Introduction

WSCUC’s For-Profit Higher Education Assessment Framework is designed to help the Commission and others better understand and examine how new business relationships and/or financial models affect the for-profit sector of higher education. The framework aims to provide a tool to better assess the financial health of a for-profit institution, much like comparable tools currently used by non-profit and public institutions.

Until recently, the Commission examined only the “accreditable” entity – not the corporate parent or related legal entities tied to a for-profit institution. It is apparent that a comprehensive approach that considers all related legal entities is necessary to gain a full understanding of the institution’s financial situation, as well as the overall governance and performance of the institution.

Half of the Framework reviews non-finance issues (e.g., governance and student outcomes), which are familiar areas of analysis. The other half of the Framework examines familiar financial issues (e.g., capital allocation and financial performance), but incorporates questions and ratios that are specifically that are more germane to a for-profit business model.

The Commission will build a database of data from for-profit institutions that reviewers and others can use for comparison. This database will be particularly helpful in the finance area, where a new ratio is proposed: the Consolidated Index that combines measures of profitability, liquidity, and leverage.

WSCUC’s For-Profit Assessment Framework will support deeper investigation and more rigorous, timely quality determinations in this unique higher education sector, as well as shape policy and institutional improvement where appropriate.

WSCUC was assisted in this project by Prager & Co., LLC, San Francisco, California.
WSCUC FOR-PROFIT HIGHER EDUCATION ASSESSMENT FRAMEWORK

Background

Modern American higher education has tracked the development of its organizational forms for decades. Until fairly recently, that literature focused primarily on non-profit and public higher education institutions. The rise of for-profit institutional providers, which enroll over 7% of all students at degree-granting institutions, presents a different business model (NCES 2015 Digest of Education Statistics, Table 304.80). Different business models require different analytical techniques and reflect new issues, including the scale and complexity of new organizational forms, and the role of a new institutional stakeholder: the investor. The analysis of for-profit colleges and universities needs tools comparable to those currently employed in the assessment of non-profit and public institutions, even as the Commission’s Standards are applied with equal rigor.

Comprehensive Assessment

The framework is a tool to help evaluators understand the general health of an institution. An effective framework examines not only the for-profit higher education entity, but also the decisions and financial transfers that take place outside of the entity’s customary disclosures. This means that holding companies, subsidiaries, and shell organizations tied to the for-profit entity must be similarly examined. Financial dealings between holding company and subsidiary may provide insight into transfers between entities, shedding light on methods of allocating profit from one entity to another. Shared service agreements, intra-company leases, and other arrangements must be inspected to get a real sense of the flow of funds and where capital is allocated. To achieve that, a comprehensive assessment uses all company information, from the lowest subsidiary up to the highest holding entity. It digs deeply inside an entity, investigating results and the decision-making processes behind those results. This includes reviewing: (1) the results or outcomes of the institution’s program; (2) the numbers and financial analysis driving the results; and (3) the decisions behind it all. A 360° assessment examines the entity vertically (decision making to performance) and horizontally (capital allocation to student outcomes) according to four vectors:
Each of the four categories, (1) Organizational Governance / Decision Making; (2) Capital Allocation; (3) Financial Performance; and (4) Student Outcomes, is graded on a scale from -10 to 10. Scores from -10 to 0 reflect red flags, and highlight areas requiring deeper inspection (the area within the red box above). Scores from 0 to 10 reflect satisfactory or positive results. This process helps the agency determine when in-depth inspection is required. The following discussion explores each component and the grading criteria.

1. Organizational Governance / Decision Making

The Responsibility of the Board of Trustees

The purpose of a board of trustees is to perform a fiduciary duty for the stakeholders of the institution. In the case of a for-profit college or university, this means acting on behalf of both students and equity holders.

Board of trustee independence is critical to ensure mission-aligned decision-making. It is critical for institutions to have an independent board on which a majority of trustees are independently elected and their authority encompasses normal and customary powers. The independent trustees’ selection process, conflicts policies and practices, term, and lack of financial or other incentives must be in place to foster a board serving the institution’s mission. Independent board members ‘stand apart’ from inappropriate influences, operate outside of managerial capture, and are free to make disinterested decisions on a given issue.

Governance – A Qualitative & Forward-Looking Indicator

It is important to distinguish institutional governance from other institution measurement items, in that governance, with few metrics or measurement tools, provides a qualitative indicator for examining an entity. Additionally, governance serves as a rudder steering managerial actions, helping to promote positive outcomes for constituents. Whereas most measurement tools are inherently backward looking, using historical data to provide insight into the institution, good organizational governance can position the institution to benefit all stakeholders.

