

The Heritage of International Finance

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Abstract

This paper examines the heritage of international academic finance. Definitions of international empirical and theoretical research are proposed, and an economic characterization of a nation is offered. In addition, an extensive taxonomy of the finance discipline is suggested, and notable domestic and international research is referenced in each of its proposed subfields. The taxonomy illustrates the dramatic neglect of international research in academic finance, and suggests possible areas for future research. The taxonomy also shows that even when international research in a particular subfield emerges, it is usually a simple extension of a domestic theory that has been in the subfield for many years. This apparent neglect may be explained by the lack of a good equilibrium model of international asset pricing, problems modelling partial market segmentation and culture, lack of good international treatments in finance textbooks, and previously unavailable international data. In sum, this review suggests that there exists first-mover advantages in international finance research and teaching, and implies that Canadian finance academics should seize them while these advantages still exist.

Résumé

Le présent document examine les fruits de la recherche universitaire à l'échelle internationale dans le domaine de la finance. Il propose des définitions de la recherche empirique et théorique internationale ainsi qu'une caractérisation économique d'un pays donné. De plus, il suggère une taxonomie complète de la discipline de la finance et, pour chacun des sous-domaines proposés, il mentionne des travaux de recherche notables menés à l'échelle nationale et internationale. La taxonomie illustre les lacunes graves de la recherche internationale dans le domaine de la finance au niveau universitaire et suggère des secteurs qui pourraient faire l'objet de futures recherches. La taxonomie montre également que, même lorsque de la recherche internationale est menée dans un sous-domaine particulier, il ne s'agit habituellement que du prolongement d'une théorie nationale observée dans le sous-domaine en question depuis de nombreuses années. Ces lacunes apparentes pourraient s'expliquer par l'absence d'un bon modèle d'équilibre en matière de fixation des prix des actifs financiers, des problèmes sur le plan de la modélisation de la culture et de la segmentation partielle des marchés, l'absence d'un bon traitement international de la discipline dans les manuels de finance et l'impossibilité temporaire d'obtenir des données internationales. En somme, cet examen suggère que l'enseignement de la finance et la recherche en la matière à l'échelle internationale peuvent produire des avantages de premier plan et suppose que les universitaires canadiens spécialisés dans la finance devraient profiter de ces avantages pendant qu'ils existent.

The borders of countries are presently open wider than at any other time in history. As more and more nations open their doors to goods and capital flows, the need for and potential contribution of international business and economic research increases. However, international business and economic research have grown

and developed far less rapidly than goods and capital flows. This phenomenon is especially evident in academic finance. While the level of international capital flows has increased rapidly since the end of World War II, finance has only recently begun to describe and model these flows.

This paper is an attempt to review the heritage of international finance. It explores the origins and development of the field of academic finance. The paper also suggests a taxonomy of the empirical finance research, based on the manner in which various types of data are used, and qualifies the types of empirical research that may be considered international. Furthermore, the def-

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inition of international theory and an economic nation are discussed. The paper also proposes a taxonomy for modern finance research, and identifies the notable domestic and international contributions to each of the research streams. The paper should prove useful for any business school professor, whether finance or not, exploring the domestic or international finance literature for pedagogical purposes, or for those simply looking for research ideas.

It should be noted, however, that the scope of the paper is limited to academic business school finance. Thus, much of the international economics literature is not examined, including international trade theory, exchange rate theory, and international macroeconomics. The paper only briefly touches on the practitioner literature. Furthermore, while an extensive reference section is incorporated, it is not intended to be a literature review. The paper does, nevertheless, examine the heritage of international capital market theory and international corporate finance. It is intended to provide an overview or big-picture analysis of the field of finance, with specific attention given to its development in terms of international research.

