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Equity Capital

From Ancient Partnerships to Modern Exchange Traded Funds

Geoffrey Poitras

ROUTLEDGE

"Financial crises and stock market crashes are all over financial history. These episodes have already been described in great detail and yet they keep surprising us. This new book deals with the underlying problem: the inherent difficulty of equity valuation. Poitras describes the development of approaches to valuing equity securities from ancient times until the crash of 1929. I am glad to recommend this book to anybody who wants to better understand financial markets."

—*Abe de Jong, Erasmus University, the Netherlands*

"Poitras provides what is by far the most comprehensive and best documented contribution on the topic of the historical foundations of modern equity valuation."

—*Stephen Buser, Professor Emeritus, Ohio State University, USA*

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Equity Capital

Capitalism is historically pervasive. Despite attempts through the centuries to suppress or control private ownership of commercial assets, production and trade for profit has survived and, ultimately, flourished. Against this backdrop, accounting provides a fundamental insight: The 'value' of physical and intangible capital assets that are used in production is identical to the sum of the debt liabilities and equity capital that are used to finance those assets. In modern times, this appears as the balance sheet relationship. In determining the 'value' of items on the balance sheet, equity capital appears as a residual, calculated as the difference between the 'value' of assets and liabilities. Through the centuries, the organization of capitalist activities has changed considerably, dramatically impacting the methods used to value, trade and organize equity capital. To reflect these changes, this book is divided into four parts that roughly correspond to major historical changes in equity capital organization.

The first part examines the rudimentary commercial ventures that characterized trading for profit from ancient times until the contributions of the medieval scholastics who affirmed the moral value of equity capital.

The second part deals with the evolution of equity capital organization used in seaborne trade of the medieval and Renaissance Italian city states and in the early colonization ventures of western European powers and ends with the emergence in the market for tradeable equity capital shares during the 17th century.

The third part begins with the 1719–1720 Mississippi scheme and the South Sea bubble in northern Europe and covers the transition from joint-stock companies to limited liability corporations with autonomous shares in England, America and France during the 19th century. This part ends with a fundamental transition in the social conception of equity capital from a concern with equity capital organization to the problem of determining value.

The final part is concerned with the evolving valuation and management of equity capital from the 1920s to the present. This period includes the substantive improvement in corporate accounting methods for publicly traded shares engendered by the Great Depression. This has facilitated the use of 'value investing' techniques and the conflicting emergence of portfolio management methods of modern finance.

Equity Capital is aimed at providing material relevant for academic presentations of the organization and valuation of equity capital, and it is targeted at researchers, academics, students and professionals alike.

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Preface

This book contains many echoes of projects stretching back over two decades. The research time line begins with a project on medieval finance I started while a faculty member at the National University of Singapore in the early 1990s and continues, over many different projects, to the present with a research paper on the trading of shares in the Roman *societates publicanorum* started while visiting the *Università degli studi di Bergamo* in Bergamo, Italy, in 2013. Those familiar with my previous books will find that I reworked and incorporated significant material from many of those efforts—in particular, *The Early History of Financial Economics* (2000), *Security Analysis and Investment Strategy* (2005) and *Valuation of Equity Securities* (2011). I borrowed lesser amounts of material from my edited books, *Pioneers of Financial Economics* (2006, vol.1 and 2007, vol.2) and *Handbook of Research on Stock Market Globalization* (2012). Given concerns expressed in this book on the expanding modern usage of equity derivatives, hedge funds, programmed trading and cash market short selling, there are also small parts of *Risk Management, Speculation and Derivative Securities* (2002) that have migrated to this effort.

As initially conceived, the historical time line for this study of equity capital organization and valuation was to span from antiquity to the end of the Renaissance. This is a period and topic of interest to me, but not too many others. It seems that those who are interested in equity capital organization and valuation want a more recent time line, and those who are interested in that time period are not too interested in how equity capital was organized and profit was determined. At the wise direction of the Routledge editorial staff, I decided to extend the time line to the present. Given the number of historical studies examining topics related to equity capital in this extended time period, there was a considerable amount of research to assemble. The length of the bibliography is evidence of the research effort needed. In contrast to my previous book projects, there is a strong element of dissent about the wealth and income distribution implications of the organization, valuation and taxation of modern equity capital. On the landscape of the intellectual attention space, this book identifies the greatest general threat to economic democracy, not from the limited liability corporation with autonomous shares, but from the failure of an archaic income-based taxation system to deal with the implications of commercial globalization and the associated untaxed and tax-deferred equity capital wealth accumulation.

This history of equity capital is roughly divided into two parts. The earlier part deals with the evolution of equity capital organization, from the partnerships of ancient times to the joint-stock companies of the 18th century. The rudimentary character of commercial activity over this period often involved single voyages or sojourns, with profits distributed at the end of the venture. As a consequence, the valuation of equity capital shares is an uneventful division of profit (or loss) and return of capital (if any). When joint stock organization was used, there was often a public or foreign policy objective in granting a charter with limited term; so even when transferable shares were available, the valuation problem cannot be disentangled from the organizational context. The 19th century marks a turning point from a focus on equity capital organization to equity security valuation. It was during this century that the general limited liability corporation with tradeable autonomous shares emerged. As Ireland et al. (1987) and others detailed, this involved a separation of the 'corporation' from its members, allowing the creation of an 'autonomous share'. Because this share is tradeable, the equity security valuation problem takes center stage during the last part of the historical time line.

Those familiar with my previous books, especially *The Early History of Financial Economics, 1478–1776* (2000), *Risk Management, Speculation and Derivative Securities* (2002) and *Valuation of Equity Securities* (2011), may be concerned that this effort will be a source of more examples of the creeping incursion of typographical and editing errors in modern academic texts. For the sometimes annoying typos in my previous books, I apologize. Though there are no guarantees in life, rest assured that Herculean effort has been made to keep bugs out. As with my previous books, the website at www.sfu.ca/~poitras will have a listing of the typos and other errors that have been uncovered since publication. (In addition to containing errata lists for my previous books, the website has a wealth of material on other subjects.) This book has benefited considerably from the comments of anonymous and not-so-anonymous reviewers on preliminary drafts of this text and other efforts. The risk of omission is such that I provide a global thank you to all who have participated in a review or refereeing process. Feedback and discussion from numerous students and colleagues over the years has also had a significant impact on the topic coverage. At Routledge, I would like to give special thanks to Laura Stearns, David Varley, Brianna Ascher and the production crew. Without their excellent efforts and patience, this book would not have survived to see the light of day.

Prologue

> CAPITAL, amongst merchants, bankers, and traders, signifies the sum of money which individuals bring to make up the common stock of a partnership, when it is first formed. It is also said of the stock which a merchant at first puts into trade, for his account. It signifies likewise the fund of a trading company or corporation, in which sense the word stock is generally added to it. Thus we say, the capital stock of the bank, &c. The word capital is opposed to that of profit or gain, though the profit often increases the capital, and becomes itself part of the capital, when joined with the former.
>
> *Excerpt from* Universal Dictionary of Trade and Commerce, *trans. from French edition by J. Savary (1657–1715) with "Large Additions and Improvements" by* Malachy Postlethwayt (1755)[1]

Capitalism is historically pervasive. Despite attempts through the centuries to suppress or control the private ownership of commercial assets, production and trade for profit has survived and, ultimately, flourished. At the core of the modern capitalist economy are markets where parties to a transaction determine the prices at which capital assets, goods and services are exchanged and profit is generated. In turn, profit and the ability to price debt and equity capital drive the process of capital accumulation that is central to the modern capitalist economy. Against this backdrop, accounting provides a fundamental insight: The 'value' of physical and intangible capital assets that are used in production is identical to the sum of the debt liabilities and equity capital that are used to finance those assets. In modern times, this appears as the balance sheet relationship. In determining the 'value' of items on the balance sheet, equity capital appears as a residual, calculated as the difference between the 'value' of assets and liabilities.[2] Recognizing the potentially complicated implications, calculations and estimations involved, this book addresses two essential historical questions: How was equity capital organized? And, how was the 'value' of equity capital determined?

Historically, how the value of equity capital was determined depends on the context arising from the various financial, social, political and legal roles played by equity capital. As such, it is difficult to overcome philosophical and historical differences over the definition of value. Because 'value' for equity capital involves an *ex ante* variable—expected future 'profit', somehow defined—it is typically unobserved at the time of valuation. With the rising of autonomous exchange traded shares of limited liability corporations, it was possible to value equity capital using the price of a common stock or other equity capital security observed in the financial markets. This 'efficient markets' interpretation of value lacks relevance to equity capital valuation for the rudimentary corporations, co-partnerships, joint-stock companies and partnerships of earlier times. In contrast to the modern efficient markets approach that equates 'market price' with the 'intrinsic value' of a publicly traded equity capital share, modern 'fundamental analysis' assumes that the market price does not necessarily capture the 'intrinsic value' of a publicly traded equity security. At any point in time, the market price may be above or below the intrinsic value, creating opportunities for profitable trading of 'mis-priced' equity capital claims.

Such modern financial definitions of 'value' lack historical relevance to the social, moral and political 'intrinsic value' of equity capital. Through the centuries, the organization of commercial activities has changed considerably, impacting the choice between debt and equity capital in the financing of commercial assets. In turn, there is an underlying social and political tension in this choice, reflected in the rules governing the use of equity capital at a given point in time. Even the use of equity capital by rudimentary partnerships of ancient times was dependent on the ability of the state and ruling class to control commercial activity and compel the use of debt finance. Abuses largely associated with consumption loans contributed to the medieval scholastics morally condemning much debt financing of commercial assets, affirming the moral 'value' of equity capital. Centuries later, the speculative manias of 1719–1720 in northern Europe led to a century-long restriction on the joint-stock organization of equity capital. Legislative actions during the 19th century that produced widespread introduction of 'general' limited liability and incorporation for equity capital organization were the result of political debate that reflects themes in the profound social changes that have overtaken modern society.

To capture the changing value of equity capital over time, this book is divided into four parts that roughly correspond to major historical changes in the organization of equity capital. Following an introductory section on etymology and legal concepts, the first part of the book deals with the rudimentary commercial organizations that characterized trading for profit from ancient times until the canon law contributions by the medieval scholastics. The general geographical area covered is the Middle East, the Mediterranean countries and northern Europe. Equity capital and the *ius fraternitalis* of the partnership were symbiotic during this period, with the extent of empire being a determinant of usage. An important theme is the evolving use of equity capital in long-distance trade. Especially in Roman times, commercial ventures were often slave-run, funded by household capital using *peculium*, negating the use of *societas* (Roman partnership) to obtain equity capital in many commercial ventures (see Abatino et al. 2011). Despite fanciful claims to the contrary by Badian (1972), Malmendier (2009) and others, equity capital in ancient and medieval times was more than difficult to trade. In medieval times, the scholastic analysis of *societas*, usury and risk provides fundamental insights into the moral 'value' of equity capital.

The second part deals with the role of equity capital in the age of European colonization up to the emergence of the market for joint-stock shares in northern Europe. This part covers the transition from the medieval *commenda* partnerships to the regulated companies and joint-stock companies of the 16th and 17th centuries. The requisite development of accounting and commercial arithmetic needed to sustain this evolution is detailed. A seminal event during this period was the commencement of rudimentary exchange trading of Dutch East India Company joint-stock shares. This trade was facilitated by specific items included in the corporate charter related to share transferability. The emergence and expansion of organized trading of shares required various legal changes that impacted equity capital organization (Gelderblom and Jonker 2004; Gelderblom et al. 2011; Gelderblom 2013). Propelled by the Glorious Revolution of 1688, transmission of Dutch trading practices into England led to creative legal methods being used to circumvent restrictions on the formation of English joint-stock companies without royal charters or acts of Parliament (MacLeod 1986; Harris 2000; Murphy 2009a).

The third part narrows the geography to examine the use of equity capital starting from the fascinating 1719–1720 market manias associated with the Mississippi scheme in France and the South Sea bubble in England. These events led to severe restrictions on use of the joint-stock company to raise equity capital for financing commercial assets. These restrictions lasted into the 19th century. In the UK, the US and, to a lesser extent, France, the 19th century saw profound legal changes associated with the widespread introduction of limited liability and incorporation and the subsequent development of global markets for trading 'autonomous' equity capital shares (Ireland 1996). During this period, 'owners' of commercial ventures supplying equity capital became increasingly separated from day-to-day operations. In turn, these changes fuelled the ability to trade and financially value such 'autonomous' equity capital shares, leading to the emergence of a global stock market, centered on exchanges in London, Paris and New York. The political debate surrounding the requisite legislative changes captures fundamental issues associated with the use and organization of equity capital. The associated social and political issues still have echoes in modern times.

Equity capital organized as limited liability corporations with autonomous shares emerged in the 19th century and flourished in the 20th century. As a consequence, the fourth and final part commences with the valuation of equity capital at the beginning of the 20th century and ends with the social history of 'fiduciary capitalism' and the implications of the 'slow motion' crash of equity capital markets in 2008–2009. This period featured the emergence of 'scientific' portfolio diversification using a hodgepodge of equity capital funds. This completed the divorce of equity capital providers from control of the commercial assets that are being funded, an issue Berle and Means identified early in the 20th century. This period also included the Depression-era reforms to equity capital markets that ushered in the modern era of 'fundamental valuation' for equity securities, which relies heavily on the accounting information provided in the regulatory filings of publicly traded companies. Fuelled by technological revolutions associated with radio, television, the computer and wireless communication, the modern era has witnessed changes in the institutional structure of equity security markets associated with: (a) exchange demutualization and consolidation; (b) the introduction of hedge funds and exchange-traded funds; (c) the expansion of online trading; and (d) the growth of equity derivative markets. Although the discussion concentrates on developments in the largest and most liquid equity capital market in the US, the geographical scope in the fourth part is necessarily global.

