金融与会计专业核心英语教程

FUNDAMENTAL OF FINANCE

金融财务

黄永超
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金融财务

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About the Authors

Professor Stephen Wong has been teaching a wide range of Finance courses at the John Molson School of Business (JMSB), Concordia University, Montreal, Canada since 1981. Prior to that, he taught Finance at McGill University, Montreal for its MBA program.

In 2004, he represented JMSB to give courses for the joint CFA(Chartered Financial Analyst) IMBA program at Bejing Normal University (北京师范大学) in China.

Professor Wong has also been working in Canada in industries ranging from nuclear to pulp and paper for the last 30 years. Since 2003, he has been a consultant to various government agencies and companies in North America and Asia in areas of Finance and Business Development. One main area of his diverse endeavors is to promote Canadian built wood frame houses in China.

Professor Dong Hui Bai is a native of Gansu province, China.

In 1993, he graduated from Xian University of Technology(西安理工大学) with a degree in B. of Engineering.

In the mid nineties, he left China to further his studies in Montreal, Canada and enrolled at Concordia University's JMSB where he progressively obtained a B. of Commerce and then a M of Science majoring in Finance. He is also a designated member of the worldwide Association of Charted Financial Analysts (CFA).

In 2004, Professor Bai returned to his native province where he teaches at both the Lanzhou School of business (兰州商学院)and the University of Lanzhou (兰州大学). Aside from teaching, Professor Bai works in various disciplines of Finance such as investment valuations, mergers and acquisitions, risk analysis etc.

He also acts as a consultant and organizes managerial trainings for both the public and private sectors as well as individuals.

前 言

在中国,金融学领域基本以国际金融学及货币银行学为主流。但是,在西方国家,金融学领域基本包括三个方向,第一是投资学(Investment),第二是公司财务(Corporate Finance),第三是金融机构运营管理(Financial Institution Management)。

投资学主要讲述金融市场的特性,金融品种的特性,金融产品的定价模式。公司财务主要讲述公司实物投资与财务管理,利用财务报表进行公司价值评估和财务状况预测。不管是哪个方向,都离不开对企业财务报表的依赖。因此在本书中我们也编著了部分会计学的知识,主要包括税务环境,财务报表和财务比率分析。

作为金融与会计专业的专业英语教材,本书涵盖货币时间价值,债券价值评估,股票价值评估,风险与回报,金融衍生物等投资学专题。也包括了资本结构,资本预算,财务杠杆,红利政策,现金流管理,兼并与收购等公司财务专题。同时以会计学的财务分析为贯穿全文的基础。其基本词汇与专用词语覆盖面很广,为读者未来阅读英文原著作品打下了良好基础。

本书可用作金融与会计专业的本科生和研究生水平的专业英语教材,同时本书的内容也适合管理学、市场学、国际贸易等其它专业的学员。特别的是,本书也可用作各商科专业双语教学的课本。我们相信本书对提高学生的学科和外语水平,开阔国际视野,培养创新型人才将起到重要的作用。

TABLE OF CONTENTS

Chapter 1 What is Finance and Why Study Finance

A. Finance is the understanding and interpretation of numbers generated in the normal course of business. The results of these interpretations can be used in controlling, executing and planning purposes. Various book - keeping and accounting disciplines generated these numbers and Finance uses them. The study of Finance encompasses all the responsibilities of a Chief Financial Officer (C. F. O.) or vice president, Finance of a large company. Therefore, our assumption is that all readers of this book are either currently in this position or want to be and that all of them will execute their responsibilities diligently and competently (Hopefully, the assumption will be reality in the not too distant future). This book is also suitable for anyone who wants to understand the numbers generated by accounting (financial statements).

It follows that the following two assumptions are made throughout this book:

—Each reader is the C. F. O. of a large limited company (a company whose equities are denominated in shares) or who wants to become one

—The C. F. O.'s own personal objective is the same as that of the company for which he works

B. Goal (Mission) of a large public company

There are many possible goals for a large public company, some are short term goals and others are long term goals. Examples of short - term goals are:

—Ensure the smooth continual operation of the company

—Maximization of before - tax profit or after - tax profit

—Maximization of sales (Market share)

Examples of long - term goals are:

—Maximization of shareholders' net worth

—Market domination, either monopoly or oligopoly

—Good corporate citizen, and etc

In Finance, the usual corporate mission is to maximize shareholders' net worth, implying maximizing share prices. This should become the personal objective of all readers concerned.