This framework provides WSCUC reviewers with guidelines by which to evaluate the independence of institutional governance in the for-profit arena, and is predicated on the WSCUC Governing Board Policy. Because the assessment of governance is inherently qualitative, the framework encourages reviewers to use their best judgment in scoring. All points should be followed to a certain extent. If the answer to any of the points is a resounding no, further inspection into the issue should be conducted. Reviewers should be satisfied as to how the issue will be resolved, or why the point failed. Scores between -10 and 10 should be given, based on how the reviewer believes the institution rates relative to comparable institutions.

Key questions to determine governing independence include:

1. Trustee Impartiality
   a. A majority of trustees must hold no board or managerial position in a related entity
b. A majority of trustees must have no financial incentive in the institution or the holding company (i.e. no remuneration or stock options)
c. A majority of trustees must currently and historically hold no material pecuniary relationships or transactions with the institution, management, directors, holding companies or its subsidiaries and associates

2. Independent Selection Process
   a. The institution must have a clear, fair, and democratic trustee selection process in place, preferably written in its by-laws, in line with industry standards
   b. A majority of trustees must be independently elected as described in the WSCUC Governing Board Policy
   c. Trustee positions must contain term limits and a reelection process

3. Power to Make Organizational Change
   a. Trustees must be provided relevant, accurate, and timely information to allow informed decision-making
   b. All trustee members must be provided a forum to voice opinions
   c. Key decisions must be made by trustees, by way of a fair and democratic method, in line with practices at similar institutions

2. Capital Allocation

Balancing Reinvestment with Shareholder Return

For-profit institutions have an additional party participating in the resource allocation process: the shareholder/investor. This stakeholder looks for resource allocation in the form of equity return (i.e. dividends, share buy-backs and retained earnings). Investors may vie with institutional departments for resources. It is important to note that this tension is neither good nor bad – it simply exists. Skewing resource allocation too far in either direction can be detrimental to an institution. If too far on the side of reinvestment in plant and program (students), investors will be starved of return, thereby limiting the attractiveness of future investment and restricting this critical form of capital. If too far on the side of investor return, plant and program will deteriorate, weakening educational value and institutional reputation. The graphic below depicts this tension and the ideal resource allocation balance.
Each institution is unique: unique in its mission, the population it serves, resources necessary to succeed, stakeholders, and partners. This uniqueness, in combination with the importance of balancing resources between shareholder return and reinvestment in the institution, discourages the creation of industry-wide minimum institution reinvestment thresholds or maximum shareholder returns. A proposed hurdle rate would likely disrupt the resource allocation balance at some schools. For example, there are institutions with extremely limited resources. If one of these schools were forced to allocate all or a majority of its financial resources to reinvestment in the institution (or even a specific percentage), it may lose access to much needed investor funds. A similar balancing of resources occurs within non-profit institutions, but without the additional needs of the external investor.

To find the appropriate resource allocation balance, WSCUC reviewers will compare program, student make-up, and capital structure at similar institutions. The comparison relies on two metrics: (1) reinvestment in the institution, as measured by return into institution (“RII”); and (2) return to shareholders, as measured by shareholder yield. Both metrics are defined below.

**Reinvestment: Return into Institution**

Return into institution is an institution-specific metric, which captures the capital reinvested into the entity. Capital expenditures are a proxy for plant investment, and are found on the statement of cash flows. As a proxy for program investment, net change in annual instruction and academic support costs is used. The combination of these two elements, capital expenditures and change in instruction and academic support costs, captures the financial resources directly returned into the campus.

The denominator of the metric is book value of plant, found on the balance sheet, plus total instruction and academic support costs. The metric is calculated as follows:

\[
\frac{\text{Capital Expenditures} + \Delta \text{Instruction \& Academic Support Costs}}{\text{Net Book Value} + \text{Total Instruction \& Academic Support Costs}}
\]

For institutions with online course offerings and/or limited physical plant, instruction and academic support costs may come in the form of digital course creation, such as trademarks and digital course design and material. Generally, these assets are recorded on the balance sheet as “goodwill and intangible assets.” Consequently, for institutions with a material digital instruction and academic support cost, the RII may be calculated to include these assets, as follows:

\[
\frac{\text{Capital Expend} + \Delta \text{Goodwill \& Intangible Expenditures} + \Delta \text{Instruction \& Academic Support Costs}}{\text{Net Book Value} + \text{Net Goodwill \& Intangible Assets} + \text{Total Instruction \& Academic Support Costs}}
\]

