Methodology Adjustments over Time</b>	13
<b>Disclaimer</b>	14

## Definitions

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<b>1Form:</b>	The standardized form used by COMPASS to collect Subcontractor information. Increases efficiency for Subcontractors as the 1Form satisfies the information requirements of multiple General Contractors, Insurance Entities, Subcontractors, and other industry users
<b>Authorization:</b>	The express permission granted by a Subcontractor for another COMPASS user (General Contractors, Insurance Entities, project owners, Subcontractors etc.) to access their Financial Information via COMPASS
<b>Color Code:</b>	The Q Scale is divided into three colors; Green, Yellow, and Red to help distinguish between levels of Subcontractor Risk. Green is Q1.0-Q3.9, Yellow is Q4.0-5.9, and Red is Q6.0-7.9
<b>COMPASS Eval:</b>	A tool available to General Contractors as part of the COMPASS platform allowing them to review Subcontractor performance across multiple categories including work quality
<b>COMPASS Pulse:</b>	A standardized survey completed periodically by Subcontractors to provide updated information throughout the year. Responses are compiled and analyzed by COMPASS
<b>COMPASS Verified:</b>	A COMPASS process to verify that select variables entered on the 1Form are supported by provided documents such as financial statements and bonding letters
<b>Expired Data:</b>	Data is deemed to expire on the date that is six (6) months after fiscal year end. Expired Data is treated in the same manner as Missing Data
<b>Insurance Entities:</b>	Insurance brokers or carriers

<b>Missing Data:</b>	Fields on the IForm that have been left blank or filled out with unusable data (example: revenue value of less than 0)
<b>Prequalification:</b>	An evaluation of a Subcontractor, by a General Contractor, to determine whether a Subcontractor is eligible to work with them. Usually driven by the requirements of an insurance carrier
<b>Primary Trade:</b>	The specific Division a subcontractor identifies as their primary area of work (by majority of revenue) based on the MasterFormat 2016 standard
<b>Primary Trade Rank:</b>	The rank of a Subcontractor relative to other Subcontractors within the same Primary Trade and same country. A Subcontractor's Primary Trade Rank will be displayed below the Q Score
<b>Q Score:</b>	COMPASS' assessment of Subcontractor Risk based on information collected from the Q Score Sections. A numerical score between 1.0 and 7.9 is assigned based on the Q Score methodology as described in this document
<b>Q Score Sections:</b>	The Q Score is assigned based on information from three (3) areas - Business, Finance, and Health & Safety
<b>Q Scale:</b>	A numeric scale consisting of Q Scores ranging from the lowest level of Subcontractor Risk (Q1.0) to the highest level of Subcontractor Risk (Q7.9)
<b>Ratio:</b>	A calculated ratio or single value used as part of the risk assessment of a Subcontractor. Different Ratios are assigned different weights
<b>Subcontractor:</b>	A company that is hired to perform a specific task as part of an overall project
<b>Subcontractor Information:</b>	All information related to a Subcontractor's Business and Health & Safety profile including, but not limited to, experience, previous work performed, and insurance details

<b>Subcontractor Financial Information:</b>	Balance Sheet, Cash Flow Statement, and Income Statement details as provided by a Subcontractor, including said documents
<b>Subcontractor Risk:</b>	An assessment of a Subcontractor's risk level based on Business, Finance, and Health & Safety information
<b>Thresholds:</b>	The border between Strong/Medium and Medium/Weak – used to categorize the result of each ratio. These are periodically adjusted
<b>Valid Data:</b>	Data provided within the 1Form that is not defined as Missing Data or Expired Data

# Overview

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The purpose of this methodology is to provide an overview and explanation of how COMPASS assesses risk (Q Score) and ranks (Trade Rank) Subcontractors in the construction industry across North America.

## COMPASS

COMPASS is an independent, unbiased third-party tool designed from the ground-up to efficiently collect, centralize, and analyze Subcontractor Information. COMPASS works closely with General Contractors, Insurance Entities, and Subcontractors to standardize the collection of data.

