Putting It All Together, Helping Accounting Majors Understand and Critique Financial Statements from the Perspective of Their Coursework in the Business Core, the Liberal Arts Core, and Theology

A Paper Prepared for the 2001 Christian Business Faculty Association Annual Meeting

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This paper is a result of my efforts at integration across three metrics in the financial accounting courses that I teach: 1) integrating concepts from business core courses, 2) integrating concepts from liberal arts core courses, and 3) integrating concepts from theology core courses.

In the paper I offer for consideration approaches that I have had some degree of success in using. My hope and prayer is that presentation and discussion of these approaches will generate ideas useful to all CBFA members who are grappling with integration issues in their financial accounting courses.

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Introduction:

Teaching accounting majors within the environment of a Christian liberal arts college presents an instructor with many challenges, with not all of these challenges being unique to a Christian liberal arts setting. It is my grappling with several of these challenges within the context of the financial accounting sequence that motivates this paper. These challenges center around one objective, the desire for integrative learning across several metrics.

First, there is the ever present desire to integrate faith and learning. From this perspective, my desire is that accounting majors thoughtfully and prayerfully grapple with what it means to see and understand financial accounting from a Christian perspective. In this regard, what does it mean to be a Christian accountant? How do the explicit and implicit goals of financial accounting measure up from a Christian perspective?

Second, my desire is that accounting majors will use concepts from their business core coursework to understand and critique financial accounting. As examples:

> How does viewing the firm as a production function and understanding income from an economic perspective-both concepts from microeconomics courses-help a student understand and critique financial accounting's definition and measurement of assets, ownership claims on assets, and income?
>
> How do the concepts of stakeholders-from management courses-and of public goods and externalities-from microeconomics courses-help a student understand and critique the primacy financial accounting places on shareholders?
>
> How does the importance placed on unbiased estimators-from statistics courses-help one critique financial accounting's use of conservatism as a guiding principle in making estimates?

Third, Liberal arts education is often lauded for its capacity to develop a student's communication, critical thinking, and problem solving skills. From this perspective, my desire is that the sequence of financial accounting courses will both appropriately use and hone these generic skills within the specific context of financial accounting. In this regard, how do instructors structure courses to achieve these objectives?

If you are looking for definitive answers to these questions, you will not find them in this paper. After seventeen years of college teaching, with the last five being at a Christian liberal arts college, my approaches remain only tentative and propositional. I offer these approaches with twin hopes-first, that they will be helpful in some way to other Christian accounting educators who are grappling with similar issues, and second, that they will stimulate input from other Christian accounting educators that will be helpful to me. In that spirit, let us proceed.

Why This is Difficult:

Beyond the challenges that go with any attempt at cross-discipline integration, there are special challenges associated with the three types of integration discussed in this paper. In general, liberal arts colleges have a significant portion of required credit hours devoted to the liberal arts core. Given the benefits derived from a liberal arts education, these are credit hours that are wisely invested. That being said, these credit hours are no longer available for use in the major area of study.

Along with the liberal arts core, Christian liberal arts colleges also devote a significant number of credit hours to the study of theology. Again, though the substantial benefits derived from theological studies make this a wise investment of credit hours, these credit hours are not available for use in the major area of study. Thus, the credit hours that remain for crafting the accounting major are most likely fewer than accounting educators desire.

Along with the credit hours devoted to the study of the various areas of accounting, most accounting majors are also required to take a core of business courses. Given these constraints, the fifteen credit hours[1] that are typically devoted to financial accounting courses represent the bare minimum necessary to cover the relevant pronouncements, standards, and other technical material. Not surprisingly, then, accounting educators at Christian liberal arts colleges can easily find themselves satisfied if they proficiently cover all of the authoritative material that comprises Generally Accepted Accounting Principle.

On several occasions plans for integrating faith and learning developed during the relative leisure of summer have been quietly set aside once I am several weeks into the reality of another fall semester. That being said, I still desire to pursue the types of integration discussed in this paper for several reasons:

> First, based the transformation that takes place when a lost sinner is reconciled with Christ, all Christians, including Christian accountants, should see and understand the whole of life, including their vocations, from a perspective that differs radically from the fallen world's.
>
> Second, both the Accounting Education Change Commission (AECC), with its project of reforming accounting education, and the American Institute of Certified Public Accountants (AICPA), with its rationale for advocating 150 credit hours of education for CPA exam candidates, have emphasized the importance of developing and honing communication, critical thinking, and problem solving skills in accountants.