When compared with similar institutions, the RII will provide context about and insight into the relative amount of reinvestment into the enterprise. Schools demonstrating RII one standard deviation below a comparison group may warrant closer inspection. A valid explanation is very possible; the comparison only serves to highlight potential under-investing schools for the reviewer to examine.
Return to Shareholders: Shareholder Yield

Shareholder yield provides context about and insight into the amount of value the enterprise is returning to shareholders through dividends and share repurchases. In addition to dividends (as demonstrated through the commonly used dividend yield), shareholder yield includes share repurchases, which increase the value of currently outstanding equity by increasing the ownership percentage of each share. Shareholder yield also includes share issuance, which generally takes place in the form of stock-based compensation, which dilutes shareholders’ ownership. All told, the metric is a proxy for the amount of capital the company is returning to shareholders. When divided by the latest available valuation of the company, the resulting calculation produces the capital returned to shareholders.

The latest available valuation can take several forms, depending on the ownership structure of the business. The best proxy for a public company’s valuation is the current market capitalization (shares outstanding multiplied by current stock price). The valuation of a private company, on the other hand, can be calculated using several techniques: (1) post-money valuation; (2) discounted cash flow analysis (“DCF”); or (3) comparable company analysis (“Comps”). Each valuation technique is further explained in Appendix A.

Each shareholder yield element is found on the statement of cash flows, under financing cash flow.

Public Company:

\[
\frac{\text{Cash Dividends Paid to Shareholders} + \text{Stock Repurchased} - \text{Stock Issued}}{\text{Total Market Capitalization}}
\]

Private Company: (Also see Appendix A)

\[
\frac{\text{Cash Dividends Paid to Shareholders} + \text{Stock Repurchased} - \text{Stock Issued}}{(1)\text{Post – Money Valuation}; \text{or} (2)\text{DCF}; \text{or} (3)\text{Comps}}
\]

When compared to similar institutions, shareholder yield will provide context into the relative amount of return to equity holders. Institutions with shareholder yield one standard deviation above its peers may warrant closer inspection. It is very possible that an institution is better managed than its peers, resulting in superior returns. However, when shareholder yield is taken into consideration with the RII, the WSCUC reviewers should make a judgment as to whether the capital allocation is in balance.

Well-balanced institutions score between 0 and 10 on the capital allocation score. Poorly balanced institutions, returning too much capital to investors or reinvesting too much capital into the institution score between -10 to 0. The relative performance is up to the WSCUC reviewer.

3. Financial Performance

Measuring Financial Health

As with a non-profit institution, the objective of measuring a for-profit institution’s financial health is to understand its long-term viability. In order to evaluate this dynamic in the for-profit
sector, the visiting WSCUC team needs to follow the money. What is the source of revenues, how are such revenues allocated and, importantly, what is their destination?

This analysis applies to both freestanding companies and companies connected to other corporate entities. In most cases, if the institution is not stand-alone revenue will flow to a holding company, which may own a number of other subsidiaries and control a variety of programs. Some programs and institutions owned by the holding company may generate large profits and some may generate deficits. This analysis serves two purposes: (1) determine the amount and appropriateness of the redirection of resources from institution to related entities, and (2) measure the health of the institution, on a subsidiary and holding company level, to ensure long-term viability.

Both areas can be answered using ratio analysis, focusing on three key areas of financial health: (1) profitability; (2) leverage; and (3) liquidity. Measuring the relative health of these financial elements can shed light on the health of the greater enterprise. Unlike the Composite Financial Index used in the non-profit area, which is a longitudinal institution-specific tool, this framework introduces the “Consolidated Index” for financial analysis of for-profit institutions. The Consolidated Index serves as a comparative tool, used primarily to measure institutions against mission aligned peer medians. The framework is applicable to both the holding company and subsidiary levels.

Healthy financial statements can insulate institutions from short-term financial shocks. On the other hand, in a healthy for-profit institution, market risks, including political headwinds or the prospect of capped returns, may encourage shareholders to “cash in” and redirect investment elsewhere. Investor return is critical to encourage future capital investment; for many institutions, overly restricting the attractiveness of this capital source can be a death sentence.

Therefore, positive financial results (in the form of ratio analysis) in and of itself themselves do not guarantee the health or longevity of an institution. Financial analysis includes a measure of judgment and instinct, to provide context and non-quantifiable factors, to fully predict the ultimate health and success of the enterprise. WSCUC reviewers should use this framework only.
as a tool for deciding whether deeper analysis is necessary; many other non-financial factors must be incorporated into the institution’s review.