Information is stored online, on a secured cloud-based platform with strict controls around access. Subcontractor Financial Information in its raw form is never shared with anyone unless specifically authorized by the Subcontractor.

COMPASS collects data from multiple sources:

- General Contractors: Contract data, post-project reviews, and historical prequalification information
- Third-Party Sources: Lien, financial, corporate structure, and executive management background data
- Direct Subcontractor Input: Data fields requested on the COMPASS 1Form

## 1Form

The COMPASS 1Form is a standardized form (or profile) for collecting Subcontractor Information. The 1Form was developed with a consortium of General Contractors across North America to satisfy all of their information requirements at once - the goal is one and done.

## Q Score

The Q Score is COMPASS' assessment of Subcontractor Risk based on key Business, Finance, and Health & Safety variables. A numerical score between 1.0 and 7.9 is assigned by COMPASS to represent that risk.

Q Scores are calculated based on a COMPASS model rooted in credit default analytics, diminishing individual bias by relying on a standardized methodology to arrive at a risk assessment.

The approach goes beyond traditional financial statement analysis by utilizing up to 10 years of subcontractor performance data and multiple GC-provided ratios for back-testing.

The Q Score is visible to General Contractors, Subcontractors, and other stakeholders through the COMPASS platform.

The Q Scale's Color Code is intended to guide General Contractor decision making, however, the ultimate decision to engage with a Subcontractor (and set limits) is solely at the General Contractor's discretion.

The specifics of the Q Score Calculation Methodology can be found on page 10 of this document.

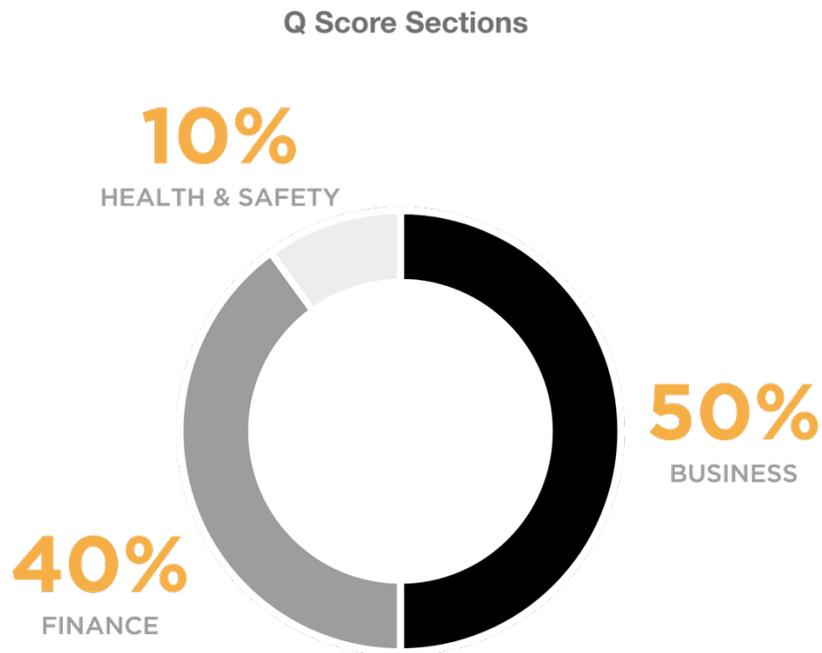
### Q Scale

Q1	<b>Lowest Risk</b>
Q2	<b>Very Low Risk</b>
Q3	<b>Low Risk</b>
Q4	<b>Low-Moderate Risk</b>
Q5	<b>Moderate-High Risk</b>
Q6	<b>Very High Risk</b>
Q7	<b>Highest Risk</b>
N/A	Have been invited to provide information but have not yet
	Registered in COMPASS but have not been asked to provide any information

## Q Score Sections

COMPASS collects key variables from the IForm as provided by Subcontractors. These variables are classified as being part of the Business, Finance or Health & Safety Q Score Sections.