C. Responsibilities of a C.F.O.

The following statement summarizes the overall responsibility: planning for, acquiring and utilizing funds to maximize the efficiency of the organization's operations. This implies maximizing share price!

Specific functions include:

—Financial analysis, planning and control

—Working capital management (current assets and current liabilities)

—Managing firm's asset structure (mix between fixed and current assets and capital investments)

—Managing firm's financial structure (debt and equity)

—Distribution of corporate earnings to owners (dividend policy)

—Mergers and acquisitions

D. Structure of this book

The structure of this book is based on a typical set of financial statements, particularly the balance sheet with emphasis on fixed assets and their financing in the form of long-term liability and preferred / common equity. Depending on the country and regulatory agencies, financial statements could include the following:

—Statement of Financial Position (Balance Sheet)

—Income Statement (Profit and Loss Statement)

—Statement of Changes in Financial Position (Cash Flow Statement)

—Supporting statements, schedules

—Notes to the above statements

—Opinions of independent auditors or chartered accountants

The Balance Sheet and the Profit and Loss Statement are the essential components of any set of Financial Statements and are always present, whichever country or regulatory agencies.

Typical Balance Sheet of Company XYZ Dec31 200X

Current Assets	Current Liabilities
Gross Fixed Assets	Long Term Debt
Cumulative Depreciation	Preferred Shares
Net Fixed Assets	Common Shares
Investment *	Retained Earnings
Total Assets	Total Liabilities and Equities

* Capital Projects and investment instruments of other companies

The L. H. S. has to be equal to the R. H. S. or Total assets = Total liabilities and equities

As assets have to be financed (purchased), they are demanders of funds while suppliers of funds come in the form of liabilities and equities.

This book examines both demanders and suppliers of funds starting with the supply side.

Concepts of Assets and Liabilities

The Balance Sheet presents in a table form, all assets, liabilities and equities at a particular point in time. Assets are economic resources. An asset is an item that has the ability or potential to provide future services or benefits to a company. Liabilities are creditors' claims on the resources of a company and typically have a specified amount and date at which they become due. Equities are the owners' claim on the assets of a firm. Unlike creditors, the owners only have a residue interest, meaning that the owners are only paid with whatever is left after all other creditors have been paid.

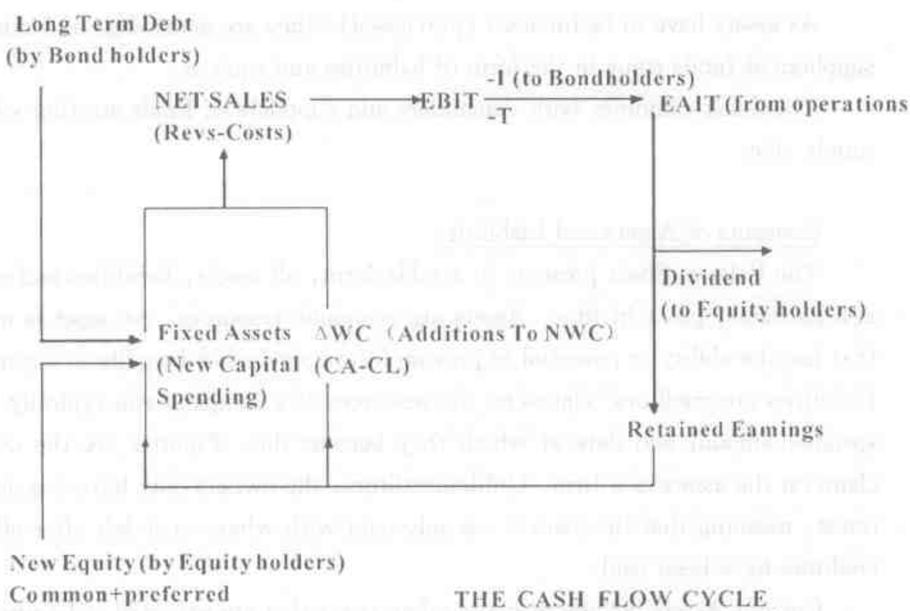
Current Assets include cash and other assets that are expected to be turned into cash, or sold, or consumed within approximately one year from the date of the balance sheet. Cash, temporary investments, accounts receivable from customers, and merchandise are the most common current assets.