In addition to detailing the accounting, legal, financial and social history relevant to the evolution of equity capital organization and valuation, this book has other objectives. Despite decades of enhanced regulation, 'scientific' study and attempts at financial 'education', modern equity capital markets continue to be subject to boom and bust cycles that, at times, seriously disrupt the wealth creation process that is central to the modern capitalist economy. In addition, the concentration of wealth in the hands of equity capitalists associated with the capture of the economic gains from technological change has dramatically impacted the social and political landscape of the early 21st century. Modern political institutions have been increasingly incapable of adapting to the threats that such wealth inequities pose for the social fabric, not to mention long-term economic stability. Documenting the 'value' of equity capital in earlier times uncovers a variety of simpler commercial situations that provide useful guidance in understanding the associated 'intrinsic value' of modern equity capital.

Throughout history, social and political tension has surrounded the use of 'debt' or equity capital in the financing of commercial ventures. Much of the modern scholarship on early financial history, such as the influential work of Grief (1989) and Kessler and Temin (2007), focuses on apolitical abstract economic problems of agency and moral hazard in early commercial relationships, especially in external trade. Various contractual methods are identified for resolving agency problems—for example, kinship in the metals trade in Old Assyria; religious affiliation for Maghribi traders; limited liability for *en commandite* co-partnerships. This considerable literature largely ignores the social and political context associated with the organization of equity capital at a given point in time, if only because timeless agency and moral hazard problems are common to either debt or equity financing. Accurate contextualization of equity capital cannot ignore the role of political, social and other factors arising from the organization and use of debt or equity financing for commercial ventures.

The upshot is that this book speaks to a wider audience than scholars of financial history. Equity market practitioners will find subtle connections between valuation methods used in the 19th and early 20th centuries and the methods employed in modern equity security markets. For this audience, the discussion will, hopefully, be entertaining and 'profitable'. Students of social, legal, accounting and financial history will find a new perspective on the evolution of commercial activity in general and the 'virtuous' role of equity capital in particular. There is a 'newness' that comes from moving beyond the exploration of agency and moral hazard problems in commercial contracting that have consumed studies on early financial history. The focus on 'equity capital' provides an alternative approach to the almost universal adoption of physical 'capital' as the relevant variable for historical analysis, as reflected in popular contributions by Piketty (2014) and De Soto (2000). In this book, the 'tent' is large enough to encompass the histories of accounting, economics, finance and law. The largely non-technical discussion will, hopefully, provide the general public with a comprehensive source on the history of equity capital, in the process identifying fundamental social, political and economic issues that are still relevant in modern times.

NOTES

1 Howard (1932, pp.243–4) provides a brief biography of Jacques Savary. Among other accomplishments, Savary was the most active member of the Council of Reform and is credited with so much of the authorship of the Ordinance of 1673 that the commercial code therein contained was commonly known as the "Code Savary."
2 Bernstein (1993, p.6) provides useful examples of the modern presentation of 'equity' and 'equity capital': "The equity interest in an enterprise is the supplier of its basic risk capital. The capital is exposed to all the risks of ownership and provides a cushion or shield for the preferred and loan capital that is senior to it. Since the equity interest is entitled to distributions only after the claims of senior securities have been met, it is referred to as the *residual* interest". Similarly, chapter 8, titled "Analysis of Stockholders' Equity", examines topics such as "The Distinction between Liability and Equity Instruments", "Classification of Capital Stock" and the calculation of "Book Value per Share".

Part I

Equity Capital Prior to Joint-Stock Companies

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1 Etymology and Legal Concepts

> Capital has been so variously defined, that it may be doubtful whether it have any generally received meaning.
>
> Nassau Senior (1790–1864)

A THE MODERN EMERGENCE OF 'EQUITY CAPITAL'

Early Problems of Definition

References to 'equities', 'equity capital', 'equity securities' and the like are relatively recent in historical terms. Until the 20th century, there was considerable lack of clarity in definitions of 'capital', and references to 'equity' in relation to 'capital' were concerned with application of the 'law of equity' to legal situations involving owners of the 'capital stock'. Fundamental disagreements about the definition of 'capital' are captured in the academic debate between Böhm-Bawerk (1891) and Irving Fisher (1896, 1904) about the relation between 'capital' and 'interest'. Fisher (1896, p.510) described the problems of definition at that time: "What Senior wrote half a century ago is far truer to-day: 'Capital has been so variously defined, that it may be doubtful whether it have any generally received meaning.'" Fetter (1900, 1907) provided a helpful review of the debate. The modern usage of 'equity' and 'equity capital' emerged haphazardly from this debate, providing some clarity to the confusing collection of definitions. The evolution of the accounting profession and the expanded usage of accounting terminology also contributed to this clarification.[1]

It is only near the end of the chronology for this book that the conventional modern use of 'equity capital' terminology emerged. This is not to imply that the 'essence' of equity capital was not recognized prior to this time; quite the contrary. Rather, there was a somewhat confusing collection of terms that badly needed improvement. An early contribution by Mortimer (1761, p.5) reported the confusing use of 'stock' to refer to both 'public debt' issues and company 'shares', especially those of the public companies. Mortimer does recognize the correct usage: "The word STOCK, in its proper signification, means, that capital in merchandise, or money, which a certain number of proprietors have agreed to be the foundation for carrying on an united commerce, to the equal interest and advantage of each party concerned, in proportion to the sum or share contributed by each." In effect, at least as early as Mortimer (1761), the correct terminology for 'equity capital' was 'stock'. To allay confusion, it became conventional to refer to 'stocks and shares', where 'shares' made explicit reference to equity capital.

In particular, up to the beginning of the 20th century it was conventional to refer to 'stocks and shares', where 'stocks' was a general term that could refer to either debt or equity and 'shares' made reference to equity capital. For example, Withers (1910, p.5) observed: "Stocks and shares, as dealt in on the Stock Exchanges of the world, fall into two main classes. They represent either (1) the debts of Governments, municipalities and other public bodies, or (2) the debts and capitals of joint stock companies". For further clarity, Withers (1910, p.361) provided the following definition in a glossary: "Stock in a general sense means any kind of security dealt in on the Stock Exchange; more particularly a form of debt or capital which is divisible into, and transferable in, odd and varying amounts, and is always registered or inscribed". Until the 20th century, it was trading in 'loan stock', rather than 'shares' in 'joint-stock companies', that constituted the bulk of trading on 'stock exchanges'.

Traditional Usage of 'Capital'

In contrast to the absence of references to 'equity', there was an abundance of references to 'capital'. Fisher (1896, 1904, 1906) recognized significant differences between economists, "business men" and bookkeepers in the definition of 'capital' employed. Dewing (1919) expanded this list to include legal definitions and, perhaps confusingly, identifies the origins of the definition of 'capital' with the Greek philosopher Xenophon (430–354 BC) where "capital was that from which profit may be obtained". Dewing (1953, p.50) also makes an astute observation referring to the use of 'capital' by businessmen: "the accepted meaning of a term by men who have the most occasion to use it invariably finds its way into legal and economic literature". This appears to have been the case with 'equity', though diffusion of this terminology was slow and haphazard. For example, examining the differing usage of 'capital' in economics and accounting, Fetter (1937) made no reference to 'equity'. Initial usage of 'equity' by academics was primarily by those with an immediate connection to the business world.

The confusion and gradual evolution for the meaning of 'equity' in relation to 'capital stock' and 'surplus' in the legal and accounting spheres was captured by Deinzer (1935, pp.334–5). While economists speak of capital "as indicating those material instruments which are concretely used in the production of goods", when referring to the same capital goods the accountant refers to "goods used in a particular business enterprise". In contrast, there is "no uniformity of meaning by the courts of the several states. The property owned and used by the corporation in carrying on its business may be designated by the term capital stock". In some states, capital stock legally referred "to a specific fund of property", making a distinction between 'capital stock' and 'surplus'. In such situations, the terms "capital and capital stock are sometimes used synonymously or interchangeably". Deinzer (p.337) recognized difficulty with the fund approach and observed: "capital stock may be defined as an equity or interest of stockholders in the totality of business property owned by a corporation. The economic values of assets are expressed in terms of money; from the sum of such money values is subtracted the total of liabilities; the resultant amount expresses the money value of stockholders' interest in the totality of assets. The value of this residuum may or may not be the amount of the capital stock."

In one sense, 'capital' can be interpreted as a shortened version of 'equity capital' in the modern sense. Dewing (1953, p.55) reflects this approach: "The capital stock of a corporation always represents, legally, a contract whereby the corporation, as separate from its owners, acknowledges the conditions under which it accepts capital delivered to it by its owners or proprietors". However, the plethora of definitions for capital made this connection opaque. For example, most economists and some businessmen identify 'capital' with the assets side of the balance sheets, especially those assets directly connected to 'production', leading to the specification of 'fixed capital' and 'variable capital'. "All economists make this distinction" (Braudel 1982, p.242). Some initial clarification in the definition of 'equity capital' was obtained by referring to 'common stock' (e.g., Mitchell 1910, 1916), which was often shortened in American sources to 'stock'. With this transition, the traditional definition of 'stock' that encompasses debt securities passed into history, and 'common stock' and 'stock' became conventional references for equity capital.

The gradual adoption of 'equity' terminology in academic studies was propelled by Smith (1924), where the "common stock theory" was proposed (e.g., Harold 1934; Siegel 1998). The prominent economist Irving Fisher was an active proponent of the common stock theory, which maintained the return on an actively managed portfolio of common stocks would outperform bond returns over a long investment horizon. As president of the Investment Managers Company, E. L. Smith was intimately connected to the financial markets. The liberal use of 'equities', 'equity investment' and the like in Smith (1927) reflects the common usage of this terminology among finance practitioners involved in the trading of equity securities. While May (1939) reflects the general acceptance of 'equity capital' in academic studies, 'common stock' was the preferred terminology prior to World War II. Reference to 'equity' was absent from academic studies associated with W.C. Mitchell and the institutional school of economists, where reference to 'common stock' was used (e.g., Macaulay 1938).

In addition to evolution of accounting standards, there were other practical reasons initiating reference to equity capital. The limitations of using 'common stock' to define equity capital were captured by Fisher (1930b), who referenced "equity securities", explicitly recognizing that there were other types of equity capital than just common stock—for example, convertible bonds and warrants. This recognition reflected the dramatic evolution in the equity securities traded in financial markets during the 1920s. In contrast, the influential Graham and Dodd (1934) used an accounting approach to define "Equity" as "Book Value". In keeping with this accounting practice, preferred stock is not identified as an 'equity' security; this reference to book value connects 'equity' only with

Table 1.1 Example of Early 20th-Century Balance Sheet

BABCOCK & WILCOX LIMITED

Balance Sheet, 31st December, 1909.

Dr.

	£	s.	d.	£	s.	d.
To Creditors:—						
Sundry Creditors	£148,763	6	1			
Dividends unclaimed ...	1,142	0	0			
Reserve for estimated further Expenditure on orders invoiced, fall in value of Investments, &c	139,847	3	1	289,752	9	2
To Capital:—						
Authorized and Issued.						
100,000–6 per cent. Cumulative Preference Shares of £1 each, fully paid	£100,000	0	0			
830,000—Ordinary Shares of £1 each, fully paid ...	830,000	0	0			
930,000 Shares				930,000	0	0
To Reserve Fund				500,000	0	0
To Dividend Equalization Fund				195,000	0	0
To Profit and Loss Account:—						
Balance brought forward	£43,278	19	9			
Profit for the year ending 31st December, 1909 ...	360,003	15	0			
	£403,282	14	9			

Cr.

	£	s.	d.
By Cash at Bankers on Deposit, and Current Accounts, and in Hand London, Glasgow, and Branches ...	£325,669	0	1
By Investments at Cost	552,303	0	3
By Bills Receivable	20,306	6	9
By Debtors	558,266	0	0
By Expenditure on Orders not Invoiced	61,020	0	1
By Stock of Merchandise, and Work in Progress	288,312	14	6
By Freehold Land and Leasehold Property, Plant, Buildings, Patents, and Shares in Associated Companies, including additions for the year ending 31st December, 1909	442,758	2	3

***Deduct*—**					
Interim Dividends paid 11th October, 1909					
On Preference Shares ...	£ 3,000 0 0				
On Ordinary Shares ...	66,400 0 0				
		69,400 0 0			
			333,882 14 9		
			£2,248,635 3 11		£2,248,635 3 11

Source: Balance Sheet (UK) from Withers (1910) common stock, as the value of preferred stock is deducted to arrive at book value.[2] Propelled by the profound changes in securities laws that gave credence to the regular filing of accurate accounting information by publicly traded companies, references to the 'capital account' gradually were replaced by references to the 'equity account' in standard accounting discussions. The extent of current accounting practices regarding 'equity' calculation are reflected in the 'Statement of Shareholder Equity' that is prepared for the securities filings of publicly traded companies.