**Liquidity Ratio: Current Ratio**

The current ratio measures whether a company has sufficient liquid resources to meet short-term obligations (generally understood as obligations due in a year or less). As defined in the formula below, the current ratio compares current assets to current liabilities. In other words, the formula measures the number of times liquid assets cover short-term liabilities.

\[
\frac{\text{Current Assets}}{\text{Current Liabilities}}
\]

A critical component of the current ratio is the definition of current assets and current liabilities. Generally speaking, current assets are assets that can or will be converted to cash within a year. Similarly, current liabilities are obligations that must be paid within a year. As a result, some investments (particularly hedge funds with restrictive redemption provisions) must be excluded from marketable securities.

A ratio under one indicates the company’s near-term liabilities are greater than its liquid assets, suggesting a heightened risk of fiscal pressure within the year. Though bankruptcy may ensue, for-profit companies may access capital in the debt or equity markets (particularly if the enterprise is able to demonstrate positive future financial projections), providing a bridge to a stronger balance sheet.

A ratio above one indicates the company is able to cover near-term obligations with liquid assets more than one time. However, a high current ratio is not necessarily a positive sign. Deploying capital efficiently is critical for a well-managed enterprise. A minimum cash balance provides operational lubrication for most firms; too much cash or liquid assets is indicative of restrictive capital deployment and perhaps inefficient capital allocation.

Consistent with the spirit of this framework, the current ratio should be compared to mission-similar peers. A ratio above or below the peer median may warrant in-depth review, and regardless of peer performance, ratios below one can be red flags, recognizing that they may be impacted by market, current trends or institution specific causes. A sustained ratio below one may indicate an institution that is over leveraged, poorly performing, or both.

**Profitability Ratio: Net Income-to-Free Cash Flow**

This ratio provides a measure of the entity’s profit (net income)-to-free cash flow. Free cash flow is the amount of cash an entity generates after disbursements on capital expenditures (property, plant, and equipment). The cash can be used to reinvest back into the business, provide return to shareholders (in the form of dividends or stock buy-backs), pay down debt, or purchase other companies. Unused cash bolsters the entity’s balance sheet. The benefit of using free cash flow as a measurement tool is its inherent resistance to manipulation. Free cash flow and EBITDA are generally reconciled from net income as follows:
Net income, on the other hand, includes several levers that are susceptible to manipulation, such as capitalizing certain expenses (labeling an item as an asset and depreciating it over time rather than expensing it in one year) or excluding non-recurring expenses, among others.

As a result, the ratio of the two will show (1) the health of an entity’s ability to generate positive cash flow, and (2) whether there is an abnormal amount of non-cash “padding” added to net income. If net income-to-free cash flow is abnormally high relative to peers, this may be a red flag to reviewers; a further investigation is warranted as to why an unusual amount of non-cash revenue or expenses is propping up net income.

\[
\frac{\text{Net Income}}{\text{Free Cash Flow}}
\]

**Leverage Ratio: Debt-to-Capitalization**

This ratio serves as a measurement of how the entity is capitalized. Unlike not-for-profits, which do not have access to equity capital, for-profits can access the debt and equity markets to fund operations, capital expenditures, acquisitions, or a variety of other cash outlays. The debt-to-capitalization ratio provides insight into the company’s capital structure, and specifically the weighting of these two vehicles to finance its operations.

Additionally, the debt-to-capitalization ratio provides insight into the company’s financial strength. High debt-to-capitalization ratios (relative to mission-aligned peers) may signal financial difficulty, given the heavy future interest expense burden contained within the debt. These entities are at an increased risk of default.
Debt includes all short-term and long-term obligations. Total capital includes the company's debt and shareholders' equity, which includes common stock, preferred stock, and minority interest.

\[
\text{Debt} \quad \frac{\text{Total Capitalization}}{}
\]

**The Consolidated Index: Putting It All Together**

Each of the three components in the Consolidated Index -- Current Ratio (Liquidity), Net Income-to-Cash Flow (Profitability), and Debt-to-Capitalization (Leverage) -- can be graded on a scale from -10 to 10. Scores from -10 to 0 reflect red flags, and highlight areas requiring deeper inspection (the area within the red box below). Scores from 0 to 10 reflect satisfactory or positive results, limiting the need for in-depth inspection, and helping to refocus investigatory resources on more worrying signs. As with all measurements in this framework, a group of mission-similar peers should be applied to assess the relative performance of the institution under review.

