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Why Financial Knowledge of Valuation Methodologies is Crucial for Accounting Professions

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Abstract

The main objective of this article is to highlight concerns about the importance of financial knowledge, specifically regarding valuation methodologies and present value measurement used in both Thai and international financial reporting standards. Since the Conceptual Framework for Financial Reporting allows companies to choose "current value measurement" as one of the techniques to arrive at a measure, it undeniably brings accounting much closer to finance than ever before. Regardless of the technical terms of current value measurement used in Thai Accounting Standards (TASs) or Thai Financial Reporting Standards (TFRSs)—such as fair value, value in use, or fulfilment value—the complexity of present value measurement techniques makes current value measurement difficult to understand and apply, especially for accountants or auditors who lack sufficient financial knowledge and experience with valuation methodologies.

This issue is exacerbated by the fact that most current accounting curricula in Thailand and other countries require only one finance subject, where concepts such as time value of money, present value measurement, central estimate of cash flows, and risk premium are only briefly covered. Although this financial knowledge might be revisited when specific TASs or TFRSs are taught, the limited time allocated to each accounting subject raises questions about the depth of understanding of these complex topics. To address this issue, if adding another finance subject focused on valuation methodologies is not feasible, it is suggested that all accounting programs should at least enhance the existing finance subject by: (a) discussing this problem with finance instructors and requesting them to devote sufficient time to topics related to value measurement, and (b) making accounting students aware of the importance of financial knowledge to the accounting profession, encouraging them to focus more on key concepts of valuation and present value measurement.

In conclusion, this paper emphasizes the close relationship between accounting and finance, and the critical importance of finance, especially for financial accounting. Given the increasing trend of current value measurement, it is imperative to provide prospective accounting professionals with sufficient financial knowledge. Improved understanding will empower accountants and auditors to handle the complexities of TASs and TFRSs involving current/fair value measurement, ultimately strengthening the reliability and faithful representation of companies' financial statements and enhancing investment decision-making for investors and other financial statement users worldwide.

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Introduction

Accounting and finance always have a close relationship. The similarity is that they are both engaged in the financial aspect of all businesses; however, they deal with companies in entirely different ways. While accounting focuses on historical and current financial information and aims to record, post, and prepare financial statements in accordance with Thai Accounting Standards (TASs) and Thai Financial Reporting Standards (TFRSs) as correctly and efficiently as possible, finance concentrates primarily on making vital financial decisions for a company to achieve the long-term financial goals. Nevertheless, nowadays, the rapport between accounting and finance are tighter than ever from the use of valuation methodologies in measuring the current value as identified in the conceptual framework for financial reporting. Unlike historical cost that gives monetary information at the date of initial recognition, current value provides updated information about the values of assets and liabilities that reflect conditions at the measurement date. Although current/fair value measurement might raise some criticisms about credibility, volatility, uncertainty, reliability and information asymmetry between investors and managers, for standard setters and defenders, the key benefit of current/fair value is prominent. It can provide financial statement users with more relevant financial information; therefore, in an aspect, it is undeniable that current/fair value is superior to historical cost (Matsane et al., 2022; Jaijairam, 2012). Nowadays, the frequently used current value measurement comprises three methods as follows:

(1) Fair value

Fair value is the price anticipated from the sale of an asset or the settlement of a liability under current market circumstances (Accountingtools, 2022). Generally, measurement of the fair value of assets and liabilities can be derived by using one or more techniques from the three main valuation approaches:

(a) Market approach (by using the prices associated with actual market transactions for identical or similar assets and liabilities)

(b) Income approach (by discounting estimated future cash flows)

(c) Cost approach (by using the estimated cost to replace an asset).

(2) Value in use

Value in use, unlike fair value, can only be calculated by measuring the present value of the estimated cash flows from the use of an asset and from its eventual disposal.

(3) Current cost

Current cost of an asset or a liability is the compensation that would be paid or given for a comparable asset or liability adjusted by the transaction costs at the date of measurement (IFRS Foundation, 2018).

Thai Financial Reporting Standards that have requirements regarding current value measurement include Thai Accounting Standard (TAS) 19: Employee Benefits, TAS 36: Impairment of Assets, TAS 37: Provisions, Contingent Liabilities, and Contingent Assets, and TFRS 13: Fair Value Measurement.