B BASIC CHARACTERISTICS OF EQUITY CAPITAL

Accounting Definitions

In modern usage, reference to 'capital' can be identified with the balance sheet relationship where **Assets = Liabilities + Equity**. In this context, **Assets** represent the physical 'capital', variable 'capital' and, possibly, the intangible 'capital' that generate the net cash flows for the firm or individual.[3] In turn, the Assets are financed with a combination of debt obligations (**Liabilities**) and equity capital (**Equity**). For a modern corporation, this distinction between the sources of financial 'capital' given by the right-hand side of the balance sheet is well defined. Legally, debt 'capital' is a contractual obligation defined by the indenture or similar contract, while equity capital depends on the specifics of the ownership structure and the legal environment provided by the corporation law and other statutes. Many modern commercial operations have a large and permanent stock of physical assets, financed by the pooling of equity capital from a large number of 'owners'. Such operations are typically organized as limited liability corporations, for which modern corporation law provides essential characteristics of the legal environment. When the equity capital is traded on public markets, securities laws also assume importance.

Modern colloquial usage of 'equity' often belies the conceptual meaning of 'equity capital'. For the modern household balance sheet: **Assets – Liabilities = Net Worth**. If only a specific asset is of interest, then **Asset Value – Debt Secured by Asset = Net Asset Value.** In colloquial usage, 'equity' is used to reference both Net Worth (household equity) and Net Asset Value. For example, a homeowner will refer to the 'equity' in a residential property as the market value of the property minus the unpaid balance on the mortgage. However, in a more technical sense, **Equity Capital** is conceptually applicable only for commercial situations where profit and loss is shared. In other words, 'equity' requires sharing of profit and loss, which is not relevant to the single entity household or sole proprietorship. For this reason, **Net Worth** is the appropriate technical reference for household capital and wealth. Similarly, equity capital involves joint asset ownership and requires some method of management and organization. Net asset value may enter the calculation of the value of equity capital, but net worth does not sufficiently capture basic characteristics of equity capital.

Table 1.2 Inter-war, Pre-SEC US Balance Sheet

CALCULATION OF BOOK VALUE OF UNITED STATES STEEL COMMON ON DECEMBER 31, 1932
CONDENSED BALANCE SHEET DECEMBER 31, 1932 (*in millions*)

Assets			**Liabilities**		
1	Property Investment Account (less depreciation)	$1,651	7	Common Stock	$870
			8	Preferred Stock	360
2	Mining Royalties	69	9	Premium on Common Stock	81
3	Deferred Charges[1]	2	10	Bonded Debt	96
4	Miscellaneous Investments	19	11	Mining Royalty Notes	19
			12	Installment Deposits...	2
5	General Reserve Fund Assets	20	13	Current Liabilities ...	47
6	Current Assets	398	14	Contingency and Other Reserves ...	37
			15	Insurance Reserves ...	46
			16	Appropriated Surplus	270
			17	Undivided Surplus ...	329
		$2,159			$2,159

Tangible assets	$2,159,000,000
Less: All liabilities ahead of common (Sum of items 8, 10, 11, 12, and 13)	524,000,000
Accumulated dividends on preferred stock	4,504,000
Net assets for common stock	1,630,496,000
Book value per share (on 8,700,000 shares).	$187.40

Source: Balance Sheet (US) from Graham and Dodd (1934)

[1] Considerable argument could be staged over the question whether Deferred Charges are intangible or tangible assets, but as the amount involved is almost always small, the matter has no practical importance. It is more convenient, of course, to include the Deferred Charges with the other assets. Standard Statistics Company, Inc., however, rules them out.

Ancient Instances of Equity Capital

In ancient times, commercial operations requiring equity capital, being relatively simple, were typically organized as some form of partnership. For this reason, it is difficult to compare them to modern equity capital organization. In particular, the fundamental modern distinction between household and commercial balance sheets was often blurred in earlier times. This distinction between household and commercial wealth has a long history, going back at least as far as Xenophon's *Okonomikos* (ca. 380 BC), in which 'capital' is "what a man possesses outside of his own household" (Dewing 1953, p.45). As a consequence, a basic characteristic of equity capital is that two or more 'merchants' are involved in a commercial venture where profit and loss are shared 'equitably'. In addition, in the long-distance trade so important to the early history of equity capital, many early partnerships were formed only for a single venture. The accumulation and permanence of modern equity capital in commercial ventures is one point of sharp demarcation between early and modern equity capital organization.

An important historical example of the need to identify the household as the source of capital is the Roman *peculium*, where the head of the household (*pater familias*) would make a loan of 'capital' to a slave or other agent for use in a particular commercial activity, such as the manufacture of textiles or the rearing and grazing of animals. All profits from the commercial venture would, under Roman law, be the property of the master. However, if the master did not participate in the management of the commercial venture, the extent of liability would be limited to the initial amount of the *peculium* plus any payments of profit from the venture made over time. At the end of the commercial venture, the capital and accumulated profit retained in the enterprise would be returned to the master. Various sources indicate financing using *peculium* was the conventional legal structure used in commercial ventures in the Roman Empire. In contrast, equity capital was associated with commercial ventures using the Roman form of partnership organization, the *societas*.

Following Hansmann et al. (2006), the *peculium* exhibited "complete owner shielding (limited liability) but no entity shielding at all". Similar to modern corporate limited liability, complete owner shielding means that, under typical conditions where the master did not engage in management of the commercial venture, losses to the owner from the venture were limited. Creditors of the 'entity' would only have claims against the slave or other agent and the *peculium* assets. However, the master's financial and social status would impact the ability of the *peculium* to enter contracts and secure loans on favorable terms. This follows because, in the event that the master went into bankruptcy, assets held by the *peculium* were attachable by the creditors of the master (i.e., there was no entity shielding). In addition, unlike modern limited liability corporations, the *peculium* featured a single owner who, in many situations, obtained the *peculium* funding by borrowing against or pledging landed property. Can funds advanced to the *peculium* be classified as 'equity capital'? Such a question illustrates the quandary of applying modern concepts to the ancient world.

While the capital used in the *peculium* had some characteristics of modern 'equity capital', it does not fit the conventional modern criteria unless the source of funds was commercial—for example, from profit generated by the activities of the *peculium*—and did not originate from the household balance sheet. Commercial ventures in the ancient world involving equity capital were conventionally organized as partnerships. Ventures involved in long-distance trade tailored the partnership organization to the needs of those ventures. As such, an essential feature of 'equity capital'—the sharing of profit, possibly negative, among the shareholders in a commercial venture—is reflected in Roman law of *societas*, which codified partnership practices from ancient times (Gaius, *Elements* Book 3, Sec.150): "If no agreement has been made as to the division of profit and loss, it must be in equal shares. If the shares are expressed in the event of profit but not in the event of loss, the loss must be divided in the same proportions as the profit." A *peculium* lacks this essential characteristic, as profit is not strictly shared, but is the property of the master.

What Is Equity Capital?

Equity capital originates when merchants combine together in a commercial venture with the objective of making profit. This characteristic of equity capital is inconsistent with sole proprietorships and not-for-profit ventures. There is no sharing of profit in these arrangements, though a sole proprietor can have 'net worth' in a business that can be 'valued', just as a not-for-profit can have 'net worth' in a residential building that can be 'valued'. A more complicated case is the capital used in state and state-sponsored enterprises. In most cases, financing of such ventures also does not technically qualify as equity capital. However, consider the construction of a bridge by a partnership between a government and a construction contractor. In partnership with the contractor, the cost of construction and toll revenues from the completed bridge are shared according to some formula set out in the partnership agreement. This could be an equity capital arrangement. In other words, it is possible for governments and other entities to qualify as a 'merchant' in a commercial venture financed using equity capital as long as essential features, such as sharing of profit and loss, are present.

The alternative to using equity capital in financing commercial ventures is to issue debt. Unlike in an equity capital arrangement, in a loan transaction the risk of commercial losses falls on the borrower. As such, the incidence of risk is another basic characteristic separating equity capital from debt. Over time, the extent of liability for losses evolved considerably, and partnership contracts were used that had characteristics associated with debt. One variation of the 'sea loan'—also known as a bottomry loan or transmarine loan—limited the investor's risk and fixed the amount of payment the investor would receive at the end of the loan. Given the sometimes severe restrictions on lending at interest in ancient and medieval times, much attention was given to determining whether such transactions were usurious, as generally maintained by the medieval Schoolmen, or 'licit usury', as concluded by the Roman jurists. The licit medieval *commenda* contract limited the investor's risk and fixed the 'shares' of profit. Limited liability and the ability to incorporate represent essential features that alter the character of equity capital and facilitate exchange trading of equity capital shares (e.g., Halpern et al. 1980; Forbes 1986).

In addition to having 'sufficient' sharing of risk, the timing and type of payment can be used to distinguish equity capital from debt. In exchange for the borrower assuming the commercial risk, the providers of loan capital agree to the amount of interest payments. Failure to make interest payments or to return loan principal at the end of the agreement carries severe sanction.

Equity capital requires a sharing of losses as well as profits. Modern preferred stock is a hybrid that offers a regular payment not depending on the amount of positive profit. As with common stock, failure to make a preferred stock dividend payment does not have the severe bankruptcy sanction associated with defaulting on a debt payment. Like common stock, preferred stock usually does not have a fixed maturity date, and the amount of equity capital that can be raised using preferred stock is determined by the corporate charter or partnership agreement. In contrast to common stock, preferred stock has little, if any, voting rights associated with ownership. Significantly, while having the debt-like feature of no profit and loss sharing, preferred stock is reported in modern accounting as part of the equity account due to the lack of a bankruptcy implication in the event a scheduled preferred dividend payment is not made.

Against this backdrop, the essential characteristic that differentiates equity capital from loan capital is the participation in the profit and loss that can arise in a commercial venture, where the organization of this participation can be structured by agreement. From the rudimentary partnerships of ancient times, the various forms for such agreements include: the Roman *societas;* the *commenda* and the *compagnia* of the Middle Ages and the Renaissance; the various forms of the joint-stock company from the 16th to the 19th century; and, ultimately, the limited liability corporation, with autonomous exchange-traded shares. In contrast, the requirement to make payment of principal and interest on a loan is independent of the success of the commercial venture. This particular distinction between debt and equity capital was especially important in early times. For example, in the ancient societies of Mesopotamia, consumption loan transactions were often made with default in mind in order to acquire the bonded labor and, possibly, the land of the borrower. As a consequence, the legal and social environment for debt capital differed substantively from that for equity capital.

Identification of equity capital in early history is complicated by the frequent confluence of the household and commercial balance sheets. In addition, families with political power were sometimes able to structure favorable commercial relationships that acted to shield personal wealth. For example, Frank (1927, p.275) observed about the timocratic Roman civilization: "Roman history does not point to a single effective leader trained in business". The use of slaves and children *in potestate* endowed with *peculium* to conduct commercial ventures limited the liability of wealthy Romans not involved in managing the business. Especially in ancient times, family relationships, religion and kinship played a key role in the structure of merchant networks essential to the external trade and colonization that generated numerous commercial opportunities for equity capital investors. Miskimin (1975, p.116) captured the ethos of two or more merchants combining equity capital in a commercial venture where the profit, possibly negative, was shared 'equally': "Even during the most dismal and bleak centuries . . . long-distance trade was undertaken by those intrepid adventurers who were prepared to risk the dangers of the sea or overland travel in search of great rewards afar, which were kept at high levels by the very dangers that turned away the fainthearted."

C THE ETYMOLOGY OF 'EQUITY' AND 'CAPITAL'

Early Definitions of Capital

Despite the voluminous definitions of 'capital' in numerous sources, the etymologies provided for 'capital' are not consistent. For example, Fetter (1937, p.5) provided the following etymology for capital:

> 'Capital' . . . made its first appearance in medieval Latin as an adjective *capitalis* (from *caput*, head) modifying the word *pars*, to designate the principal sum of a money loan. The principal part of a loan was contrasted with the 'usury'—later called interest—the payment made to the lender in addition to the return of the sum lent. This usage, unknown to classical Latin, had become common by the thirteenth century and possibly had begun as early as 1100 A.D., in the first chartered towns of Europe.

In contrast to the literal etymology of Fetter, Dewing further hypothesized that 'head' refers to the use of the head or visage of important persons on coins dating as far back as 555 BC. Dewing (1953, p.45) makes a direct connection between capital and wealth in ancient times:

> Wealth in the days of Greece and Rome consisted of specific material things—land, houses, ships, slaves, tools and coins. Consequently, when the Roman merchant of the time of Augustus wished to gather together a hoard of wealth, other than land, that would occupy a small compass, he would corral a mass of coins; and most of these coins, especially the Roman gold coins, bore a head. It was his capital, his reserve of material resources. Thus the Roman concept of capital, as a reserve of hoarded wealth, passed to the commercial cities of Medieval Italy—thence to England and western Europe.

The Latin root *capitalis* thus sustains an origin for 'capital' in Roman times not necessarily connected to 'the principal sum of a money loan'.