**Student Outcomes**

When properly weighed against comparable institutions, student outcomes can provide valuable insight into an institution’s achievement of its mission. Because educational value is realized over a lifetime, only backward-looking metrics exist to measure its historical performance. Four metrics will help reviewers determine if an institution is adding value to students and society at large. These metrics include: (1) student loan default rates; (2) graduating student loan balances; (3) graduation rates; and (4) gainful employment.

**Student Loan Default Rates**

Graduates’ ability to repay student debt provides an important data point measuring the value of education transfer to students. Ability to cover educational costs after graduation offers insight into whether students are financially better off after program completion, inclusive of costs.

However, it is important to note that many variables impact student loan default rates, such as prevailing interest rates, current economic trends, and regional employment rates. Furthermore, in most population subsets, a percentage greater than zero will default on loans, regardless of the
quality of education received or cost incurred to procure it. This is due to factors at the individual level, such as ability to manage finances, health considerations, or compensation levels of a chosen field. Consequently, student loan default rates at the institutional level must be measured against peer averages, to get a sense of the relative performance of the college or university. Student loan default rates pitted against a national average or singular hurdle rate lack both nuance and specificity.

Federal law restricts funding (including student loans) to institutions with average student default rates above 40% or a three-year trailing average of 30%. Consequently, all institutions seeking federal funding or eligibility for federally subsidized student loans are required to maintain at least three years of satisfactory student default rates.

To distinguish between the federally mandated exercise and the one articulated in this document, the methodology incorporates: (1) current economic factors; (2) similar timeframes; (3) institutional mission; (4) target student audience; and (5) other aspects. This framework provides WSCUC reviewers with a general guideline, purposely omitting specific hurdle levels, allowing reviewers flexibility to include peer and economic trends specific to the institution under consideration. If the institution under review falls one standard deviation above the default rate average (for student loan default rates nationwide, one standard deviation from the mean ranges between 2% to 4%) of a comparable set of institutions, the economic value of the institution’s offerings may be questionable and a deeper inspection may be advisable.

For illustrative purposes, the three-year national average default rates were 11.3% and 11.7% in 2013 and 2012, respectively (2013 includes 2013 - 2015; 2012 includes 2012 - 2014). Further granularity is depicted below, including bands representing one standard deviation above the national rates.
**Graduating Student Loan Balances**

Graduating student loan balances are a leading indicator of student loan default rates. A heavier debt burden upon graduation equates to larger monthly payments and a lengthier repayment term. Institutions properly fulfilling their mission should consider graduates’ student loan balances. Students graduating with large debt burdens, as well as those that declare default, are less likely to succeed post-graduation.

Similar to the loan default rate approach, reviewers will make comparisons to a group of similar institutions. If the institution under review falls one standard deviation above its peer average, the value of the institution’s education may be questionable and a deeper inspection should be considered.

**Graduation Rates**

A major focal point of institution performance is graduation rates. Graduation rates are straightforward and easy to understand; however, their simplicity obscures the basis of their calculation and their comparability across institutions. The measurements vary greatly across schools and school categories, and are impacted by many variables, such as selectivity, core student makeup, and reliance on federal loans.

In general, private non-profit institutions have superior graduation rates, public state supported institutions have less robust rates, and private for-profit institutions have lagging rates. The chart below depicts these student graduation rates over five years, beginning with the 2004 starting cohort.1

![Student Graduation Rates: 2004 – 2008 Starting Cohorts](image)

The difference in these rates does not indicate a difference in the value of the institutions *per se*. Rather, an evaluation of graduation rates may consider such variables as mission, admissions policy, student body composition and educational preparation, core academic focus, delivery modality (online vs on-ground), and institutional resources. Because of the wide variation in these variables, no single measure of graduation rates alone presents a fair representation of an institution’s performance. For example, the chart above only measures first-time, full-time

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1 National Center for Education Statistics. (https://nces.ed.gov/fastfacts/display.asp?id=40)
freshman – consequently, transfer students are deemed non-graduating individuals. Therefore, WSCUC will incorporate its Graduation Rate Dashboard metric, as well as National Student Clearinghouse data and sometimes additional measures, into a refined instrument that gives a multi-lens view of graduation rate success.

All told, similar to student loan default rates and graduates’ student loan balances, graduation rates should also be weighed in part against a group of similar institutions. The data can highlight failing institutions; however, differences must be expected across institutional categories and individual factors may help explain why an otherwise well performing institution produces less robust graduation rates.

**Gainful Employment** [Note: *The implementation of GE is in flux at the time of publication*]

In 2015 the US Department of Education enacted the Gainful Employment Rule (“GE”), which stipulates that higher education institutions that provide certificate programs (across all higher education) and degree programs (at for-profit colleges) must maintain prescribed minimum student return on investment for federal student aid is withdrawn for failing institutions. The table below depicts the applicability of the GE rule.