Fixed Assets include machinery, land and buildings and other assets that can provide some future services or benefits. Fixed Assets are expected to be kept within the firm and not depleted for at least one year from the date of the balance sheet.

Current Liabilities include short term loan from banks, accounts payable from suppliers and other debts that are expected to be paid within one year from the date of the balance sheet.

Long term debts include bonds, mortgages and other debts that are not expected to be paid off in its entirety within one year of the date of the balance sheet. Equities include preferred shares, common shares and retained earnings. We will discuss these in details in Chapter 6.

Please note that the arrangement of the individual items may differ from company to company and from country to country. Some will list equities first on the left hand side, while others will list current liabilities first. There are also horizontal format and vertical format. Most of the items listed above will usually appear in a balance sheet, whatever the actual format or layout used.



THE CASH FLOW CYCLE

Notes:

1. EBIT: Earnings before Interest and Tax
2. I: Interest Payments
3. T: Tax
4. EAIT: Earnings after Interest and Tax
5. WC: Working Capital
6. CA: Current Assets

7. CL: Current Liabilities
8. L.H.S.: Left Hand Side
9. R.H.S.: Right Hand Side

Chapter 2 The Tax Environment

A. Background

The understanding of how the tax system works in a given country, be it applied to an individual or a corporation, is very important in Finance as taxes levied by governments immensely affect financial decisions.

In Canada, for example, interest income is fully taxable for an individual while dividend income is subjected to the gross - up rule, resulting in dividends being taxed far lightly than interest income. It follows that, all things being equal, individuals would prefer receiving dividend than interest income.

In fact, effective in 2005, the US has stopped taxing dividend income as the government claimed that taxing dividend constitutes "double taxation".

At the corporate level, financial decisions are made based on cash flows (see chapter 7 for details) and not accounting profits. Cash flows are always computed on an after - tax basis.

For example, if a company needs to have a new manufacturing plant funded by long term debts, the decision to use equities, bonds, mortgages or leasing could very well hinge on the taxation system.

Tax impacts on different types of financial decisions are discussed and demonstrated throughout this book in chapters to follow.

In this chapter, both the Canadian and Chinese taxation systems are reviewed. Even though the two systems give rise to different tax rates, the method by which after - tax profits are computed for both countries remain essentially the same. It follows that, in spite of the fact that examples given in this book are predominately Canadian, the same principle applies in a Chinese tax environment.

B. Computation of Tax Payable

For an individual working in any jurisdiction subjected to:

average tax rate of "t"

gross income of "R" and

deductible expenses of "C"

His tax payable is computed as follows:

Taxable Income = gross income − all deductible expenses

$= (R - C)$

Tax payable = Taxable income × t

$= (R - C) \times t$

After − tax income $= (R - C) \times (1 - t)$

The same mathematical approach also applies to corporations.

C. The Canadian Tax System

In Canada, both individuals and corporations are subjected to taxes imposed by both the federal and provincial governments.

For individuals, personal incomes tax is levied on all income sources, be they from direct employment or investments, even though they have different rules governing their applications.

All the Canadian provinces except Quebec have the federal government collect their personal income tax for them. For corporations, the same arrangement applies.

C.1 Personal Income Tax Rate in Canada

In Canada, personal income tax payable is based on a progressive approach; in other words, the more one makes, the more one pays! This is in marked contrast to places such as Hong Kong where ones pays a flat rate of 16% regardless of how much one makes as long as the income is over a certain minimum amount.

As an example of a progressive tax system, for taxation year 2004, the following were the rates applied to each bracket of taxable income for an individual:

Taxable Income Range	Federal Tax Rate
Up to $35,000	17%
$35,001 to $70,000	22%
Greater than $70,000	24%

Provincial personal tax payable is computed as a percentage of federal tax paid ranging from as low as 42% to as high as 70%. In the two provinces with large Chinese populations, Ontario has a rate of 42% and British-Columbia 45%.

In Canada, direct employment income after allowable deductions is fully taxable while investment income is subjected to capital gains tax which is levied at 50% of the amount made in investments such as gains in the stock market. The reason for capital gains being taxed at half of their full value is to reward investors for risk taking and facilitates fund raising for corporations.