While the actual word 'capital' has a Latin root, the concept of capital had a much earlier beginning. As with other aspects of ancient history, careful attention to context, translation and interpretation of a limited number of surviving sources is required in order to provide an accurate impression of the historical situation. Consider the translated quote from Dewing (1953) from the Greek philosopher Xenophon (430–354 BC) where "capital was that from which profit may be obtained". By comparison, the Loeb Classical Library translation of Xenophon's *Oeconomicus* gives this translation: "wealth is that from which a man can derive profit". The surrounding discussion in the text is concerned with the relationship between 'profit', productive 'property' and 'wealth'. Direct connection of 'capital' to funds used to finance a commercial enterprise is lacking. Dewing (1953, p.44) traced the first use of 'capital' "in anything resembling its current usage" to the English trading companies, noting especially the East India Company records of 1614. Without sufficient context, even this less ambitious historical reference gets caught up in the confusion surrounding the various modern definitions of 'capital'.

Perhaps Braudel (1982, pp.232–3) provided the most accurate etymology:

> *Capitale* (a Late Latin word based on *caput* = head) emerged in the twelfth to thirteenth centuries in the sense of funds, stock of merchandise, sum of money or money carrying interest. It was not at first defined with any rigour, as the discussions of the time centred primarily on interest and usury . . . Italy, the forerunner of modernity in this respect, was at the centre of such discussions. It was here that the word was first coined, made familiar and to some extent matured. It appears incontestably in 1211 and is found from 1283 in the sense of the capital assets of a trading firm. In the fourteenth century, it is to be found practically everywhere: in Giovanni Villani, in Boccaccio, in Donato Velluti. On 10 February 1399, Francesco di Marco Datini wrote from Prato to one of his correspondents: 'Of course, if you buy velvet or woollen cloth, I want you to take out an insurance on the capital (*il chapitale*) and on the profit [to be made]; after that, do as you please'. The word, and the reality it stood for appears in the sermons of St Bernardino of Siena (1380–1444), '. . . *quamdam seminalem rationem lucrosi quam communiter capitale vocamus',* 'the prolific cause of wealth we commonly call capital'.

Based on this, it appears that Dewing's claim of an origin for 'capital' in its modern sense in the records of English trading companies is misplaced. The selection of medieval Italy, also obscured by Fetter, seems consistent with the historical record. Primary sources as early as the Genoese notarial records of the 11th century identify more sophisticated commercial development in the Italian city states compared with the rest of Europe. Various Italian mercantile and other records use the word in a more-or-less modern sense, providing further support for Braudel's historical etymology.

From Adam Smith and Karl Marx to Modern Definitions

Focus on historical roots can obscure the philosophical evolution of 'capital' as a concept in a broader social or legal or financial or economic theory. With Marx (*Capital,* vol. III), there is an alienation of physical capital from control of commercial operations: "the abolition of capital as private property within the confines of the capitalist mode of production itself". As Henderson (1986, p.126) observed: "The profit income received in the form of dividends by the money capitalist is an income derived from mere property ownership and not from any value-creating function performed by such [equity] capitalists, who are superfluous to the value-creating processes of production". This 'alienation' is a decidedly different view of the 'capital' than the 'agency costs' associated with the separation of joint-stock capital ownership from control of commercial operation initially identified by Adam Smith and pioneered in the 20th century by Berle and Means. These two historical perspectives on 'capital'—which are central to modern perspectives on 'capital' and 'capitalism'—are separated by the fundamental transition of equity capital organization permitted by general registration for limited liability corporations during the 19th century.

The conceptual difference between the 'capital' of Smith and that of Marx is apparent in modern scholarship. Marx is an important part of an intellectual tradition searching for the inexorable 'laws of capitalism'. As Acemoglu and Robinson (2015, p.3) observed: "Economists have long been drawn to the ambitious quest of discovering the general laws of capitalism. David Ricardo, for example, predicted that capital accumulation would terminate in economic stagnation and inequality as a greater and greater share of national income accrued to landowners. Karl Marx followed him by forecasting the inevitable immiseration of the proletariat." The contemporary popularity of this intellectual tradition is reflected in the surprisingly widespread popularity in both the academic and popular media of "Thomas Piketty's (2014) tome, *Capital in the 21st Century*, [which] emulates Marx in his title, his style of exposition, and his critique of the capitalist system. Piketty is after general laws that will demystify our modern economy and elucidate the inherent problems of the system—and point to solutions" (Acemoglu and Robinson 2015, p.3). In this tradition, capital and capitalism are intimately connected.

Piketty is ultimately concerned with "putting distribution back at the heart of economics". An important part of the argument supporting Piketty (2014) is use of 'empirical data' to demonstrate the rate of return on capital exceeds the growth rate of the economy, resulting in an increasing inequality of wealth within and across countries. Such arguments depend fundamentally on a particular definition of 'capital'. While a claim that the rate of return on capital exceeds the growth rate of the economy implies a physical definition of 'capital', Piketty (2015, p.70) claimed that any definition of capital depends on the historical context:

> Capital is not an immutable concept: it reflects the state of development and prevailing social relations of each society . . . The boundary between what private individuals can and cannot own has evolved considerably over time and around the world, as the extreme case of slavery indicates. The same is true of property in the atmosphere, the sea, mountains, historical monuments, and knowledge. Certain private interests would like to own these things, and sometimes they justify this desire on grounds of efficiency rather than mere self-interest. But there is no guarantee that this desire coincides with the general interest.

This definition seems to reference an association between capital and ownership of property. In contrast, in *The Mystery of Capital* De Soto (2000) argued that 'dead capital' associated with inadequate claims to title for physical assets such as land and houses prevents entrepreneurs in developing countries from accessing 'active capital' needed to fund commercial ventures.

Written at the end of the 19th century, after the emergence of the limited liability corporation with autonomous shares, *Capital* III perceived an 'alienation of capital' that Smith could not foresee. As Henderson (1986, p.127) observed, one facet of 'finance capitalism' was "a matter of alienation, the owning capitalist estranged from his capital, the functioning capitalist replaced by managers who exploit the workers for the benefit of others who are superfluous to the production process". Whereas Smith perceived significant agency costs associated with a separation of management and ownership in joint-stock companies, Marx observed a more developed stage of equity capital organization, where separation of ownership from control of the production process generates surplus value. The pervasive character of the associated 'alienation of capital' was an essential element in the Marxian thesis about the 'laws of capitalism'. In modern times, diverse notions of 'capital' and 'capitalism' have led to the 'varieties of capitalism' approach that informs the two-volume effort by Neal and Williamson (2014) that aims to trace the historical evolution of 'capitalisms' from ancient to modern times.

The Connection between Equity and Capital

Given this background, the relevant etymology for 'equity capital' revolves around the problematic meaning for 'equity'. Fortier (2005, p.3) observed that "equity taxes simple notions of etymology". Similarly, Falcón y Tella (2008, p.13) called the word 'equity' "an ambiguous term." Falcón y Tella argued that the historical approach is "indispensable" in understanding the concept of equity and identified several distinct historical periods. The earliest period in the etymology of 'equity' is represented by the Greek *epieikeia,* a concept found in the writings of Aristotle, especially *Nichomachean Ethics*, and Plato (e.g., *The Republic*). For Aristotle, equity had a positive tone, while for Plato the tone was negative. In both cases, 'equity' translated roughly as 'correction of the generic law to suit the specific case' (p.15). The notion of equity evolved for Plato. Initially (in *The Republic*), Plato maintained that failures in the general laws could be adjusted by the wise and prudent statesman, who would stand above the law and was able to make 'equitable' adjustments in specific cases. The difficulties in identifying a wise and prudent ruler eventually led Plato to seek general laws to which even the ruler was subservient. In this case, equity claims reflected negatively on the perfection of law and the art of politics.

Applying to the 'justice of a specific case', *epieikeia* involves 'correcting generic law to suit a specific case'. The Greek root word for *epieikeia* is *epieikes,* which means reasonable or moderate. Applied to the law, numerous Greek philosophers used *epieikeia* to distinguish between the justice of a specific case and the abstract ideal justice which a system of laws aims to obtain. Greek philosophers generally differed as to whether *epieikeia* was a positive or negative concept, with significantly different implications for the conduct of legal affairs. For Plato and others seeking an ideal 'rule of law', *epieikeia* was an imperfection, a deviation from the ideal. To them, the 'rule of law' was supreme, and judges were to be severely restricted in exercising judgment in the application of laws. In contrast, for Aristotle *epieikeia* was a 'correction' of the law that, in specific cases, seeks a 'more just' outcome than the 'rule of law'. By the Middle Ages, Thomas Aquinas and other scholastics captured the subsequent adoption of 'equity' in canon law associated with the Aristotelean concept of *epieikeia*.

In modern times, it is the positive Aristotelean *epieikeia* that is the accepted version.

Epieikeia is so deeply rooted in Aristotelean philosophy that some translators resist the temptation to translate the word as 'equity', preferring to leave *epieikeia* untranslated. While Plato viewed *epieikeia* in the technical context of applying a law to a specific case, Aristotle elevated *epieikeia* to the status of 'virtue', providing a fundamental connection to his theory of ethics. This debate over the interpretation of *epieikeia* took place at a time when Greek society was governed by the harsh laws and customs of ancient times. For example, Aristotle identified difficulties with applying the Greek law that a foreigner climbing the city walls was to be sentenced to death. Designed to punish attacking enemies, the law would require putting to death an individual climbing the wall for less nefarious reasons, such as to enter without paying an entry toll. Ancient Greek society tended toward strict application of the 'rule of law', which would have the person put to death, whatever the specifics of the case. Aristotle was arguing against such actions, allowing for virtuous intervention in specific cases.

The etymology of 'equity' capital in modern commercial usage combines Aristotelean and Roman roots. Aristotle's influence on Aquinas and other scholastics' interpretation of equity provided a system of equity based on "plain justice and good faith" (Kerr 1929, p.355) that was the foundation for subsequent development of the law merchant, used for centuries by merchants to settle disputes. "Etymologically, . . . as its first meaning, '*aequitas*' seems to refer to equality, and in legal terms means that law has as an end the awarding of equal protection to equal interests . . . the law must be the same for all individuals" (Falcón y Tella 2008, p.23). This interpretation fits with the Commutative vs. Distributive Justice identified by Malynes (1622):[4]

> *Justice* is administered, which is *Distributive* and *Commutative*. The *Commutative* part includeth *Traffick*, which is the sole peaceable instrument to in rich kingdomes and common-weales, by the means of *Equalitie* and *Equitie*, performed especially by the *Law Merchant* by reason of her stabilitie.

It is tempting to extend *epieikeia* to interpret 'equity capital' as 'virtuous', as in Islamic finance or medieval scholasticism, an interpretation that is relevant to distributive justice. In seeking to apply *epieikeia* to problems of commutative justice, medieval scholastics also developed canon law doctrines concerning usury and risk that were not favourable to debt-financed commercial transactions.

D EQUITY CAPITAL AND CONCEPTS OF LAW

Types of Law

The legal history of equity capital includes: the early law codes of Sumer and Babylonia; the Roman law of partnership (*societas*) and 'sea loans' (*foenus* *nauticum*); the medieval and Renaissance *commenda* and *compagnia* contracts; the canon law and 'law merchant'; the regulated and joint stock chartered companies of the 16th to 18th centuries; and the modern law of incorporation and limited liability. Concepts of law appear again and again as essential elements in the history of equity capital. This begs a fundamental question: How does the law impact the organization and valuation of equity capital? For example, medieval scholastic doctrine and the associated canon law was profoundly concerned with the moral 'value' of equity capital. As Noonan (1957, p.21) stated: "A firm belief in the rationality, immutability and universality of law is at the heart of the scholastic approach to all moral problems." Yet, canon law and scholastic doctrine evolved to accommodate commercial developments. Strong canon law restrictions on payment of interest were gradually relaxed to admit 'moral' exceptions to the usury sanctions.

For purposes of discussing history related to financing, conduct and organization of commercial ventures, three general types of law can be identified: divine law, positive or civil law and natural law. In Jewish and Christian traditions, divine law originates with the Bible. However, interpretation of scripture is complicated. St Paul's Epistle to the Romans (Romans 1–16) provides a useful example. St Paul recognizes the commandments of the Old Testament, divine law as revealed to the Jews and to be accepted by Christians. He also recognizes the divine law revealed in the New Testament, which incorporates and advances the divine law of the Old Testament, and recognizes law that extends beyond divine law and applies to all individuals, whether Christian, Jew, Gentile or pagan. This law, which is an interpretation of natural law, imposes "natural moral duties" (Noonan 1957, p.21) required to maintain civil society. Canon law evolved as a collection of laws providing scholastic interpretation of the divine law contained in the scriptures.

Natural law is difficult to define precisely. Discussion of natural law can be found in the writings of Greek philosophers, such as Aristotle, and was explicitly developed in Roman law. Natural law is immutable. "The natural law may not be dispensed from by any human authority. It binds all men. Its first principles are innate, though experience is necessary for their application or development. Sometimes the natural law is considered in its subjective principles, and then it is identified with reason itself; sometimes it is considered in its objective content then it is identified with what is taught by reason" (p.23). Natural law applies to fundamental issues, such as the rules governing union of the sexes, the birth and raising of children and the proper treatment of neighbours. Because divine law also speaks to these issues, medieval canonists did not formally distinguish between divine law and natural law. By the 18th century, natural law philosophy had largely superseded scholasticism.