- TAS 19: To determine post-employment benefit plans, the standard requires that any defined contribution plan must be discounted to its present value. For defined benefit plans, the standard also requires the use of an actuarial valuation method to measure net defined benefit liabilities or assets, with the fair value of the plan assets derived from the present value of the defined benefit obligation to estimate the net surplus or deficit.

- TAS 36: To calculate value in use, the standard stipulates that an entity must estimate the future cash flows it anticipates to receive from the asset, considering all could-be variations in both timing and amount of those future cash flows, as well as the time value of money, the ambiguity innate in the asset, or any other factor that market players would demonstrate in pricing the future cash flows anticipated to obtain from the asset.

- TAS 37: To measure provisions, the standard requires that the measurements for either provisions for one-off events or provisions for large populations of events must be at discounted present value, using a pre-tax discount rate reflecting the existing market evaluations of the time value of money together with any specific risks of the liability.

- TFRS 13: The standard indicates that an entity can choose any valuation technique that is most proper in the situations and for which adequate data are accessible to calculate its own fair value. Generally, most entities choose one or more techniques from one of the three valuation approaches: Market approach, Income approach, and Cost approach. The market approach employs level 1 input or level 2 input; while the income approach typically uses level 3 input and must use the entity's own data as well as any other information about market player assumptions that is realistically accessible. The concept of fair value in TFRS 13 is also applied in other accounting standards such as TAS 16: Property, Plant, and Equipment, TAS 38: Intangible Assets, TAS

40: Investment Property, and TFRS 9: Financial Instruments.

- TAS 16 and TAS 38: For measurement subsequent to initial recognition, the standards allow an entity to measure and present the value of those assets at a revalued amount (Revaluation model), which is its fair value at the revaluation date less subsequent depreciation/amortization and impairment losses.

- TAS 40: The standard permits an entity to choose the fair value model by remeasuring the entity's value of investment property at its fair value. The fair value is typically given by current prices on an active market for similar property or, in some cases, on less active markets with modifications to present variations in economic situations and discounted cash flow estimates built upon valid evaluations of future cash flows.

- IFRS 9: The standard indicates that all financial instruments are initially assessed at fair value adjusted by transaction costs. For subsequent measurement of financial assets, all financial assets can be measured either at amortized cost or at fair value in the statement of financial position.

(Deloitte Touche Tohmatsu Limited, 2022a; 2022b; 2022c; 2022d; 2022e; 2022f; 2022g; 2022h; Thailand Federation of Accounting Professions, 2021).

These accounting and financial reporting standards were adopted by the listed companies in Thailand and in other countries around the world for some time; still, prior accounting research provided some disturbing results which indicated that since the adoption of these standards, many accounting professionals have faced challenges regarding current/fair value measurement. Specifically, the empirical results showed a low degree of awareness of fair value measurement among accountants who had responsibility for preparing financial statements. Furthermore, auditors face several complex challenges, including the lack of necessary information for value measurement, which leads to varying degrees of subjectivity. These challenges include the auditors' inability to successfully examine value estimates, managers manipulating the values of assets and liabilities during the estimation process, and the improper use of valuation techniques by companies (Oyewo, 2020; Oyewo et al., 2020). In sum, it is quite clear that financial knowledge about valuation methodologies is very crucial to all accounting professionals when applying all accounting standards involving current/fair value or the calculation of discounted future cash flows. This kind of knowledge is imperative because current/fair value measurement is presently applied in many accounting and financial reporting standards worldwide. Nevertheless, with the empirical evidence, it could be inferred that accounting professionals, both accountants and auditors, still encounter urgent issues concerning current/fair value measurement. Problems reflect inadequate attention and insufficient financial knowledge in the accounting realm. Consequently, some solutions are needed promptly to alleviate these current challenges to prepare the prospective accounting professionals to be ready to enter the professional world and effectively grow in their career. The summary of the requirements in each accounting standard relating to valuation methodologies is shown in Table 1 below.