[1] A typical financial accounting sequence would include the following five courses: introduction to financial accounting, intermediate financial accounting I and II, advanced financial accounting, and auditing. Additionally, some colleges allow four credit hours for the intermediate and advanced courses, while other colleges have a second advanced course. Either of these approaches would increase the total number of credit hours devoted to financial accounting to eighteen.

> Third, if I am to be a wise steward with the students that God entrusts me with, I must strive to create an academic environment that maximizes the opportunity for student development, growth, and transformation. In this regard, I need to do more than train up technically proficient accountants.

Thus, what follows in the remainder of this paper is a sketch of the results of my grappling with multiple metric integration.

Integrating Across the Business Core:

Given the propensity of students to view individual courses as self-contained entities-a perspective that I held as an undergraduate-integration will not take place without intentional effort on the part of educators. In that regard, I have found many opportunities for integrating concepts from microeconomics into financial accounting courses, concepts that help students understand and critique financial accounting.[2]

In contrast with financial accounting income, economic income includes normal rates of return to the various factors of production as deductions in the computation of income. Thus, by definition, firms in perfectly competitive industries earn zero economic profits. Economic profits only accrue to firms that have some degree of market power.

Provided that the students have had an introductory microeconomics course, it is an interesting integration exercise to ask students in intermediate financial accounting how the income statement, balance sheet, and statement of cash flows would differ if an economic definition of income was used in preparing the financial statements. Regarding the income statement, with instructor assistance as needed, students should be able to notice the following:

> The accounting definition of income includes only returns to human capital (wage and salary expense) and to debt financed tangible and

[2] For an overview of the economic theory of the firm, definition of income, and theory of public goods and externalities see Mankiw (1998) or any other introductory economics text.

> intangible capital (interest expense) as deductions in the computation of income. Returns to equity financed tangible and intangible capital (dividends and share price appreciation) and to public goods (positive and negative externalities) are not considered in the computation of income.
>
> Certain expenditures, such as those for research and development and employee training, that are currently expensed represent investments in factors of production, investments that should be capitalized.
>
> Were the above changes made to the computation of income, so that economic income is measured and reported, any resulting income is consistent with the firm possessing market power.

If the balance sheet is to correspond with the income statement, the observations noticed above, should lead to the following observations regarding the balance sheet:

> Under assets, the balance sheet only lists the tangible and intangible assets purchased by the firm, and these assets are valued at historical cost, not at market value. All other factors of production are missing from the balance sheet. Adjusting the balance sheet so that all factors of production are listed at market value requires that tangible and intangible assets be adjusted to market value, that human capital be valued and placed on the balance sheet, and that goodwill be valued and placed on the balance sheet of all firms earning positive economic income. The key to recording goodwill, then, is not whether the firm purchased it in an arm's length transaction. Instead, the key is whether the firm earns an economic profit.

Moving from an accounting to economic understanding of income does not change a firm's actual cash flows. This move will, however, change how these cash flows are categorized on the statement of cash flows. Consistent with the above observations regarding the income statement and balance sheet, again with instructor assistance as needed, students should notice the following:

> Returns to factors of production other than equity financed tangible and intangible assets are included as outflows in the operating activities section. Consistency with the treatment of dividends requires that these outflows be moved to the financing activities section.
>
> Expenditures, such as those for research and development and employee training, included as outflows in the operating activities section should be

moved to the investing activities section, as they represent firm-level investments in factors of production.

A second integration opportunity allows students to apply concepts from two seemingly unrelated subject areas, management and microeconomics. The idea that many parties beyond stockholders have an economic interest in a given firm is not new to the field of management, where the is a well developed body of literature on the concept of stakeholders. That being said, the concept of stakeholders receives only scant attention in accounting textbooks.