Unlike natural and divine law, civil or positive law is more changeable and does differ across time and location. In modern times, 'civil' or positive law encompasses a range of legal areas such as criminal law, constitutional law and the civil tort law. In addition to governing commercial relationships, civil law is responsible for maintaining social order and, by design, must recognize that virtue is sometimes a difficult objective to achieve. Vices may be permitted, if these do not conflict with the social order. Civil law is made by governments or by local custom and, as a result, can be adapted to conform to changing social and commercial norms. Despite these qualifications, there are limits to the types of civil laws that can be imposed. In particular, natural law is the measure of civil law. For example, natural law dictates that criminals must be punished. Civil law establishes the precise punishment that will be applied. As demonstrated repeatedly over the centuries, civil laws that violate natural law are unreasonable and can lead to the breakdown of social order.

Significantly, natural law and divine law do not provide precise guidance on numerous issues of importance to civil law. The institution of private property is a case in point. Is private property protected under natural law? The answer to this question is at the root of many fundamental political, social and economic questions, and it has been an essential feature in the evolution of equity capital. Capitalist societies maintain that reason dictates private property is required for social peace and the encouragement of industry. Hence, private property rights are derived from natural law, although the specific form of private property rights have to be determined by civil law. In turn, private property rights play a central role in determining the use of equity capital in commercial ventures. For example, in scholastic doctrine, usury is considered a form of theft, violating the property rights of the individual who is required to make these unjust payments. As such, the scholastic usury doctrine applies equally to rich and poor, providing substantial impetus to the use of equity capital in financing commercial ventures during the Middle Ages.

De Roover (1944, p.185) directly addressed the impact of the scholastic usury doctrine and arrived at a forceful opinion:

> The usury prohibition should be taken more seriously than it usually is. One should not assume that the canonist doctrine on usury was merely a topic for academic discussion among theologians. The opposite is true: the usury prohibition had a tremendous influence on business practices all through the Middle Ages, the Renaissance, the Reformation period, and even down to the French Revolution. Since the taking of interest was ruled out, such a practice had to be concealed by resorting to various subterfuges, which the merchants justified by all kinds of sophisticated and fallacious arguments.

That interest was paid in commercial transactions during the Renaissance and Reformation is not disputable. What is of topical interest are the techniques and arguments that were used to structure licit interest-bearing transactions. Understanding of these techniques and arguments requires discussion of how the scholastic usury doctrine evolved and the permitted exceptions to this doctrine, such as *cambium* and *census* and, especially, the *societas*. In this vein, the legal history of commercial law is distinct from criminal and constitutional law. For much of early history, legal mechanisms for resolving commercial disputes were separate from the courts that decided criminal and constitutional matters. Merchant custom, somehow defined, tended to determine the legal outcome of a commercial dispute, independent of the locale where the dispute was being settled. However, at least since Bewes (1923), there has been scholarly debate surrounding the extent to which merchant law represented a 'transnational law' independent of local legal constraints.

Roman Law Origins

Compared to modern limited liability corporations, the legal environment for organizing and valuing equity capital is different when the ownership structure is a *societas* or partnership, an essential form of business organization throughout ancient and early history. The influence of the Roman *societas* on the subsequent centuries of equity capital organization has been profound. The extent and duration of the Roman Empire, combined with the careful codification of Roman laws, provided the legal foundation for the financing of subsequent commercial activities, especially in long-distance trade. Yet, it is well known the Romans adopted and adapted commercial laws of countries they conquered, such as Greece. For example, the Greek sea loan described by Demosthenes (384–322 BC) has the essential legal features of the Roman *foenus nauticum*. Modern knowledge of Roman law comes from the *Corpus Juris Civilis* prepared under the instruction of the Eastern Roman Emperor Justinian I (482?–565). In turn, the Roman law of Justinian was a foundational influence for later European laws governing commercial organization.

While the corpus of modern corporation law evolved over the centuries, it was not until the 19th century that the limited liability corporation started to take modern form. In contrast, the origins of the 'law' surrounding partnerships predate recorded history. The rudimentary character of most commercial operations in the agrarian societies of antiquity did not require the permanent equity capital stock needed by modern corporations with publicly traded common stock. In many situations, the value of equity capital was directly related to the profit from a particular venture. For example, equity capital from an individual merchant or partnership of merchants would be used to purchase goods to be carried by sea or land to another location, where the goods would, hopefully, arrive in good order and be sold by a travelling partner or an agent. At the end of the venture, profits and return on capital would be distributed in shares determined by the specific arrangements for the transactions. Especially in ancient times, kinship, military, political and religious affiliations determined the structure of equity partnerships.

The modern organization of equity capital depends fundamentally on the properties of limited liability, incorporation and autonomous shares. While today there are a wide variety of legal forms of equity capital organization, such as the traditional partnership, the limited liability company and the limited liability partnership (e.g., Guinnane et al. 2007; Ribstein and Sargent 1997), the combined legal characteristics of limited liability and corporate status have proved to be the most expedient for public trading of equity securities, an essential feature of the modern equity capital landscape. Recognizing that there is a much longer historical time line for the evolution of these legal characteristics than for equity capital organization, the tipping point for the widespread introduction of limited liability and corporate status for commercial ventures can be traced to debates that took place during the 19th century.

Having the most influential market for trading equity capital during this period, debates in the UK have particular significance. Alternative forms of equity capital organization employed elsewhere, such as the French *société en commandite simple*, were considered in these debates but not widely adopted in practice.

Limited liability, incorporation and market trading of equity securities are fundamental to the modern equity capital landscape. This situation begs the following questions: When did trading in equity capital 'shares' in a commercial venture begin? How does limited liability and incorporation facilitate this trade? Many conditions need to be satisfied before a 'share' in a commercial venture can be 'traded'. The precise conditions depend on the legal type of business organization. For various reasons, a 'share' in a private partnership is more than difficult to trade than a 'share' in an exchange-traded, limited liability corporation. Recently, claims for ancient 'trading' of equity capital shares in commercial ventures have been made for the *societates publicanorum* of the Roman Republic, where corporate or joint stock organization is also claimed (e.g., Badian 1972; Malmendier 2009). Such fanciful claims suffer a number of defects. In addition to conceptual difficulties with the rationale and commercial basis for such trading, there is an underlying confusion about the organization of equity capital as 'corporate' or joint stock. Neither the joint-stock nor the corporate claim has a sound basis in the commercial context of the Roman economy, because the Roman Republic had not developed sufficient legal foundation to sustain such forms of organization.

Legal and economic historians have long recognized differences between joint-stock and 'corporate' organization (e.g., Poitras 2000, pp.267–72). For example, Kessler and Temin (2007, p.318) recognized this distinction in making the following claim about the *societates publicanorum*: "There is evidence showing that at least some Roman companies functioned similarly to the joint-stock companies of the English and the Dutch in the sixteenth and seventeenth centuries". This could implicitly reference the appearance of a market for trading in shares of the *VOC* (Dutch East India Company), a joint-stock company, that commenced in 1602. However, the claim for share trading in the 16th and 17th centuries is muted. This predates the historical emergence of 'autonomous' shares of private, commercial limited liability 'corporations' during the 19th century (e.g., Taylor 2006; Blair 2003; Ireland 1996). There is a legal and historical distinction between a 16th-to-17th-century 'joint-stock company'—chartered with a public purpose and a separate 'corporate' identity but with liability determined more in the fashion of partnerships—and a 19th-century 'corporation'—with both limited liability for shareholders and a separate 'corporate' identity—that is often obscured. For example, Verboven (2002, p.23) confounded this difference: "The legal concept of the 'corporation' as a private enterprise with limited liability dates from the Early Modern period and was intended to facilitate long distance maritime trade, the Elizabethan 'East India Company' (1600) being the first of its kind."[5]

Any capital association can be loosely defined as a 'company' or, where business involving the state is involved, a 'state enterprise'. Such terms are generic and are not indicative of the organizational structure of the company. For example, the 15th-to-17th-century English 'Company of Merchant Adventurers' was a regulated company with 'shares' that were typically acquired by birthright and apprenticeship.[6] At times, some English regulated companies admitted all those willing to pay a fee (e.g., the Levant Company). Business organization in general, and the concepts of limited liability and incorporation in particular, have had a long development. The Roman state (*Senatus populusque Romanus*) and, especially, the *municipia*, evolved as legal public entities separate from individual citizens. From this point, determining the status in Roman private law of corporate entities with "juristic personality" is "a vast and deep problem" (Daube 1944, p.128; 1943; Duff 1938).

Some private arrangements that had achieved a level of corporate status during the late Republic were *collegia, universitates* and *sodalicia*. In the general case of a *societas*, Verboven (2002, p.277) observed:

> Roman *societas* was fundamentally different from modern corporations or trade companies, which are characterized by their corporate capacity. Outsiders doing business with *socii* could in no way acquire claims on or incur obligations toward the *societas* as such because the *societas* as a legal entity did not exist.

Against this backdrop, *societates publicanorum* with 'corporate' personality independent of the *socii* were established. This 'corporate' personality originated by extending the public personality of the *populus Romanus*; the activities of the *societates publicanorum* were predominately public, not private, duties—that is, tax farmers were contractors providing essential revenues for the state, and public works contractors were building essential infrastructure. Beyond this, there is no evidence that the *societates publicanorum* had a 'private' corporate personality independent of that extended by the *populus Romanus*. This is an essential issue for the claim of trading in shares.

The *Societates Publicanorum*

The specific organizational details we have of the *societates publicanorum* are scant. Despite a paucity of details, Balsdon (1962, pp.135–6) provided a conventional modern description of a *societas publicanorum* that can be found in earlier secondary sources, including Deloume (1890) and Kniep (1896):

> The only tax-farming company (*societas*) at Rome of whose organization we have a detailed description is the company which farmed the '*scriptura et sex publica*' of Sicily; it had a Chairman (*Manceps*), a Managing Director (*Magister*), a Board of Directors (*Decumani*), and there were Shareholders (*Socii*). In the province the staff of this as of all tax-farming companies consisted of a Local Manager (*Pro Magistro*) and of minor officials (*Qui operas dabant*).

The 'primary sources' for this detailed description are scattered and numerous (e.g., Poitras and Geranio 2016) and are insufficient to support the description given; artful interpretation has taken place. Basing inferences about the organization of the *societas publicanorum* involved in Sicilian tax farming described by Cicero (*In Verrum II*) seems somewhat incongruent given that recognition of the *Lex Hieronica* meant contracts for the tithe (*decumae*) were auctioned in Sicily, not Rome. The *scriptura* and the lucrative *portoria* were auctioned in Rome, though Scramuzza (1937) indicated only one, possibly, two *societates* were farming those taxes. Traditional Sicilian methods of *decumae* collection attract modern attention because of claims the Romans adopted this practice in other conquered territories. Sherwin-White (1977) and Cotton (1986) demonstrated the organization of tax farming in Anatolia was also dependent on local traditions, given the discretionary authority of the governors (e.g., Rauh 1989a, b).

A 'trade' of a 'share in a *societas publicanorum*' (*partes*) was an inherently legal operation. The rights and obligations associated with ownership of a share had to be legally defined; the transfer of ownership legally recorded; an accurate legal receipt provided for funds exchanged. Perhaps verbal agreements with witnesses involving only *familiares* and *amicii* were used? In any event, certain legal details relevant to the claims of share trading attracted attention from Roman jurists and are captured in the *Institutes* of Gaius (Gordon and Robinson 1988) and the *Digest* of the emperor Justinian (Watson 1985). It is well known that these sources originated from legal decisions well after the end of the Republic and also suffer, to varying degrees, from philological difficulties. In addition, legal sources are not always indicative of actual commercial activities. However, to ignore these sources for such reasons presumes an absence of reliable continuity in key features of Roman commercial law.[7]

Given this, many sections are relevant: *Institutes*[III, 148–52] and *Digest* [17,2] on the organization of partnerships; *Digest*[3,4] on actions for and against corporate bodies; *Digest*[39,4] on actions against tax farmers; *Digest*[50,10] on public works; *Digest*[19,2] on lease and hire; *Digest*[6,3] on actions for *vectigalian*; *Digest*[10,3] on actions dividing common property; and, *Digest*[50,11] on markets. If claims of share trading are correct, the absence of legal interpretations in the *Institutes* and *Digest* directly relevant to disputes on the 'trading' of shares is, presumably, because this was a practice only during the (late?) Republic and, for some reason, received no interest from the jurists of the Empire. This seems highly unlikely.

With these provisos, the most significant legal description of the *societas publicanorum* is found in *Digest*[3,4,1], where private 'corporate bodies' are described as follows:

> Partnerships, *collegia* and bodies of this sort may not be formed by everybody at will; for this right is restricted by statute, *senatus consulta,* and imperial *constitutiones*. In a few cases only are bodies of this sort permitted. For example, partners in tax farming, gold mines, silver mines and saltworks are allowed to form corporations . . . Those permitted to form a corporate body consisting of a *collegium* or partnership or specifically one or the other of these have the right on the pattern of the state to have common property, a common treasury, and an attorney or syndic through whom, as in a state, what should be transacted and done in common is transacted and done.

Significantly, there is considerable debate over the textual validity of this "corrupted" source (Daube 1944, p.126). In addition to 'bad Latin'—the source is identified as Gaius, 'Commentary on the Provincial Edict', Book 3, not the more influential *Institutes*—the reference to imperial *constitutiones* involves a method of organizing these activities appearing during the Empire.