Table 1 Thai Financial Reporting Standards relating to Valuation Methodologies

TFRSs	Requirements
TAS 19: Employee Benefits	• Used to determine post-employment benefit obligations by calculating present value of estimated ultimate cost
TAS 36: Impairment of Assets	• Used to determine value in use for the recoverable amount of non-financial assets to test an impairment
TAS 37: Provisions, Contingent Liabilities and Contingent Assets	• Used to determine provisions or the expenses expected to be required to transfer or settle an obligation
TFRS 13: Fair Value Measurement Remark: Related accounting standards that also apply TFRS 13 ○ TAS 16: Property, Plant and Equipment ○ TAS 38: Intangible Assets ○ TAS 40: Investment Property ○ TFRS 9: Financial Instruments	• Used to assess fair value of permitted or required assets and liabilities ○ Revaluation model ○ Revaluation model ○ Fair value model ○ Fair value

Valuation Methodologies

Valuation methodology can be used to determine the fair or current value of enterprise, equity, asset, and liability. As defined above that fair value is the estimated current market value of an asset or a liability on the measurement date in an orderly transaction (not under pressure to sell) to a third party (not a corporate insider or connected in any way to the seller) under current market conditions (Accountingtools, 2022), to determine the current value of those items, normally, there are three valuation approaches with many techniques that are frequently used for measuring the current value of assets and liabilities in the financial reporting standards. The well-known three approaches are market approach, income approach and cost approach. In the case of the

market approach, an entity determines fair market value by using the prices associated with actual market transactions for identical or similar assets and liabilities or by reviewing actual transactions of comparable companies to derive a fair value. Valuation techniques in the market approach include:

(1) Transaction price given for an identical asset

(2) Transaction price given for a similar asset

(3) Valuation multiples from comparable companies such as EV/EBITDA and EV/EBIT for measuring enterprise value, as well as P/E and P/B for measuring equity value.

However, in some circumstances the market approach may not be appropriate to use, the income approach is another proper choice that an entity can obtain when considering the measurement of fair or current value. For the income approach, an entity calculates the Present Value (PV) of future cash flows or earnings associated with ownership of the equity interest or asset. After that, the estimated future cash flows or earnings will be discounted at a rate representing the time value of money and is suitable for the risks linked with those future benefits. The valuation techniques in the income approach consist of:

(1) Discounted Cash Flow (DCF) model

Generally, especially for measuring equity instruments, the DCF valuation can be divided into two methods to calculate either equity value or enterprise value. The first one is Free Cash Flow to Equity (FCFE) that uses the cash flows accessible to only equity capital providers as its input and applies the cost of equity capital as its discount rate. On other hand, the second one is Free Cash Flow to Firm (FCFF) that uses the cash flows available to both equity and debt providers and applies the Weighted Average Cost of Capital (WACC) as its discount rate.

(2) Dividend discount model

The dividend discount model is used when the core assumption that the share price of an entity will equal the present value of all anticipated future dividends in perpetuity.

(3) Constant-growth dividend discount model

The constant-growth dividend discount model is used when an entity can estimate dividends for every period into the unspecified future with the key assumption that the expected future dividends will increase at a constant growth rate.

(4) Capitalization model

The capitalization model measures the present value based on the entity's earnings or economic income with the fundamental assumption that the income streams that are capitalized must be constant in infinity or must increase at a stable rate.

Lastly, an entity can also choose the cost approach that uses the estimated cost that would be required at the time to substitute the service capacity of an asset. Thus, it is up to the entity to select one or a combination of these approaches and techniques which is the most appropriate to the entity's situation (IFRS Foundation, 2013; IFRS Foundation, 2019; Deloitte Touche Tohmatsu Limited, 2013; Divestopedia, 2016). An overview of the valuation approaches and techniques together with some of their formulas are presented in Table 2 below.

Table 2 Valuation Approaches and Techniques

Valuation approaches	Valuation techniques
Market approach	• Transaction price given for an identical asset • Transaction price given for a similar asset • Valuation multiples from comparable companies ○ EV/EBITDA where, EV = Enterprise Value EBITDA = Earnings before Interest, Tax, Depreciation and Amortization EV = Ordinary Shares + Preference Shares + Market Value of Debt + Minority Interest – Cash and Equivalents ○ EV/EBIT where, EBIT = Earnings Before Interest and Tax ○ P/E where, P = Current share price E = Earnings per share (EPS) ○ P/B where, P = Current share price B = Book value per share ○ EV/Revenue where, EV = Enterprise Value ○ Others
Income approach	• Discounted Cash Flow (DCF) model $PV = FCF/(1+i)^n$ or $PV = \Sigma FCF/(1+i)^n$ where, PV = Present Value, FCF = Free Cash Flow, i = discount rate, n = times Remark: (1) If Discount rate is cost of equity capital, then an entity should assess the cost of equity by using the Capital Asset Pricing Model (CAPM) as shown below. $i_e = r_f + \beta(r_m - r_f)$ where, ie = Cost of equity capital, rf = Risk free rate, β = Measure of the systematic risk for the individual shares, rm = Required market rate of return, rm–rf = Required entity premium

Table 2 (Cont.)