This concept of stakeholders does, however, relate to the above noted reformulation of the balance sheet to include all factors of production. Beyond viewing the firm as a production function, another concept from microeconomics, the concept of public goods and externalities, is useful for capturing the full range of stakeholders in a given firm. Communities often make infrastructure improvements to keep or attract firms. With instructor assistance as needed, students should observe that these infrastructure improvements are factors of production for the firm. Yet, these infrastructure improvements also provide benefits to the rest of the community, so they are properly thought of as public goods.

The concept of externalities applies even when public goods are not factors of production for the firm, and the concept of externalities is sufficient to identify additional stakeholders. Externalities represent either positive or negative spillovers to transactions between the firm and a second private party. Pollution is the most popular example of a negative externality, while business opportunities derived from serving suppliers or employees of the firm represent an example of a positive externality.[3]

One last integration example comes from the disciple of statistics. Statistics and financial accounting are similar in that both exist as disciplines with the purpose of providing useful information to decision makers. In statistics it is important that the estimators of population parameters calculated from sample data be unbiased estimators. Indeed, lack of bias and minimized dispersion are the two criteria used to evaluate alternative estimators.

Financial accounting does not share this desire for unbiased information with statistics. Instead, financial accounting intentionally provides biased information. Though the principle of conservatism is rarely, if ever, stated this way, intentionally biased financial statements are the direct result of applying the conservatism principle.

The conservatism principle is based on the notion of risk aversion, the investor posture assumed throughout the discipline of financial economics. But, does the notion of investor risk aversion support the provision of intentionally biased financial statements? Could risk averse investors make better decisions if they were provided with unbiased financial statements?

Students do not need to be well versed in information economics to understand and participate in a discussion at this level. When this discussion turns to finding a plausible reason for financial accounting holding to the conservatism principle, one can incorporate concepts from interest group theory. Students can observe that auditors minimize the likelihood that they will be sued by holding to the conservatism principle,

[3] The appendix at the end of this paper provides a sketch of what the financial statements might look like if they were recast in accordance with these integration ideas.

as lawsuits arise from unpleasant surprises (earnings less than expected), not from pleasant surprises (earnings greater than expected).

While there are not doubt other opportunities for cross course integration from within the business core, these are opportunities that have worked reasonably well in my accounting courses. I most often engage in these integration opportunities in the intermediate financial accounting sequence and in auditing. By the intermediate level students both have sufficient depth in financial accounting and have usually completed introductory microeconomics and statistics. By the auditing level most students have also completed management, and auditing is as close as I get to a financial accounting capstone course. These integration opportunities require the students to use their communication and critical thinking skills, which is where I turn next.

Integrating Across the Liberal Arts Core:

Newman (1996), among others, has persuasively made the case for a liberal arts education. Additionally, Holmes has (1987) examined the purpose of Christian liberal arts education. In general, one purpose of a liberal arts education is to help a student develop a sense of perspective for the human condition an experience. A second purpose is to develop and hone a student's communication, critical thinking, and problem solving skills. MacArthur focuses on this second purpose, and it is this second purpose that I focus on in my efforts to integrate across the liberal arts core.

Developing communication, critical thinking, and problem solving skills can give purpose to courses that appear to have no relevance to an accounting curriculum. I often make use of this perspective in my role as advisor when I am trying to motivate student interest in non-major courses. From this perspective a two-year sequence in a foreign language, for example, can have great relevance for an accounting major. In grappling with a foreign language-in learning the vocabulary and grammar, in struggling with the process of logically and persuasively communicating ideas using the foreign language, in struggling with ideas communicated by others in the foreign language-a student develops and hones generic skills that are useful as the student strives to master accounting.

Gardiner (p. 41), in an adaptation of the Taxonomy of Educational Objectives (Bloom, 1956), provides a framework that I find helpful in my efforts to develop and hone these skills in an accounting setting:

1. Knowledge, here referred to as *Recall*, requiring memory alone;

2. *Comprehension*, which includes acquisition of concepts and principles;

3. *Application*, in which concepts and principles are used in new, albeit straightforward situations;

4. *Analysis*, which involves the disassembly of wholes to identify their constituent parts, themes, or organizing principles;

5. *Synthesis*, in which novel wholes are assembled form parts; and

6. *Evaluation*, which involves judgment of relative value or quality.