Business Ratios contribute 50% of the total Q Score with Finance Ratios worth 40% and Health & Safety Ratios worth 10%.



## Trade Rank

To assist General Contractors in their risk management of Subcontractors, each Subcontractor is ranked within their Primary Trade group on the basis of their Q Score.

Primary Trade is usually classified by the Subcontractor itself, however, COMPASS will review a Subcontractor's assigned trade group periodically, based on current and past contract scopes. A Subcontractor's Primary Trade Rank is found below the Q Score.

## Non-Numeric Q Scores



### **BLANK**

Subcontractors may be registered on the COMPASS platform for reasons other than risk assessment. Examples include Subcontractors a) being invited by a General Contractor to participate in the COMPASS Pulse Survey, or b) having been added to the COMPASS platform as part of General Contractor leaving a performance review of the Subcontractor as part of COMPASS Eval. Under these circumstances, the Subcontractor will not receive a Q Score or a Trade Rank; both fields will be left "Blank".



### **N/A**

Once a subcontractor has been invited by a General Contractor to provide their information, the status is immediately updated from "Blank" to "N/A". This indicates that the Subcontractor has been invited but not yet started the COMPASS IForm. Note that companies assigned "N/A" are not ranked.

# Q Score Calculation Steps

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## 1. Ratios

Based on collaboration with multiple General Contractors, and historical analysis COMPASS has identified up to 25 Ratios which can be used in combination to assess Subcontractor Risk.

- In total, the Ratios rely on up to 50 variables from the 1Form
- Financial Section variables are generally found on the financial statements, while Business Section variables include items such as duration of relationships, past project experience, and concentration risk

Each of these Ratios falls under one of the three Q Score Sections (Business, Finance, and Health & Safety).

- The maximum number of points available for each Q Score Section are:
  - 50 points for Business Section Ratios
  - 40 points for Finance Section Ratios
  - 10 points for Health & Safety Section Ratios

## 2. Ratio Scoring

Ratios differ in their predictive power. Each Ratio has been assigned a different weight and is thus worth a different number of points.

- Each Ratio contributes to a different Q Section score

The result of each Ratio is categorized as Strong, Average, or Weak based on pre-determined quantitative Thresholds.

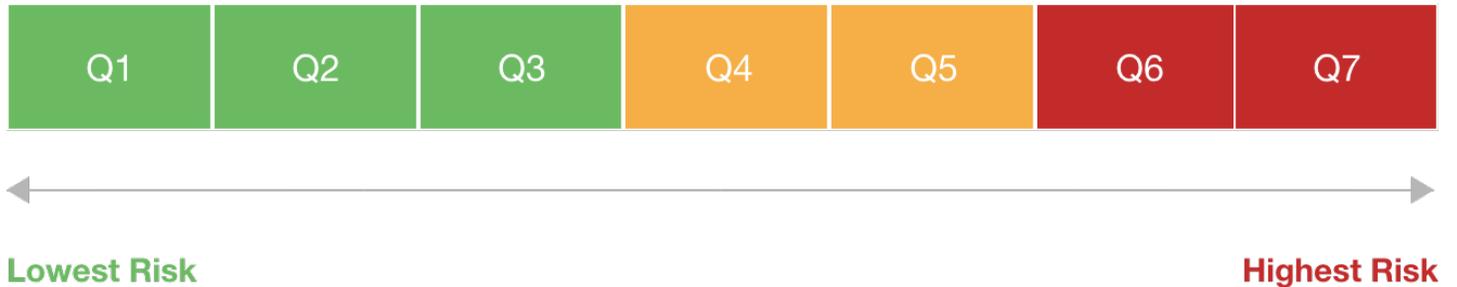
- Strong results receive maximum points for that Ratio, while Average and Weak receive less points
  - This is not trade-specific, all Subcontractors are subject to the same Thresholds
  - Ratios that cannot be calculated (due to Missing Data or Expired Data) are considered Weak

### 3. Q Score Calculation

The points from each Q Score Section are summed to arrive at a total point value.