Valuation approaches	Valuation techniques
	(2) If Discount rate is the weighted average cost of capital, then an entity should compute WACC using the formula shown below. $WACC = [D/(D + E) \times (1 - t) \times i_d] + [(E/(D + E) \times i_e]$ where, D = Fair value of debt E = Fair value of equity t = Effective income tax rate i_e = Cost of equity i_d = Cost of debt • Dividend discount model $PV = \Sigma d/(1+i)^n + TV/(1+i)^n$ where, d = dividend TV = Terminal Value, which is the value of an asset, or an enterprise beyond the projected period when future cash flows can be assessed • Constant-growth dividend discount model $PV = d/(i-g)$ where, d = dividend, g = growth rate • Capitalization model Value = Net operating income/Capitalization rate where, Net operating income = Income generated by the asset Capitalization Rate = Net operating income/ Current market value of the asset
Income approach	• The estimated cost that would be required at the time to substitute the service capacity of an asset

Finance subjects included in the accounting curriculum at each university

Based on International Education Standard (IES) 2: Initial Professional Development-Technical Competence (Revised) released by the International Accounting Education Standards Board (IAESB) under the auspices of International Federation of Accountants (IFAC) in 2019, the learning outcomes for technical competence required to accomplish by the end of Initial Professional Development (IPD) also include the competence area of Finance and financial management. Specifically, the learning outcomes for finance and financial management consist of the capabilities to (1) differentiate the various financing sources accessible to an entity; (2) investigate an entity's cash flow and working capital necessities; (3) examine the present and future financial position of an entity, using various essential techniques such as ratio, trend and cash flow analyses; and (4) assess the suitability of the elements used to measure an entity's cost of capital. (The International Federation of Accountants, 2019)

To measure the current value of assets and liabilities in accordance with financial reporting standards such as TAS 19, TAS 36, TAS 37, and TFRS 13, skills to assess an entity's cash flow and working capital necessities, and to determine the suitability of the elements used to measure an entity's cost of capital are essential. Generally, accounting programs around the world include at least one finance subject in the curriculum. However, we should ask whether offering only one finance subject in each accounting course is sufficient. If it is impossible to add more finance subjects to the curriculum to maintain the total college credits as low as possible, we should also consider whether enough attention is given to financial topics related to valuation methodologies.

From the examples shown in Table 3 below, it can be seen that, except for those in Malaysia and the Philippines, accounting programs in well-known universities in Thailand (Suan Dusit University, Chulalongkorn University, and Thammasat University), Singapore (National University of Singapore and Nanyang Technological University), and Indonesia (Diponegoro University and Universitas Airlangga) have only one finance subject that covers every financial topic important to meet all requirements of IES 2 for the competence area of finance and financial management. Consequently, the time spent on topics such as time value of money analysis and value measurement with all valuation approaches and techniques in each finance subject is limited. This limitation might lead to difficulties in learning and clearly understanding the contents of present value measurement in the aforementioned accounting and financial reporting standards.

Conclusion and Suggestions

The purpose of this academic article is to raise some concerns about the importance of financial knowledge regarding the valuation methodologies and the present value measurement in both Thai and international financial reporting standards, as shown in Figure 1 below. Unlike other business-related subjects such as Marketing, Economics or Management, Finance is an integral part of Accounting, closely connected with accounting fundamental principles. Basic financial concepts such as time value of money, central estimate of cash flows, risk premium and discount rates, are very

Table 3 Examples of Finance Subjects included in the Accounting Curriculum at Each University