In introduction to financial accounting I focus heavily on recall and comprehension, with the higher order skills receiving significantly less emphasis. Building on the foundation provided by the introductory course, I focus more heavily on application, analysis, synthesis, and evaluation in the intermediate and advanced financial accounting courses and in the auditing course.[4]

[4] Though I have yet to find the available credit hours to accommodate such a course, I would like a financial accounting capstone course built around financial statement analysis. Revsine, Collins and Johnson (1999) is a text that could be used in such a course.

Often, this works out better as an ideal than as a reality. In the first intermediate course I usually find myself spending more time than planned reviewing concepts from the introductory course. The same happens in the auditing course, where time is spent reviewing concepts from the intermediate courses. I have yet to find a satisfactory solution to the problem of student retention of knowledge from course to course.

Additionally, my general finding is that students have greater difficulty than expected in mastering the higher order skills. This may be due to students having relatively little experience in developing higher order skills. Given the reality that it is easier to construct and administer courses that emphasize lower order skills, the reality of significant teaching loads at Christian liberal arts colleges, and the reality of student workload expectations, one can understand why constructing and administering upper level courses that emphasize higher order skills represents the less-traveled road. Yet, this is the road that Christian stewardship, the AECC, and the AICPA call us to travel.

The key theme of the AECC is that accounting courses should be taught from a user perspective, as opposed to a preparer perspective. The preparer perspective creates a disconnect between accounting education and practice. An accounting education that focuses on the preparation of journal entries does not necessarily prepare students for a profession that focuses on analyzing financial statements. This disconnect need not exist, as knowing how to prepare financial statements can and should provide the ideal foundation for analyzing financial statements. However, courses taught from the perparer perspective increase the likelihood that students will rely too heavily on lower level skills. In contrast, courses taught from the user perspective require that students place greater reliance on higher level skills.[5]

In making the case that 150 credit hours of education is necessary for students entering the accounting profession, the AICPA did not note a need for more technical accounting education. Instead, the AICPA noted that accounting students need better communication, critical thinking, and problem solving skills. Indeed, the AICPA recommends that the additional credit hours beyond the bachelors degree be taken in non-accounting courses. State boards of public accountancy that have adopted 150 hour requirements have followed the lead of the AICPA by making only insignificant changes to the number of accounting and business credit hours that are required to sit for the CPA exam.

Most importantly, to the extent that the development of higher order skills is essential to optimally prepare students for productive lives, then regardless of the obstacles that lie in our paths, educators at Christian liberal arts colleges are called to create environments that maximize the likelihood of developing higher order skills. We are called to create environments of this sort if we are to be wise stewards of the students that God entrusts to us. It is this notion of stewardship that provides a theological framework for understanding financial accounting.

Integrating Across the Theology Core:

The concept of stewardship resonates throughout the Bible. In the creation accounts of Genesis 1 and 2 it is noted that God entrusted management of the Garden of

[5] Skousen, Stice and Stice (2000) is an intermediate financial accounting text that is midway between the preparer and user perspectives.

Eden to Adam and Eve.[6] In His parables-specifically the parable of the talents in Matthew 25:14 through 30 and the parable of the ten minas in Luke 19:11 through 27-Jesus makes it clear that followers of Christ are expected to exercise wise stewardship over the resources that they are entrusted with.[7] Thus, from their theology courses, accounting majors should have a biblical understanding of stewardship. But, how can one use the concept of stewardship to make theological sense of accounting?

The United States, however, is not a theocracy, so is it relevant to apply the biblical concept of stewardship to secular enterprises? One only needs to call student attention to the extent to which words like productivity and efficiency appear in the evaluations of business enterprises to realize that stewardship is already in wide use as a metric for evaluating business enterprises. A reasonable next step, then, is to suggest to students that financial statements be viewed as stewardship reports for all factors of production invested in a business enterprise. Students can then consider the modifications examined in the business core integration section of this paper from a stewardship perspective. Do those modifications result in financial statements that do a better job of reporting on stewardship?