<table>
<thead>
<tr>
<th></th>
<th>Public Institution</th>
<th>Private Institution</th>
<th>For-Profit Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Certificate Program</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Degree Program</strong></td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The objective of the GE rule is to measure how much students borrow to fund their education and their capacity to repay, considering their postgraduate income in the borrowing equation. Two separate tests consider a cohort of students to be gainfully employed only if their incomes meet student loan obligations without “undue duress.”

The first test, called “the annual earnings rate” compares the median student’s estimated annual loan payment to mean or median (whichever is higher) annual earnings. A program passes if the institution scores below eight percent (8%) of income or is “in the zone” between 8%-12%; it fails if the score is above 12%.

The second test is called “the discretionary income rate.” The discretionary income rate method uses mean or median annual earnings (whichever is higher) minus 150% of the federal poverty level for a single individual. A program passes if it is below 20% or is “in the zone” between 20%-30%; it fails above 30%. Both calculations are depicted below:

<table>
<thead>
<tr>
<th><strong>Annual Earnings Rate Method</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Annual Loan Payment</td>
</tr>
<tr>
<td>(Greater of) Mean or Median Annual Earnings</td>
</tr>
</tbody>
</table>
A program will lose eligibility for federal loans under the following conditions: (1) fails both tests for two out of three years, or (2) fails or is in the zone of both tests for four consecutive years. It is important to note that a program passes in a given year if it meets or exceeds passing grades for either test.

Results of the first GE test were released in early 2017, covering the 2015 calendar year for graduates in the 2010-2011 and 2011-2012 academic years. The universe of programs required to meet the GE test encompassed 6,082 programs, comprised of ~54% (3,260) for-profit institutions, ~40% (2,428) public institutions and ~6% (394) private institutions.

GE rates should be compared against mission-similar institutions using a comparable time frame. Employment trends shift quickly, are highly regional, and differ greatly across industries. Comparing the job prospects of a technology graduate in Silicon Valley with those of a philosophy graduate in Mississippi tells very little.

Alternatively, as a simplistic measure, evaluators could use median annual income as defined in the annual earnings rate method of the GE rule. These figures are widely available, given the Federal mandate to produce them. In conformity with the other measurements in this framework, median annual income should be measured against a group of mission-similar institutions over a similar time period. Institutions falling one standard deviation below the median warrant further inspection as to why this occurred.
Appendix A: Private Company Valuation Methodologies

Post-Money Valuation: After receiving outside equity financing, post-money valuation refers to the entity’s valuation, inclusive of the infusion of capital. Valuations before the capital infusion are referred to as pre-money valuations. Post-money valuation is equal to the pre-money valuation plus the amount of new capital and shares issued, as the result of an equity financing.

For example, assume a for-profit entity, Utopia University, has a $100 million pre-money valuation. An outside investor provides $50 million in equity financing, creating a post-money valuation of $150 million. The investor would own 33.3% of Utopia ($50 million / $150 million).

Discounted Cash Flow Analysis: At the core of a Discounted Cash Flow (DCF) valuation is the principle that the value of a business or asset is inherently based on its ability to generate cash flows. To that extent, the DCF relies more on the fundamental expectations of the business than on market factors or historical precedent. The DCF method serves as an underlying analysis of an entity under the going concern principle. In other words, a DCF analysis evaluates the underlying value of the entity under the assumption that the business will continue operating into the foreseeable future and generate a measure of value (in this case, the most liquid and fundamental measure of value: cash).

The DCF approach serves to calculate net present value of cash generation over the foreseeable future. Earnings can often be clouded by accounting irregularities or inconsistent policies; however cash flow is difficult to manipulate. Consequently, many investors believe that cash flow provides a relatively accurate predictor of an entity’s ability to generate value.

A DCF analysis includes: (1) the projection of free cash flow; (2) the present value of these near-term cash flows, using the weighted average cost of capital (“WACC”); and (3) the present value of the terminal (or residual) value of the entity. The near-term present value (#2 above) and the present value of the terminal value (#3 above) are summed, which is equal to the discounted cash flow value, a fair estimate of the entity’s current value.

Comparable Company Analysis: An alternative, market based approach to valuing an asset, is the Comparable Company Analysis method (“CCA”). This approach employs the use of other businesses’ metrics, and in particular, current market-based valuation metrics, to approximate the value of the institution under question using the University’s own financial figures. In short, the CCA method states that the market assigns values to companies based on their financial performance; in a theoretical world, if the institution under question were publicly traded, the CCA method suggests the enterprise would be valued in proportion to similar entities.