University (Country)	Finance subject/ Course description (in brief)	Number of Finance subject in Accounting program	Course description of each Finance subject explicitly identifying the contents regarding time value of money analysis or value measurement
Suan Dusit University (Thailand)	• Business Finance Course description: This course emphasizes rudimentary concepts of financial management covering some key topics such as tools and techniques of financial management, cost of capital, financing mix, time value of money analysis including financial statement and risk-return analyses. (Suan Dusit University, 2021)	One	Yes
Chulalongkorn University (Thailand)	• Fundamentals of Corporate Finance Course description: This course emphasizes rudimentary concepts of financial management containing some main topics such as risk-return analysis, working capital management, capital structure, cost of capital and budgeting as well as synopsis of derivative instruments. (Chulalongkorn University, 2017)	One	No
Thammasat University (Thailand)	• Business Finance Course description: This course emphasizes rudimentary concepts of financial management covering some key topics such as financial, cash flow and risk analyses, time value of money analysis, asset pricing model, cost of capital, capital budgeting and financing mix. (Thammasat University, 2018)	One	Yes
National University of Singapore (Singapore)	• Finance Course description: This course provides synopsis of financial environment and mainly focuses on preparing students to make appropriate financial decisions by using necessary theoretical and analytical skills. Various case studies with some ethical issues are included throughout the course. (National University of Singapore, 2021)	One	No
Nanyang Technological University (Singapore)	• Financial Management Course description: This course provides a broad understanding of financial management mainly focusing on basic concepts, principles and tools which are a necessary foundation for any other advanced courses. (Nanyang Technological University, 2021)	One	No
Universiti Malaya (Malaysia)	• Corporate Finance Course description: This course provides more understanding and knowledge of corporate finance mainly focusing on risk and return, capital structure, merger and acquisition, risk management including financial derivatives. • Financial Management Course description: This course focuses on important financial tools and includes some key topics such as financial statement analysis, time value of money, capital budgeting and working capital management. (Universiti Malaya, 2022)	Two	No Yes
Universiti Teknologi MARA (Malaysia)	• Financial Management Course description: This course emphasizes rudimentary concepts of finance covering some necessary topics such as financial statement and ratio analyses, time value of money and working capital management. • Corporate Finance Course description: This course focuses on fundamental concepts of financial management covering some key topics of risk and return, capital asset pricing model, cost of capital and foreign exchange rate.	One	No

Table 3 (Cont.)

University (Country)	Finance subject/ Course description (in brief)	Number of Finance subject in Accounting program	Course description of each Finance subject explicitly identifying the contents regarding time value of money analysis or value measurement
	• Financial Markets Course description: This course provides a synopsis of equity, debt and derivatives markets and focuses on financial management skills and the use of financial market instruments in the real-life situations (Universiti Teknologi MARA, 2021)		
Diponegoro University (Indonesia)	• Financial Management I Course description: Not applicable for English language (Diponegoro University, 2017)	One	Not applicable
Universitas Airlangga (Indonesia)	• Financial Management Course description: Not applicable for English language (Universitas Airlangga, 2021)	One	Not applicable
De La Salle University (Philippines)	• Financial Management 1 Course description: This course emphasizes rudimentary concepts, tools and techniques of financial management covering some key topics relating to financial analysis, working capital analysis and short-term financing analysis. • Financial Management 2 Course description: This course provides deeper knowledge of financial management covering some more complicated topics such as evaluation of management opportunities, financial asset valuation, merger and acquisition, medium to long-term investments and financing mix. • Financial Markets Course description: This advanced course of financial management mainly focuses on more complex situations in financial world covering some key topics such as financial system and government regulations, financial requirements for various entities, financial institution management, commercial banking as well as many securities markets. (De La Salle University, 2022)	Three	No Yes No
Ateneo de Zamboanga University (Philippines)	• Basic Finance (Only for non-ABM track) Course description: Not applicable • Financial Markets Course description: This course provides a synopsis of the financial system, financial markets and financial institutions for both domestic and global perspectives covering from valuation of securities and portfolio analysis to real-life case studies in the rapidly changing world. • Financial Management Course description: Not applicable • International Business, Trade & Finance Course description: Not applicable (Ateneo de Zamboanga University, 2019)	Three	Not applicable No Not applicable Not applicable

crucial for measuring fair value, value in use or other current value of assets and liabilities identified in some accounting and financial reporting standards such as TAS 19: Employee Benefits, TAS 36: Impairment of Assets, TAS 37: Provisions, Contingent Liabilities and Contingent Assets and TFRS 13: Fair Value Measurement. Nonetheless, due to the lack of realization or undervaluation on the significance and the involvement of finance in accounting at universities, finance instructors might provide inadequate attention or devote insufficient time on the topics relating to value measurement. Therefore, many students might carelessly treat finance subjects like other non-core subjects by ignoring and leaving some key financial knowledge unknown or misunderstood. The ignorance towards finance leads to difficulties for both accounting

instructors and students when confronted with accounting standards like TAS 19, TAS 36, TAS 37, TFRS 13 including TAS 16, TAS 38, TAS 40 and TFRS 9. Consequently, to alleviate the problems as stated before, we suggest that in the short-term period, it is vital to increase the perception of how significant Finance subjects are to Accounting professions, and to allocate more instructional time to the lessons about valuation methodologies.