Given such qualifications, *Digest*[3,4,1] can be claimed as support for the position of Verboven (2002, p.278) and others:

> In some exceptional cases a *societas* was granted corporate capacity by a law, a senatorial decree or (later) an imperial *constitutio*. The most famous example is the large *societas vectigalium* formed to collect taxes on behalf of the state. Under the Republic, they were no doubt the only 'incorporated' *societates*.

The precise meaning of 'incorporated' in this case is elusive. Property held in common is a feature of partnerships that can be found in the origins of Roman law (*societas ercto non cito*). Common property 'on the pattern of the state' indicates that a partner does not have the traditional right to bring an *actio pro socio* to dissolve the partnership (*Institutes* III, 151). Similarly, this *societas* survives the death of a *socius* (*Institutes* III, 152). As such, the *societates publicanorum* had a 'corporate' identity separate from the *socii*. This was exceptional in the Roman law of *societas* at the time of the late Republic and provides indirect support for a limited claim of share trading—for example, if a partner dies, a 'share' may become available for sale. However, the 'corporate' features granted were only those necessary to ensure that the essential state activities of revenue collection and public works construction were not disrupted.

The two other features of the *societates publicanorum* described by Gaius as 'on the pattern of the state' are harder to clarify. For the *municipia,* having a common treasury was essential for the provision of common services and maintenance of public works. In the Greek and Roman eras, the 'treasury' was typically a building of importance, reflecting the independent corporate status of a *municipium* or city state. Having a common treasury in the sense of the *collegia* that, say, emerged among soldiers during the early Empire often meant a common fund that would be used to pay burial expense and, possibly, provide a rudimentary form of 'social insurance' (e.g., Lewin 2003). The need for a *societas publicanorum* to have a 'common treasury' is likely related to the *publicani* providing essential funds for provincial administration and, where appropriate, making payments in Rome. The 'common treasury' would provide a fixed location where tax collection business of the *societas* could be conducted and revenues collected and disbursed. If the *publicani* employed municipal authorities in the Asian provinces to collect taxes within their scope of influence, then the 'common treasury' of the local authorities could be used to collect state revenues and disburse funds to the Roman administration for purposes such as provisioning the troops and compensating a variety of officials on the governor's staff. *Digest*[3,4,7.1] suggests a common treasury of a *societas publicanorum* would also provide a legal method for those "put to some expense" in collecting taxes or erecting public works to seek redress without having to take action against *socii* individually.

The final feature identified by Gaius—having an attorney or syndic act in the common interest—implicitly requires some method for the *socii* to select and replace such an individual. This feature also extends the traditional limited liability of a *socius* in, say, a *peculium* beyond initial funds invested (plus any profit earned) if not directly involved in the management of the venture (e.g., *Digest*[17,2,25]). Further detail on the liability of the *socii* is provided in *Digest*[39,4,1]: "If a tax farmer or his *familia* takes anything by force in the name of the public revenue and it is not returned, I will grant a *judicium* against them". It is observed that '*familia*' in this context includes all *familiares* who work for the tax farmer collecting *vectigalia*. This includes slaves owned by the tax farmer, freedmen and slaves belonging to others. *Digest*[39,4,6] provides detail on liability when tax farmers act in concert: "If a number of tax farmers has been involved in making an illegal exaction . . . all shall pay their share and anything that one cannot pay will be exacted from another." Finally, *Digest* [39,4,9.4] observed that "Where partners in *vectigal*-collection administer their shares of the contract separately, one of them can legally petition to have the share of another who is of doubtful solvency transferred to himself".

Digest[39,4] and other sections demonstrate that *socii* in the *societates publicanorum* did not have the limited liability of a modern corporation. Most legal actions were taken against a *socius,* not the *societas*. Those *familiares* responsible for the collection of taxes were responsible to the *socius* and not the *societas*. Even when acting in concert, the liability was individual and would be shared according to the partnership agreement. Because partners could 'administer shares separately', the role of the syndic or attorney acting in the common interest was, again, likely related to conducting tax-farming business in multiple locations—for example, in Rome and the Asian province associated with the contract—and the need to disburse funds for Roman administration. This allowed the syndic or attorney to act in place of a *socius* who was in another location or was otherwise unavailable.

Is the associated liability of the *socii* consistent with the broader liability of a shareholder in a 16th-to-18th-century joint-stock company? Such a comparison is complicated due to differences in the commercial context between late Republic tax farming and long-distance seaborne trade of the early joint-stock companies. The presence of an attorney or syndic, somehow selected, creates a liability for the *socii* similar to that of shareholders in the *VOC* with respect to the assembly of 'Seventeen Masters' (e.g., Poitras 2000, p.273). However, resources of the *societas* used to collect taxes were owned individually, unlike the joint-stock companies where ships, cargoes, outposts and the like were owned by the company. On balance, the equity capital organization of the *societas publicanorum* was decidedly ancient Roman in character.

NOTES

1 Modern accounting standards issued by accounting entities such as the Financial Accounting Standards Board (US) and the International Accounting Standards Board are replete with references to 'equity'. For example, in 1990 the

FASB issued a discussion memorandum, "Distinguishing between Liability and Equity Instruments and Accounting for Instruments with Characteristics of Both", to clarify issues associated with the increasing appearance of 'hybrid' equity (debt) securities with debt (equity) features.

2 Another illustration of the accounting differences between preferred and common stock is that declared but unpaid dividends on cumulative preferred stock is classified as a liability while unpaid dividends on common stock do not have such accounting treatment.

3 This is a notional approach aiming to provide a connection with historical notions of 'capital'. In accounting practice, there are numerous other items also included on the assets side of the balance sheet, such as goodwill and accounts receivable, that do not qualify as either physical or intangible assets.

4 Corrective or criminal justice could also be added to this list of justice concepts. However, Malynes (1622) was only concerned with detailing the 'law merchant' associated with rules of commercial relationships that were international in character. Disputes were generally settled by reference to the 'laws of equity'. Depending on the time period, such disputes over the value of individual shares of 'equity capital' could be adjudicated by civil authorities, religious bodies or a council of merchants.

5 As evidence, consider that the charter of the East Indies Company contains a list of 200 named individuals and the requirement that "they, at their own Adventures, Costs, and Charges" are required to satisfy the following: "[The] Company of Merchants of London, Trading into the East-Indies, and their Successors, that, in any Time of Restraint, Six good Ships and Six good Pinnaces, well furnished with Ordnance, and other Munition for their Defence, and Five Hundred Mariners, English Men, to guide and sail in the same Six Ships and Six Pinnaces, at all Times, during the said Term of Fifteen Years, shall quietly be permitted and suffered to depart, and go in the said Voyages." This is not consistent with limited liability, as there is a distinct possibility of calls for shareholders to provide more capital (beyond the amount of the initial investment). The early joint-stock companies often made additional calls on shareholders. As for separate corporate identity, the charter is clear: "they and every of [the 200 named individuals] from henceforth be, and shall be one Body Corporate and Politick, in Deed and in Name, by the Name of The Governor and Company of Merchants of London, Trading into the East- Indies."

6 Though the origins of the Company can be found in the 13th century and remnants of the company survived into the 19th century, the key charter was obtained in the 15th century. This began a period of prominence for the Company, which lasted until the Glorious Revolution at the end of the 17th century.

7 Reliance on the *Digest* and *Institutes* is complicated, because Roman law evolved over time and because and the period from the Grachan law (*Lex Sempronia Agraria*) to the end of the Republic was an especially active period of legal change and evolution. It is well known that the dating of legal opinions listed in the *Digest* is not transparent. The *Institutes,* likely written during the early Empire and largely concerned with Roman 'old private law', lacks detail on specific issues associated with the *societates publicanorum*.

2 Equity Shares in Antiquity

locupletare amicos umquam suos destitit, mittere in negotium, dare partis
(he never ceased enriching his friends, sending them upon commissions, bestowing shares upon them)

Pro C. Rabiro Postumo [2.4]

eripuerisne partes illo tempore carissimas partim a Caesare, partim a publicanis?
(Did you not at the same time filch shares when they were at their highest, in part from Caesar, in part from the tax-farmers themselves?)

Pro Vatinium testem interrogatio [12.29]

Cicero (106–43 BC)

A EQUITY CAPITAL AND 'MARKETLESS' TRADING

Trade, Markets and Money

The study of commercial life in antiquity is hampered by the limited and fragmented evidence available. Business activities following the introduction of the printing press in the 15th century are captured in a substantial number of notarial records, merchant archives, toll registers, company records, price *courants*, records of legal proceedings and the like. In contrast, information about Roman, Greek, Egyptian, Phoenician, Babylonian, Sumerian, Assyrian and other ancient civilizations survives in a relatively small number of sources. While archaeology has been able to fill in some gaps, "the general inadequacies of the evidence accentuate the role of conceptualization in historical research" (Bang 2008, p.3). The only sources available deal with a small slice of ancient history and cannot provide enough detail to construct an accurate historical record. In addition, many sources deal only with a particular non-commercial activity (e.g., military campaigns, classical literature, criminal law, royal edicts), leaving no trace of many aspects of ancient commercial life. Careful examination and scrutiny of sources has to be supplemented by 'artful' interpretation. "Sources are . . . not self-explanatory. They must be interpreted to bring us to the ancient reality" (Bang 2008, p.3).

In modern times, the difficulty of determining specifics of commercial activities in the ancient world is reflected in the ongoing debate over the extent of 'the market economy'. This debate features ideologically charged questions such as 'Was a market economy present at the beginnings of civilization?' Seeking a reflection of modern times in ancient societies, Temin (2001, 2004, 2006), Malmendier (2009) and other economic historians "have gone their own way in creating models that describe how early civilizations might have developed if it had followed the lines of modern individualism at the outset" (Hudson et al. 2002,

Figure 2.1 Stele for Code of Hammurabi in the Louvre

p.19). Ancient historians, anthropologists and sociologists often find alternative explanations of the available sources. For example, an early contribution by Weber (1896/1909) argued that ancient Mesopotamian irrigation systems required continuous supervision, giving rise to complex bureaucratic structures that employed bonded and forced labor on an immense scale. The upshot was an ancient world characterized by despotic states dominating economic life, what Dale (2013) identified as "hydraulic-bureaucratic official-states". In this interpretation of ancient life, there was limited scope for a 'market economy' and the associated use of equity capital in commercial ventures.

Understanding the context of economic life and commercial activity is essential to identifying methods of organizing and valuing equity capital in the ancient world. Polanyi (1957) provided insight into the problem by identifying three essential commercial institutions: trade, markets and money. For Polanyi, trade in ancient Mesopotamia was "marketless", though the precise meaning of this claim requires considerable clarification (e.g., Dale 2013; Cangiani 2011; McCloskey 1997; Silver 1983). In modern times, all three institutions have merged into the market system. Economic historians "tend to assume that the same triadic nexus applied in earlier epochs, and to assume markets to have been the generative and coordinating instance, with trade conceived of as a movement of goods through markets, facilitated by money as a means of exchange" (Dale 2013, p.160). Polanyi and other economic anthropologists, however, such as Finley (1973, 1981), view trade, markets and money as discrete elements that need to be examined independently.[1] Avoiding the argument about economic development based on consideration of the three essential institutions in the ancient world, the 'triadic nexus' still provides helpful structure to interpret the use of equity capital in the ancient world (e.g., Oka and Kusimba 2008).

To see the importance of equity capital in the structure of ancient trade and commercial activity, consider some basic characteristics. For Polanyi, trade was a method of acquiring goods that were not available locally. Goods could be traded for in various ways, not just the price-driven mutually beneficial exchange of the market. As such, market trade was "geared toward making a profit" and was well suited to the use of monetized accounting. However, there was also 'administered trade', in which prices "were fixed largely by custom, statute, or proclamation, and perhaps should not generally be called prices at all" (Polanyi 1966, p.xix).[2] Instead of variable prices for services being set in markets, 'prices' for many important economic activities in the agrarian societies of Old Babylonia and other parts of Mesopotamia were set by fiat, supporting the view advanced by Polanyi (1957) that there was 'marketless trade'. Similarly, in ancient societies money could serve different functions than in a monetized market economy. For example, commodity 'money' of ancient times such as barley could serve as 'currency' in the payment of tribute or taxes with little or no use as a store of value or medium of exchange. This begs questions such as 'What were the methods used to organize and value equity capital in ancient times? Were equity capital shares transferable, and, if so, could the monetary value of equity capital fluctuate? What methods of contracting and accounting were employed?'

In the search for marketless trading in the ancient world, Polanyi (1977, p.124) observed:

> [A] market mechanism is beyond the most nimble spade. While it may be comparatively easy to locate an open space where, sometime in the past, crowds were wont to meet and exchange goods, it is much less easy to ascertain whether, as a result of their behaviour, exchange rates were fluctuating and, if so, whether the supply of goods offered was changing in response to the . . . up or down movement of those rates.