Public companies in the same industry serve as the closest, and therefore best, candidates for use as proxies. A basket of several companies (to diversify out any one specific company bias) are selected. The basis of the CCA asserts that similar companies will have similar valuation multiples. In the current context these multiples are applied against the financial performance of the school being analyzed to approximate how it would be valued if it were publicly traded.
**Discounted Cash Flow Calculation**: The DCF method asserts that the total value of an entity is equal to the present value of: (1) near-term projected future cash flows (e.g. a five-year time horizon) plus; (2) the present value of a future residual value (e.g. the value of the entity from year six to infinity). The graph below depicts how both portions of value are calculated (separately) and summed.

![Discounted Cash Flow Graph](image)

The DCF is calculated in six distinct phases.

1) Projecting net income: the institution’s revenue, expenses and net income are forecast five years into the future.

2) Calculating free cash flow: change in net assets is reconciled to free cash flow.

3) Calculation of the institution’s equity cost of capital using the Capital Asset Pricing Model (“CAPM”).

4) Estimating the weighted average cost of capital: Using the CAPM and the University’s estimated cost of debt.

5) Calculation of terminal value: the residual value (i.e., years six to infinity) is calculated.

6) Putting it all together: near term free cash flows are present valued and summed with the present value of the terminal value. The result is an estimated value of the institution.

**Projecting Net Income**: As mentioned above, free cash flow is the preferred measure of value, rather than profitability, to determine the valuation of the institution being analyzed. Free cash flow can be reconciled from net income; consequently, we begin by projecting net income five years into the future.

To look forward, we begin by looking backward; utilizing the institution’s historical audited financial statements for the previous three years provides context and trends to project financial and operational performance into the future.

**Calculation of Free Cash Flow**: In accrual accounting, some items impact profitability but do not influence cash flow. Consequently, the goal in reconciling free cash flow from net income is
to add back all non-cash expenses and strip out all cash expenses that are not included in accrual accounting.

The following items are reconciled from change in net assets to arrive at free cash flow:

<table>
<thead>
<tr>
<th>Net Income</th>
<th>+ Depreciation &amp; Amortization</th>
<th>(-) Capital Expenditures</th>
<th>(-) Change in Working Capital</th>
<th>(-) Income Tax Expense</th>
<th>= Free Cash Flow</th>
</tr>
</thead>
</table>

Add back non-cash expenses not included in accrual accounting.

**Capital Asset Pricing Model**: For the purposes of the present value rate, an overall cost of capital is required. The overall cost of capital, also known as WACC, is a weighted average of the equity cost of capital ($Re$) and debt costs of capital ($R_d$).

The cost of debt ($R_d$) can be estimated by using comparable debt in the market place. However, the cost of equity ($Re$) must be calculated utilizing the capital asset pricing model, a proxy for determining the equity cost of capital.

At its core, CAPM states that the expected return on an investment is equal to the risk-free rate plus a risk premium. The risk premium can be calculated as: (1) the riskiness of the investment relative to the average market return plus; (2) a size premium (smaller investments are inherently riskier). A volatility index, known as beta ($\beta$), defines an investment’s sensitivity to non-systemic risk (market risk). A beta value greater than one implies that the investment is riskier than the market; a value less than one implies that the investment is less risky than the market.

The CAPM formula is as follows:

$$R_e = (R_f) + \beta \times (R_m - R_f) + R_s$$

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>$Re$</td>
<td>Equity Cost of Capital</td>
</tr>
<tr>
<td>$R_f$</td>
<td>Risk-Free Rate</td>
</tr>
<tr>
<td>$\beta$</td>
<td>Beta</td>
</tr>
<tr>
<td>$R_m$</td>
<td>Expected Market Return</td>
</tr>
<tr>
<td>$Rs$</td>
<td>Size Premium</td>
</tr>
</tbody>
</table>

Further explanation of each input is as follows:
1) Risk-Free Rate (Rf): This rate is the baseline return an investor can expect to receive for a “riskless” investment. The U.S. Treasury 30-year yield is a good proxy for this rate (perceived by investors as the safest investment available).

2) Beta (β): As mentioned above, Beta is a measure of the systematic risk of a specific investment relative to the overall market. Using a basket of publicly traded stocks in the education sector, on the whole, assumed to be of similar volatility to the institution being analyzed.