According to the stewardship concept, all stakeholders should strive to make the wisest use possible of the resources they have been entrusted with. Financial accounting reports that detail both the investments made by all stakeholders and the returns on investment realized by all stakeholders will greatly assist all stakeholders as they endeavor to be wise stewards. Periodically, as financial accounting information is

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[6] See Hamilton (1990, pp. 103-185).

[7] See Wenham (1989).

received, stakeholders have to decide whether they should continue to leave their resources invested as they currently are or whether their resources should instead be invested in another firm.

When they consider whether to leave resources invested in a given firm or to instead invest those resources in a second firm, stakeholders are essentially evaluating the extent to which managers of a given firm have been good stewards of the resources invested in the firm. Thus, wise stewardship is required at two levels, at the firm manager level and at the stakeholder level, with stakeholders having the opportunity to reward or sanction managers based on their stewardship at the firm level. Ultimate stewardship responsibility, then, lies at the stakeholder level.

What criteria should stakeholders use when they conduct stewardship evaluations? Should maximizing the financial return on investment be the sole, or even primary, criteria? While this is a decision that each stakeholder must make, when one looks to biblical revelation, one finds that the answer is “No.” Addressing this question brings one to the heart of a biblical understanding of stewardship.[8]

According to biblical revelation, the resources entrusted to stakeholders are not ultimately theirs. Instead, God is the ultimate owner of all creation, His creation. It is from this perspective that an ethical economic framework is laid out in the Pentateuch. Israel’s failure to abide by this framework is noted as the reason for God’s judgment by the prophets Amos, Isaiah, and Micah. This framework further evidences itself in the teachings of Jesus.

[8] For more on biblical ethics see Blomberg (1999), Hays (1996), Mott (1982), Sider (1997, pp. 41-120), and Wright (1995).

The cornerstone of this ethical economic framework is that God, the Creator, is the ultimate source of protection, provision and fulfillment. Humans are mistaken when they look to God's creation as the ultimate source of protection, provision and fulfillment. The key to wise stewardship, then, is using the resources that one is entrusted with in accordance with God's purposes. From this perspective, caring for the fatherless and the widow is more important than maximizing the financial rate of return. From this perspective, giving modern meaning to land tenancy laws from an ancient agrarian society, providing a source of income for families in a community is more important than closing a plant to maximize the financial rate of return.

Conclusion:

My experience is that it is much easier to consider integration as an abstract concept than it is to implement it in a concrete fashion. This paper is a result of my efforts to integrate across several metrics in the financial accounting courses that I teach. My hope and prayer is that this paper and the dialogue it generates will be of value to all CBFA members (including myself) who are grappling with these integration issues.

Appendix: Examples of Modified Financial Statements

Modified Balance Sheet:

Assets		Claims on Assets	
Physical Capital	xxx	Creditors' Investment in Physical Cap.	xxx
Human Capital	xxx	Shareholders' Invest. in Physical Cap.	xxx
Public Goods	xxx	Investments in Human Capital	xxx
Market Power	xxx	Investments in Public Goods	xxx
Total Assets	xxx	Total Claims on Assets	xxx

Modified Income Statement:

Total Revenues	xxx
Less: Cost of Material Inputs	(xxx)
Value Added	xxx
Returns to Creditors' Investment in Physical Capital	(xxx)
Returns to Shareholders' Investment in Physical Capital	(xxx)
Returns to Investments in Human Capital	(xxx)
Returns to Investments in Public Goods	(xxx)
Economic Rent due to Market Power	xxx

Modified Statement of Cash Flows:

Cash from Operating Activities (Value Added)	xxx
Cash from Investing Activities	
Firm Level Investments in Physical Capital	
Firm Level Investments in Human Capital	
Firm Level Investments in Public Goods	xxx
Cash from Financing Activities	
Creditors' Investments in Physical Capital	
Returns to Creditors (Interest Payments)	
Shareholders' Investments in Physical Capital	
Returns to Shareholders (Dividend Payments)	
Investments in Human Capital	
Returns to Human Capital (Wage Payments)	xxx
Beginning Cash Balance	xxx
Ending Cash Balance	xxx

Modified Retained Earnings Statement: No Longer Required

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