Unfortunately for any examination of 'ancient times' that seeks 'general explanations', ancient historians have gradually come to recognize the extensive commercial diversity of ancient societies and the sometimes dramatic evolution and devolution in commercial practices and laws that took place over time within the same society. It is not surprising that economic historians such as Rostovtseff, Temin and Malmendier, pondering the character of economic activity in

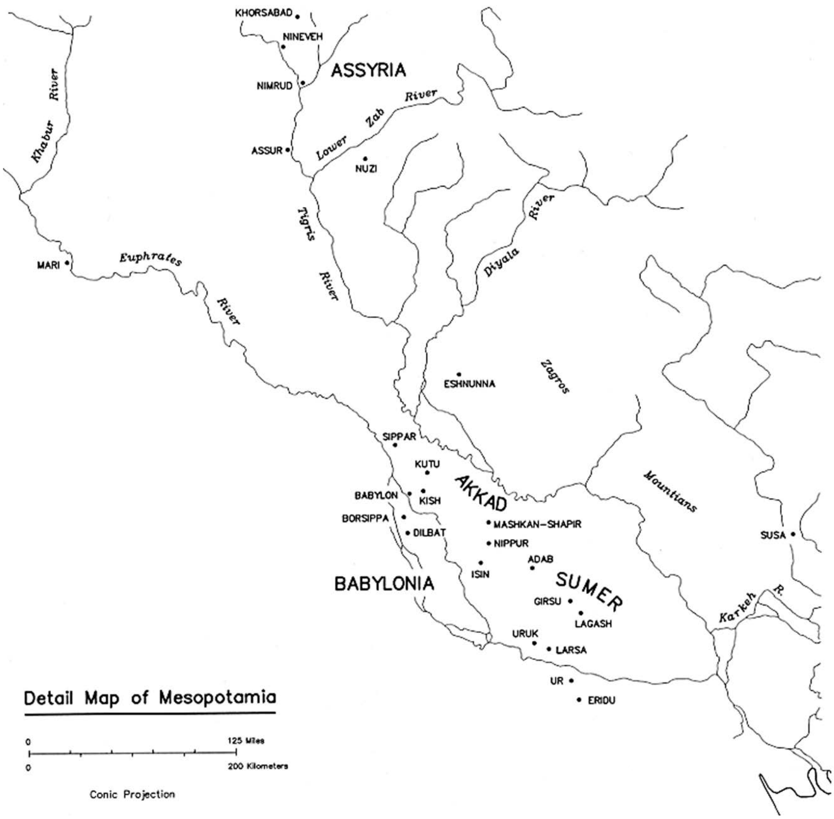

Figure 2.2 Bronze Age Mesopotamia City States

Source: Oriental Institute, University of Chicago ancient times, seek answers predominately in the Greek and, especially, Roman civilizations. Yet, even Polanyi recognized the emergence of widespread monetized market-driven trade in Greek times, possibly earlier. By Greek times, rudiments of the 'law merchant' governing rules of conduct in commercial practice had evolved, reflecting a level of 'generality' in international trading that was relatively sophisticated in terms of monetized valuation and accounting accuracy.

The historical importance of Roman law governing the usage, organization and valuation of equity capital is difficult to understate. Roman law played a fundamental role in the development of commercial law throughout Europe and, via the mechanisms of colonization, throughout the modern world. Yet, despite numerous sources evidencing Roman civilization, the character of trade and markets in Roman times is not completely clear. That significant bulk trade in goods extended throughout the Roman Empire is well established, if only from archaeological evidence. The works of Cicero and others provide some account of the workings of the *publicani* in tax farming and public works construction. What is often overlooked in the search for evidence of markets, money and trade is the fact that Roman commercial law evolved from laws and customs going back millennia, to a time when a large segment of commercial activity was not purely monetary in character. In turn, relevant laws were shaped by commercial activity of the time and did not evolve in a linear fashion, either temporally or geographically.

The Bronze Age Law Codes in Sumer and Babylon[3]

The earliest form of record-keeping, called cuneiform script, is thought to have begun in Sumer, in southern Mesopotamia, during the 4th millennium BC. It consisted of using a wedge-shaped stylus to make impressions on wet clay tablets (see Figure 2.3). Because many cuneiform documents originated as commercial contracts, especially 'loans' associated with agricultural production, we have considerable information about the evolution of commercial practices throughout ancient Mesopotamia. Accurate interpretation of these documents—which is where the history of equity capital begins—requires understanding of another artefact: the law codes of the various city states that characterized the region.

The law codes of ancient Sumer and Babylonia reflect the symbiotic relationship between the legal codes that have survived from ancient times and the character of trade that is likely associated with such codes. In modern times, the Code of Hammurabi (ca. 1780 BC) of Old Babylonia is the best-known illustration of such law codes (Kent 1903). However, the code of Lipit-Ishtar, ruler of the Sumerian kingdom of Isin, preceded the Code of Hammurabi by as much as 175 years (Steele 1947, p.159). Because laws of this era required the use of written contracts for common commercial activities, a great many cuneiform tablets related to these activities were produced, many of which remain to be interpreted.[4]

Only fragments of the Isin law code survive. However, based on those fragments, there were laws relating to the use of boats, possibly relevant to the

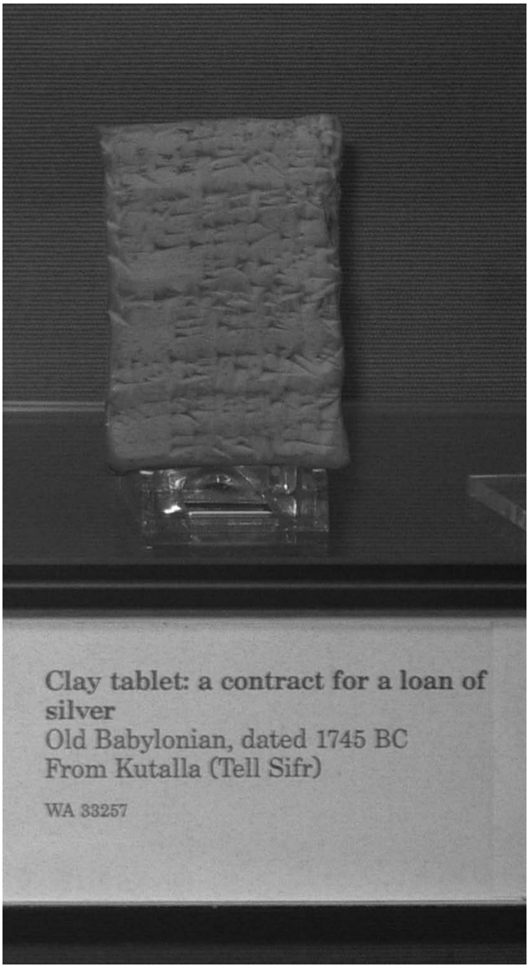

Figure 2.3 Sumerian Cuneiform Tablet, A 'River Loan' of Silver, British Museum Collection

conduct of trade. There were also laws dealing with slaveship, servitude, and feudal obligations. Steele (1947) estimated there were only a little over a hundred laws in the complete Lipit-Ishtar code, compared to over 250 laws in the Code of Hammurabi. Steele (1947, p.162) concludes: "In general, there appears to have been considerable revision of the individual laws and probably even some rearrangement of the laws within the larger groups during the interval between Lipit-Ishtar and Hammurabi. A majority of the extant Sumerian laws, however, find either close parallels or at least analogues in the Babylonian code." The increase in the number of laws likely reflects the increased sophistication of commercial activity by Hammurabi's time.

Unfortunately for our study, sections of the Code of Hammurabi that almost certainly relate to commercial activities and equity capital in particular have been obliterated. However, combining archaeological evidence from 'loan' documents with the laws that have survived gives us a somewhat clear picture of commercial activities. For example, Laws 45 and 46 identify the difference between debt (rental lease) and equity capital transactions in agricultural production:

> 45. If a man rent his field for tillage for a fixed rental, and receive the rent of his field, but bad weather come and destroy the harvest, the injury falls upon the tiller of the soil.
>
> 46. If he do not receive a fixed rental for his field, but lets it on half or third shares of the harvest, the grain on the field shall be divided proportionately between the tiller and the owner.

It appears that landowners were able to take a debt or equity position in the production of grain for the upcoming harvest. However, the situation may have been considerably more complicated. Significantly, Law 46 does establish there were legally defined half or third shares associated with dividing the returns to such agrarian ventures between the source of the equity capital and the laborer, providing some insight into the structure and scope of transactions in which rudimentary pricing mechanisms might have been used. In this vein, it becomes essential to make a distinction between commercial activity within a given state and trade between different states.

Given the agrarian character of economic life in ancient times, many laws deal with agricultural situations. Following two such laws:

> Law 64. If any one hand over his garden to a gardener to work, the gardener shall pay to its owner two-thirds of the produce of the garden, for so long as he has it in possession, and the other third shall he keep.
>
> Law 65. If the gardener do not work in the garden and the product fall off, the gardener shall pay in proportion to other neighboring gardens.

there is then the unfortunate gap in the Hammurabi law code created by obliterated sections of the stele. The code restarts with the following, dealing with trade to other areas:[5]

> 100. . . . interest for the money, as much as he has received, he shall give a note therefor, and on the day, when they settle, pay to the merchant.
>
> 101. If there are no mercantile arrangements in the place whither he went, he shall leave the entire amount of money which he received with the broker to give to the merchant.
>
> 102. If a merchant entrust money to an agent (broker) for some investment, and the broker suffer a loss in the place to which he goes, he shall make good the capital to the merchant.
>
> 103. If, while on the journey, an enemy take away from him anything that he had, the broker shall swear by God and be free of obligation.

> 104. If a merchant give an agent corn, wool, oil, or any other goods to transport, the agent shall give a receipt for the amount, and compensate the merchant therefor. Then he shall obtain a receipt from the merchant for the money that he gives the merchant.

Modern analysis of such laws has revealed the difficulties of translation, context and interpretation. In particular, commercial practice in ancient Sumer up to the Ur III period indicates a high degree of state control, in which 'merchants' (*damgar* in Sumerian) were likely functionaries of the city-temple under the direction of a palace official. The contrast with Old Babylonia of the early second millennium is striking (Van de Mieroop 2002, p.69):

> It is remarkable how the bias of our documentation has shifted from the previous Ur III period. While the 21st century [BC] textual record derives almost exclusively from central institutions, the temples and palaces of the early second millennium are poorly documented as compared to the private citizenry. The large majority of tablets from both licit and illicit excavations were found in the domestic quarter of the cities.

Due to the growth and size of Old Babylonia: "The central institutions 'privatized' many of their services . . . Private individuals acted as intermediaries between institutions and the citizenry, collecting dues, issuing payments and organizing the collection and distribution of resources". This context was favorable to profitable investment of private equity capital in commercial enterprise, leading, ultimately, to an equity capital valuation problem when, say, ventures were completed or where probate was involved. Such situations were managed by the extensive use of written contracts, including some partnership contracts.

B THE OLD ASSYRIAN EXTERNAL TRADING NETWORK

Merchants of Mesopotamia

The change in context across time and geography in Bronze Age Mesopotamia is reflected in the use of *tamkārum* for 'merchant' in Babylonian, which is consistent with the same usage in Old Assyria.[6] While there was a *gal damgar* (chief trader) in ancient Sumer, there were more layers in the process of extending credit to merchants marketing the largely perishable agricultural surplus generated by the Babylonian state. This change in reference reflects the rise of *kārum* (Veenhof 2010, p.42):

> In the Babylonia of the early second millennium BC a system emerged which allowed groups of merchants from various trading cities to settle in other cities, occasionally even—presumably on the basis of political agreements—in those of neighboring territorial states. These merchants were usually concentrated and often lived together with the local traders in a special area,

called *kārum*, "quay, harbor," where they conducted their business in the interest of themselves, their mother-city, and their host city.

Key elements in the commercial activity of 'merchants' were the extent of state control of agricultural production and the importance of trade beyond the borders of the state. In the first and second centuries of the second millennium BC, the borders of the Babylonian state did not extend to the Assyrian territory to the north: "during the first centuries of the second millennium BC . . . trade was the preferred, most efficient, and presumably also the cheapest way of obtaining the materials essential for its highly developed and urbanized culture" (p.41). In particular, the merchants of Assur in Old Assyria traded with Babylonians for wool, textiles, grains and slaves. These were exchanged for tin, copper, silver and other goods obtained through a network of Assyrian trading colonies, of which the important colony of Kanesh in Anatolia has proved a rich source of cuneiform documents.[7]

It is evident from the law codes and numerous cuneiform tablets that there were 'merchants' who invested equity capital in both agrarian production and commercial trade. It is also evident that there was considerable diversity in the specific role of 'merchants' across the various civilizations of Bronze Age Mesopotamia. While Law 46 of the Hammurabi code and other laws indicate that there were conventions surrounding distribution of returns to equity shares in Old Babylonia, rules for equity valuation appear to have considerable flexibility, in which written contracts played a crucial role. While it is the "loan document [that] is probably the most commonly preserved record from ancient Mesopotamia, and the Old Babylonian period (c. 2000 to 1595 BC) is especially rich in such records" (Van de Mieroop 2002, p.163), interpretation of such documents is complicated by the use of the same general contract format for different commercial situations. Without sufficient context, such as why the document was preserved, the tendency is to interpret a given tablet as a 'loan'. It was not until Neo-Babylonian times (626–539 BC) that contracts typically contained accurate dating and identification of the individuals involved, using a three-part name (person's name, father's name, family name), substantively increasing our ability to put documents in context.