Depreciation as a tax-deductible expense for individuals or corporation having possession of depreciable assets will be discussed in Chapter 3 and chapter 7.

C.2 Corporate Taxes in Canada

Canadian corporations, like individuals, are subjected to taxes levied by both the federal and provincial governments. Corporate taxes are ultimately passed on to consumers through higher prices, to workers through lower wages and to investors through lower returns.

Total (federal and provincial) corporate tax rate for large corporations range from 35% to 40% of taxable income. The exact rate applied depends on the province where their head offices are located.

In this country, small businesses enjoy a lower tax rate as all businesses, regardless of sector, only pay between 17% to 22%, for their first \$250,000 of taxable income, the exact rate again depends on their head office location. The purpose of a lower tax rate for the first \$250,000 of taxable income is to assist small businesses to get started or remain in operation in their initial years. In these days, small businesses are the prime motor for job creation.

C.3 Average versus marginal tax rates

In making financial decisions, it is often important to distinguish between average and marginal tax rates. An individual's average tax rate is simply his total tax payable divided by his total taxable income or:

$$\text{Average Tax Rate} = \text{Total tax payable} / \text{Total taxable income}$$

The individual's marginal tax rate is the rate at which he pays tax on the last dollar earned, it is a concept in economics.

Normally, marginal tax rate is relevant for decision making as incremental cash flows to corporations and individuals are used for investment evaluations. Note that for large corporations, their average tax rates approach their managerial rates as amounts of taxable income involved are significantly greater than \$ 250,000.

Example 1

Using the tax rates given for 2004 for a resident living in Vancouver, British Columbia, compute his total tax payable if he made \$ 60,000 of taxable income in that year from direct employment and also \$ 20,000 in the stock market

Compute also:

a) his average tax rate and

b) his marginal tax rate for that year

Solution to Example 1

For the 2004 taxation year, the federal rates were:

Taxable income	Federal rate
Up to \$ 35,000	17%
\$ 35,000 to \$ 70,000	22%
Greater than \$ 70,000	24%

For a resident of BC with a taxable income of \$ 60,000:

$$\text{Federal tax payable} = \$\,(35{,}000 \times 0.17 + (60{,}000 - 35{,}000) \times 0.22)$$
$$= \$\,11{,}450$$

$$\text{Provincial tax payable for BC} = \$\ 11{,}450 \times 0.45 = \$\ 5152.5$$

$$\text{Total tax payable from employment} = \$\ (11450 + 5152.5)$$
$$= \$\ 16{,}602.5$$

$$\text{Total capital gain tax payable} = \$\,(20{,}000 \times 0.50 \times (1 + 0.45) \times 0.22)$$
$$= \$\,3190$$

Therefore, total tax payable from both direct employment and investment

$$= \$\,(16{,}602.5 + 3190.0)$$

$$= \$19{,}792.5$$

a) Average tax rate = Total tax payable/ Total taxable income

$$= 19792.5/(60{,}000 + 20{,}000 \times 0.5) = 28.3\%$$

b) Marginal tax rate is the tax levied on the last dollar our investor made and his total taxable income had already reached $70,000 or (60,000 + 20,000 × 0.5), so his rate on the extra dollar made above $70,000 would be:

$$24\% \times (1 + 0.45) = 34.8\%$$

Example 2

A Canadian corporation has ordinary business income of $170,000, capital gains income of 40,000, preferred dividend income of $25,000 and common share dividend of $35,000. Assuming a small businesses tax rate of 20%, what is its tax bill?

Solution to Example 2

Note that in Canada:

—Dividend incomes to corporations are exempted from paying taxes as tax is already levied on those companies issuing the shares. Such dividends are known as "intercorporate dividends".

—Capital gains for corporations, like those for individuals, are taxed at 50% of their full value.

Therefore, total tax payable

for this corporation = $ (170,000 + 40,000 × 0.5) × 0.20 = $ 38,000

D. The Chinese Tax System

The Chinese tax system bears a certain resemblance to the Canadian one. It is also progressive in nature and there is a tax for individuals and one for corporations.

D.1 Personal Income Tax

An individual is taxed on his/her salary as an employee and also income from other sources such

as interests, dividends and extraordinary incomes such as winning a lottery.

Tax on direct salaries is payable on a monthly basis with a deduction of 1,600 RMB that applies to all. For individuals without a Chinese permanent residence