- Perfect score = 100 points

Point values out of 100 are translated into the Q Score.



### 4. Adjusting the Q Score

After calculating the Ratios and awarding points, there are certain adjustments made to the Q Score. These adjustments are to account for either insufficient data, or to encourage Subcontractors to provide additional information (thereby increasing transparency and decreasing risk).

#### Capping

There are a number of circumstances under which it is not appropriate to award a Green, or even Yellow Q Score.

For all of the following cases, the assigned Q Score becomes the higher (ie. worse) of:

- The Capped Q Score or,
- The Q Score as calculated in Steps 1-3 above

The following cases result in a Capped Q Score:

- If less than 50% of Ratios in one (1) Q Score Section can be calculated (indicating insufficient data), the Q Score is capped at Yellow (Q4.0)
- If less than 50% of Ratios in two or more (2+) Q Score Sections can be calculated (indicating insufficient data), the Q Score is capped at Red (Q6.0)
- Missing financial statements result in a Q Score that is capped at Yellow (Q4.0)
- If a Subcontractor has annual revenue in excess of \$5 million and provides internally produced financial statements, the Q Score is capped at Yellow (Q4.0)
- COMPASS can cap the Q Score at either Yellow (Q4.0) or Red (Q6.0) at their discretion for various reasons such as company fraud, bankruptcy, or other regulatory infractions

## Bonuses

An underlying premise when assessing Subcontractor Risk is that additional information and increased transparency, lead to better risk management. As such, it is appropriate to award a small Q Score bonus to Subcontractors that provide information beyond what is required to calculate the Ratios.

The following bonuses may be applied:

- A Q Score bonus of 0.1 upon submitting the 1Form with one or more (1+) fields completed. The practical implication is that Subcontractors with a Q Score of Q7.9 can easily be identified as Subcontractors that have started the 1Form but never actually submitted
- An additional Q Score bonus of 0.1 upon meeting each 1Form completion milestone

<b>1Form Completion Milestones</b>	<b>Total Q Score Bonus Awarded</b>
1+ field completed	0.1
25% complete	0.2
50% complete	0.3
75% complete	0.4
95% complete	0.5

# Miscellaneous

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## Methodology Adjustments over Time

COMPASS reserves the right to change the above methodology at any point in time including, but not limited to:

- Amending, adding, or removing Ratios
- Changing the points allocated to each Ratio
- Applying a different allocation of points to each Ratio depending on trade
- Changing the thresholds for Strong/Medium/Weak depending on Ratio
- Applying different thresholds for Strong/Medium/Weak depending on trade
- Changing the overall weight of Business, Finance, and Health & Safety
- Changing the Point split for Strong/Medium/Weak (either by Ratio and/or by trade)
- Amending the method to translate the point score into a Q Score
- Changing the % completion requirements by Section
- Applying any of the above on a geographic basis

## Disclaimer

The information upon which COMPASS Q Scores are based is obtained by COMPASS from sources COMPASS believes to be reliable.

The Q Score, or any other analysis and research issued or published by COMPASS are, and must be construed solely as, statements of opinion and not statements of fact as to credit worthiness, risk level, or execution ability.

The data supporting the COMPASS model is considered to be accurate, reliable, complete, and timely, however, COMPASS cannot verify the accuracy, reliability, completeness, or timeliness of the data. In no circumstances should the owners and employees of COMPASS, or Bespoke Metrics be liable from any direct, indirect, or incidental damages or expenses of any kind, or losses arising from any use of COMPASS Q Score or outputs. The Q Score is an empirical model driven evaluation of execution ability and is not a statement of fact or recommendation to engage with subcontractors, general contractors, or other stakeholders. The information and data included is protected by copyright, and other laws. All COMPASS content, including Q Scores or any derived output, shall not be modified, reverse engineered, reproduced, or distributed without written permission from COMPASS Holdings Inc.

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