While it is difficult to isolate many generalities regarding commercial activity across the millennia of the diverse civilizations of ancient Mesopotamia, it is still essential to distinguish between production within a given area of political control and trade between different areas. It is generally accepted among ancient historians that domestic agricultural production involved the use of debt-bondage contracting similar to the *nexum* contracts of the early Roman Republic, abolished by the *Lex Poetelia Papiria* in 326 BC (e.g., Finley 1981; Skaist 1994; Steinkeller 2002). Such 'loans', which comprise the bulk of surviving tablets from Old Babylonia, were made 'in kind' by wealthy landowners advancing goods to sharecroppers and subsistence farmers. The objective of the 'loan' was typically not to make interest but to obtain the labor and, possibly, the land of the debtor. In the event of default, debtors would make payment by providing bonded labor (either their own or a family member's) for a period of time. Money loans of silver for commercial purposes, such as payment for goods obtained in external trade, were not common and typically earned a customary 20%.

The extent of control by the political, religious and military structures of the palace-temple organization over the societal wealth used in agricultural production was fundamental in determining the role played by 'merchants' in commercial ventures. For example, in Ur III the state controlled the bulk of agricultural production—that is, "during Ur III times, all arable land belonged to the state, meaning, consequently, that there was no outright ownership of such holdings . . . all arable land available in Ur III took the form of either 'temple estates' or subsistence land, the latter category also including the holdings of the royal family" (Steinkeller 2002, p.115). This situation is substantively different from that in Old Babylonia, where the extent of state ownership and direct control was significantly less and 'loans' were extended to merchants to market the agricultural surplus both domestically and externally. The situation was even more different in Assyria, especially in the Old Assyrian period, in which Assur served

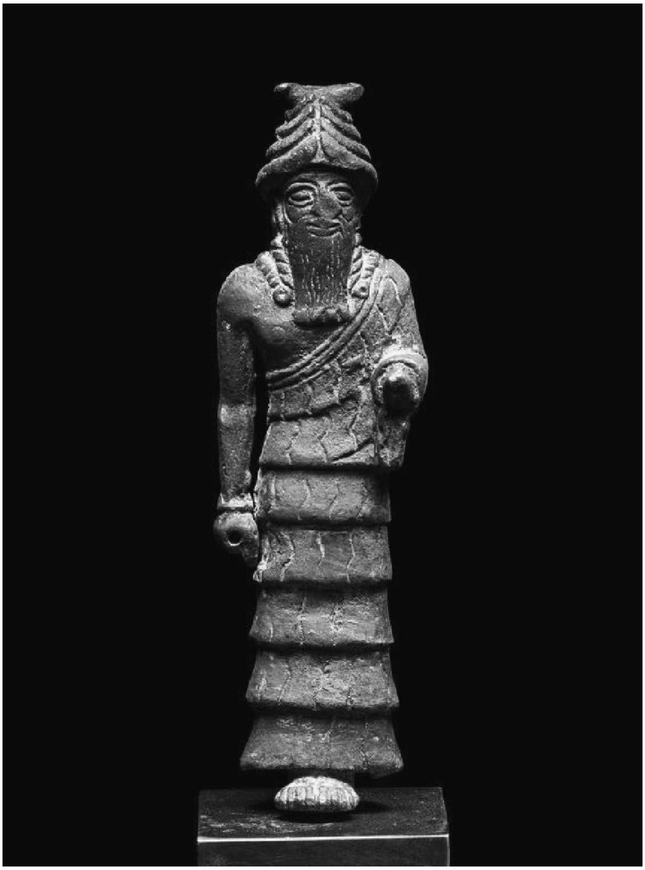

Figure 2.4 Bronze Age Statue of Nannar, Sumerian Moon God

as the hub for a network of trading colonies (e.g. Larsen 1976, 1977; Veenhof 1997, 2010). In this case, state control was muted, and merchants played an important role in state activities.[8]

The Bronze Age was characterized by the spread and adoption of metallurgy required to produce bronze, a combination of mostly copper and some tin[9], which is significantly stronger than unalloyed copper. Bronze was used to produce weapons, agricultural implements, luxury goods such as statutes and the like. Though copper is relatively plentiful in the earth's crust, the acquisition of copper that had already been smelted, as well as tin and especially silver, was an important feature of the external trade of Babylonia and other states of the alluvial plain of southern Mesopotamia. In this trade, silver played an essential role as a medium of exchange and unit of account. Wool, woolen textiles and grains were exchanged for silver that was used to acquire copper, tin, lapis lazuli and other high-value items. More importantly, delivery of silver was the required method of settling the 'loan' that financed the initial allocation of goods involved in the external trade.

Ancient historians do not know with certainty where the tin and silver that Bronze Age Mesopotamians traded for came from. Of these two, tin has remained the more elusive (e.g., Dayton 1971; Stech and Pigott 1986; Muhly 1973; Amzallag 2009). From the perspective of equity capital organization, mining ventures are particularly important due to the possible need to maintain a permanent stock of physical assets. In cases where the mineral source is on the surface—for example, in alluvial deposits—it is possible for ore to be obtained without significant capital resources. However, where the ore body extends below the surface and some type of shaft mining is required, a 'permanent' equity capital investment could be needed (e.g., Richardson 1976). In addition, the impetus for a 'permanent' equity capital stock can arise in the smelting of ore in furnaces (not crucibles) and the establishment and maintenance of the external trading network to distribute processed ore to population centers. In turn, a long-lived physical capital stock is fundamental to the transition of equity capital organization beyond individual commercial ventures where there is distribution of profits and return of equity capital at the end of each journey or harvest cycle.[10]

The Trading Network of Assur

In the absence of detailed information on the organization of ventures for mining tin and silver, attention turns to the external trading networks needed to acquire high-value goods. Due to impressive efforts by ancient historians and archaeologists such as Larsen (1976, 1977), Veenhof (1997, 2010), Dercksen (1996), and Byrne (2003), we have gained substantial insight into the workings of the remarkably "modern" network of external trading colonies of Old Assyria in the first two centuries of the second millennium BC. Unlike in Babylonia and Sumer farther south on the alluvial plain, the more abundant rainfall and ecology of Old Assyria meant significantly less reliance on the 'bureaucratic, hydraulic oligarchies' of their southern neighbors. As a consequence, there was substantially less state control over both agricultural production and geography. Treaties, rather than military might, were commonly used to support trade between cities. The economic and trading center of Old Assyria was the city of Assur. Veenhof (2010) describes the Assur of this period:

> Assur was not an "imperial" city, with a strong military and a ruling elite supported and supplied by a large productive territory and with income from subjected fringe areas. Its commercial presence in Anatolia and the trade routes through northern Mesopotamia had not been enforced, and could not be backed, by military power, but were based on mutual commercial interests, sealed by treaties.

Unfortunately, the archaeological evidence on the trading networks of Assur comes primarily from Anatolia, where 23 colonies (*kārum)* and 15 trading stations (*wabartum*) have been identified. That there was trading by merchants from Assur with other important trading centers in Mesopotamia such as Mari, Susa and locations in Elam seems necessary, but archaeological evidence is scant.[11]

Absent commercial ventures that require a permanent capital stock, equity capital is invested in single ventures associated with the harvest cycle or the transport and marketing of goods, either domestically or externally. In such cases, equity capital organization is relatively simple. Equity capital shares are generally non-transferable (i.e., illiquid), and valuation is determined at the end of the venture by the return of capital and distribution of shares in the profit from the venture, as determined in the initial contract. However, in Old Babylonia, there was little need for private equity capital to market goods domestically and, in most cases, externally. The state would 'loan' the goods to the merchant,

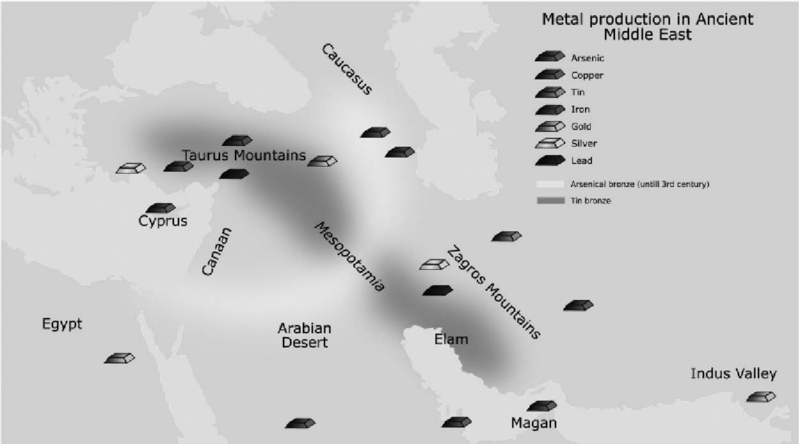

Figure 2.5 A map showing the major sites of metal production in the Ancient Near East, including Egypt, Asia Minor, Mesopotamia, Persia, and the Indus Valley Civilization

Source: van der Crabben (2012) from http://www.ancient.eu/image/350/

requiring the payment of silver at a later date after the sale of the goods. Domestically, merchants would often 'loan' these goods to sharecroppers and subsistence farmers. 'Profit' from such ventures would appear as loan 'interest' and would not have a direct equity capital component. As is common in agrarian economies, considerable capital investment was directed to land ownership. Given the often complicated social issues surrounding land ownership, in cases where equity capital was employed, valuation was driven by the annual profit from the agricultural production cycle.

The situation changed dramatically where external trading involved a permanent network of colonies, as in ancient Assur.[12] Building on contributions by Larsen and others surrounding the substantial archaeological finds at Kanesh, the most important Old Assyrian *kārum* in Anatolia, Veenhof (2010, p.55) identified an important equity capital element:

> The main and probably most successful traders in Kanesh were usually involved in many transactions, at times also together with partners, and many in addition carried out commission sales and purchases for relatives, friends, and women in Assur. Most of these traders had become more independent by having become managers of a "joint-stock fund" (called *naruqqum*, "money bag"), usually set up in Assur. This phenomenon appeared for the first time around 1900 BC and seems to have been an Old Assyrian invention that went beyond individual partnerships and cooperation in a joint caravan. The arrangement, rather similar to that of the early medieval *compagnia*, meant enlisting a number (usually about a dozen) of investors (*ummiānum*, "financiers"), who supplied capital rated in gold, usually in all ca. 30 kilos, ideally consisting of shares of 1 or 2 kilos of gold each. It was entrusted to a trader (the *tractator*), usually for ca. ten years, for the generally formulated purpose of "carrying out trade." The contract contained stipulations on a final settlement of accounts, on paying dividends, on the division of the expected profit, and on fines for premature withdrawal of capital (meant to secure the duration of the business). Investors or shareholders mostly lived in Assur, but successful traders in Anatolia too invested in funds managed by others, perhaps also as a way of sharing commercial risks. In such cases a contract would have to be drawn up in Anatolia that obliged the *tractator* "to book in Assur *x* gold in his joint stock fund in the investor's name." Among the investors we find members of the *tractator*'s family, but also business relations and others, probably a kind of "merchant-bankers," and other rich citizens, who aimed at fairly safe, long-term investments.

Larsen (1977, p.123) made a significant connection between practices of the Old Assyrian traders and those of Jewish merchants documented in the Geniza archive, an important documentary record that commences in the 9th century AD and has been an important primary source on the commercial activities of a network of Jewish traders in the Middle Ages:

> For the Geniza material Goitein has made the observation that "at least one-half of the international trade was based on informal business cooperation

> which could last for a lifetime and even for several generations" and it is therefore not at all surprising that in the similar Old Assyrian system we have not one example of a real partnership contract.

While detailed contracts laying out precise terms and conditions of enduring business 'partnerships' have not survived, Larsen was able to report details of a *naruqqu* contract (p.124):

> Landsberger has published the one known *naruqqu*-contract, a tablet which is now in the museum in Kayseri. It starts with a list of personal names, each connected with a sum of gold, i.e., the names of the investors and the size of their investments. At the beginning two lines are missing, and it can be seen from the rest of the text that the two names must have been connected with a total investment of 6 minas of gold; five men are noted for 2 minas each, four for 1½ mina, two for 1 mina, and one person is booked for 2½ minas. At the end of this list we find the name of the man who was entrusted with this *naruqqum*, a certain Amur-Igtar, and he is credited with an investment of no less than four minas of gold. The main body of the text continues as follows:
>
>> In all: 30 minas of gold, the *naruqqum* of Amur-Igtar. Reckoned from the eponymy Susaja he will conduct trade for twelve years. Of the profit he will enjoy (lit. "eat") one-third. He will be responsible (lit. "stand") for one-third. He who receives his money back before the completion of his term must take the silver at the exchange-rate 4:1 for gold and silver. He will not receive any of the profit.

After this follows a list of seven witnesses, the first one being the *laputtd'um*-official.

Based on additional archaeological evidence, Veenhof (2010) reported that

> The few contracts we have of the setting up of a joint-stock fund do mention the names of the investors, some of whom are family and business relations of the trader, but others are unknown and some are registered anonymously as *tamkārum,* probably again in order to enable the transfer of shares, e.g. in cases of disputed ownership or in connection with the division of an inheritance.

The fascinating evidence that there may have been trading in *naruqqum* shares, unfortunately, does not also provide detail about the methods used to price the equity capital or the goods involved in such transactions.[13]

An important theme in the early history of equity capital concerns the role of kinship and family relationships. The impersonal character of modern equity markets results in a traded 'price' that is mutually agreeable to both buyer and seller of the equity capital claim. The same is not necessarily the case where kinship and family bonds are involved. Pricing and trading of specific shares could reflect a host of additional factors beyond the 'fair value' of the actual shares. This difficulty is