The relationship between accounting and finance grows stronger every day. Thus, it is necessary to point out the importance of financial knowledge to accounting professions. Because basic financial knowledge has already been embedded into many existing accounting and financial reporting standards, it is unarguable that accounting professions cannot avoid learning finance concepts, especially in the topics of time value of money and current/ fair value measurement. By giving adequate attention or devoting sufficient time on the topics relating to value measurement, it should empower prospective accounting professionals when confronting the complications of the existing TASs or TFRSs in the real world. Finally, it can ensure that companies' financial statements will have both reliability and faithful representation as required in the conceptual framework for financial reporting and can help improve investment decision making of both investors and any other financial statement users worldwide.

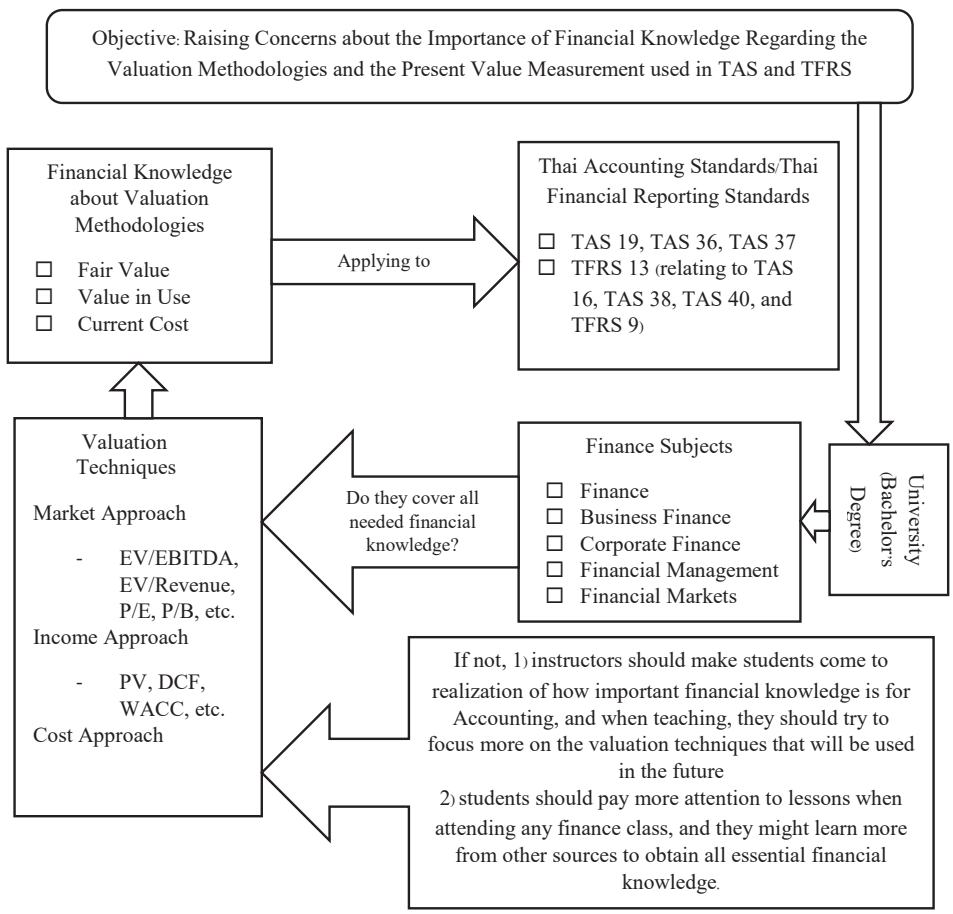

Figure 1 Relationship between Financial Accounting and Finance regarding Valuation methodologies

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