3) Equity Risk Premium (Rm - Rf): This is the additional return an investor requires, on top of the riskless rate, in exchange for investing in an equity vehicle. This excess return compensates investors for taking on the relatively higher risk of the equity market. The 20-year trailing S&P compounded annual growth return is a good proxy for the market’s expected yield.

4) Size Premium (Rs): Generally, small businesses carry higher risk than larger, stable businesses (i.e., a small stock versus a stock in the S&P 500). Consequently, investors in small businesses require a higher rate of return, known as the size premium. The Ibbotson micro-stock premium reflects the risk premium of a basket of stocks under $300 million in market capitalization. In 2013, this was 4.20%.

Calculating the Weighted Average Cost of Capital: As mentioned above, an entity’s assets are financed with one of two vehicles, debt or equity. When financing or investing in an asset, an investor is exposed to various risks. These include non-systemic risks (also known as diversifiable risk), such as company-specific risks, and systemic risks (also known as non-diversifiable risk). The riskier the investment, the higher the required return. Discount rates thus represent the return an investor would require; it is the market’s measure of the required return for the level of risk inherent in the investment.

A firm’s WACC is the overall required return on the firm as a whole and, as such, it is often used internally by company directors to determine the economic feasibility of expansion opportunities and mergers or acquisitions. It is the appropriate discount rate to use for cash flows with risk that is similar to that of the overall firm. The WACC is equal to:

\[
WACC = \left[ \frac{E}{V} * R_e \right] + \left[ \frac{D}{V} * R_d * (1 - Tx) \right]
\]

The tax rate is deducted from the debt cost of capital, because, under the current tax structure for for-profit entities, interest expense is tax-deductible. Consequently, because the WACC is a proxy for the discount rate in an effort to calculate the present value of cash flows, we include the tax benefit of interest expense.

The debt cost of capital is simply the total portfolio borrowing cost. Overall debt portfolio yield is the appropriate metric.
Calculation of Terminal Value: Gordon’s growth model states that the intrinsic value of an entity can be estimated based on a series of dividends that grow at a constant rate into perpetuity. These dividends are equal to the perpetual free cash flow that the University generates, which can be approximated by the last forecasted period. The formula for Gordon’s Growth Model is as follows:

\[
\frac{FCF_0 \times (1 + g)}{r - g}
\]

### Symbol Table

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>E/V</td>
<td>Percentage of Financing that is Equity</td>
</tr>
<tr>
<td>D/V</td>
<td>Percentage of Financing that is Debt</td>
</tr>
<tr>
<td>Re</td>
<td>Equity Cost of Capital</td>
</tr>
<tr>
<td>Rd</td>
<td>Debt Cost of Capital</td>
</tr>
<tr>
<td>Tx</td>
<td>Corporate Tax Rate</td>
</tr>
</tbody>
</table>

### DCF Computation -- Putting It All Together: Using the WACC for the institution being analyzed, as calculated above, the present value of all future cash flows can be calculated. Near term cash flows are discounted at the WACC, using the mid-year convention (assuming, on average, the cash flow occurs in the middle of the fiscal year). The terminal value is similarly discounted; however, using the full-year convention (the Gordon Growth Model calculates the nominal value of the terminal value as of year-end). The summation of the two present values (near-term cash flows and terminal cash flows), using the WACC as a proxy for the discount rate and an appropriate long-term growth rate (1.00% to 4.00%), provides the DCF value.

### Comparable Company Analysis: As mentioned previously, this approach employs the use of other businesses’ metrics to approximate the value of the institution under consideration. Theoretically, if the institution were publicly traded, the CCA method suggests that it would be valued in financial proportion to similar entities.

As with the Beta calculation performed above, public companies in the same industry serve as the closest, and therefore best, candidates for use as proxies. The basis of the CCA asserts that similar companies will have similar valuations multiples, such as Enterprise Value-to-Revenue, Enterprise Value-to-EBIT or Enterprise Value-to-EBITDA.
Enterprise Value ("EV") is typically used as the theoretical acquisition price; it is calculated as market capitalization plus debt, minority interest and preferred shares, minus total cash and cash equivalents. In the event of an acquisition, a buyer would be responsible for the company's debt, but would also inherit its cash.

Ratios should be selected from a basket of selected publicly traded securities. Multiplying the average EV-to-Revenue, EV-to-EBIT and EV-to-EBITDA ratios of the basket by the institution being analyzed Revenue, EBIT and EBITDA, provides a proxy for the institution’s EV, if it were to be publicly traded.

A proportion of each metric can be applied, such as:

1) EV-to-Revenue: 33.3%
2) EV-to-EBIT: 33.3%
3) EBIT-to-EBITDA: 33.3%
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