The paper is organized as follows. The next section discusses the question: What is international finance? Definitions for international empirical research and international theory are proposed. An economic definition of a nation is also discussed. The second section briefly examines the origins of academic finance and suggests a framework for categorizing its main streams of research. The third section proposes a subfields categorization of the capital markets stream of research. The notable domestic and international contributions in each of the subfields are surveyed. The fourth section is similar to the previous one, except that it proposes subfield categories for the corporate finance research stream. It also surveys the notable domestic and international contributions to these subfields. These sections highlight possible areas for future international research in finance. The fifth section discusses many of the reasons for the tendency of international finance research to lag domestic research, sometimes by more than a decade. The final section summarizes the paper and discusses its implications for Canadian finance academics.

What is International Finance?

What constitutes international research in finance? This is a difficult question to answer from an empirical and theoretical point of view. First, there are many disparate types of empirical research, many of which involve data from more than one country. However, many multi-country empirical studies are not international in the

true sense of the word. Second, finance theories often have trouble differentiating between nations, due to their homogeneous treatment of economic agents, and the assumption of perfect and complete capital markets. Nevertheless, this section will attempt to identify the defining features of international finance research.

Reviewing the empirical research in finance, one can distinguish between five types of studies. They are: (a) U.S. data test of a single-country theory; (b) non-U.S. data test of a single-country theory; (c) N-sample, N-country data test of a single-country theory; (d) pooled cross-sectional, N-country data test of a single-country theory; (e) N-country data test of a multicountry theory. The first three types of studies are classified herein as domestic research because they do not explicitly acknowledge differences between nations, whereas the last two types of research make explicit comparisons between nations and thus are classified as international research.

It should be noted that a single-country theory in finance tends not to specifically focus on a single nation. Generally, finance theories are thought to be universal in the sense that all economic agents, individuals and firms, are believed to behave in a homogeneous manner—if they are rational. Economic agents either maximize utility, profits, or some other objective function, despite their national citizenship, culture, or tastes. Thus, the term single-country theory may be somewhat of a misnomer, but on the other hand, as will be discussed later, it may be more appropriate than the term global theory.

The first type of empirical study, the U.S. data test of a single-country theory, tends to be the most common and is usually the first test for any new theory. Since most finance journals are published in the U.S., most theories must pass the U.S. data test first. Another factor reinforcing the popularity of this type of study is the widespread availability of large quantities of good quality U.S. data. In finance, extended time series of high quality data are generally essential for publication.

The second type of study, the non-U.S. data test of a single-country theory, has also become common and is usually the second type of empirical verification a new theory must pass. Once a theory has been tested numerous times using U.S. data, out-of-sample verification is sought. These studies have been valuable for non-U.S. based financial researchers, since they allow these researchers to gain a competitive advantage over their U.S. counterparts in that they have better access to non-U.S. data. In this manner, some Canadian financial researchers have made careers by providing out-of-sample Canadian data evidence for U.S. data-substantiated, single-country theories. This competitive advantage which non-U.S. based researchers possess has, however, been diminishing over the past several years due to the creation of good quality, consistently collected, and widely available mul-

ticountry data sets. This is especially true in capital market research where data sets, such as the Morgan Stanley Capital International Perspectives database, are now widely utilized. Non-U.S. based researchers still possess a competitive advantage in corporate finance data, but one suspects that this will begin to diminish as high quality multicountry corporate finance data sets are created.

The third type of empirical research design is the N-sample, N-country data test of a single-country theory. This type of study has become popular in the last decade and often lends the best support to a single-country theory. It simply tests a theory in each of N different countries using the data from each respective country independently. Essentially, this type of study represents an attempt to obtain N-1, out-of-sample data tests of a previous U.S. data validated model within the same study. No aggregation or comparison of the N samples occur in this methodology. On the other hand, the fourth type of empirical study, the pooled cross-sectional, N-country data test of a single-country theory, does look at data from N countries in aggregate and in comparison. This type of multicountry data test explicitly uses differences between the N countries' institutions, in order to test a single-country theory that may otherwise be untestable using a single country's data. Since this type of research explicitly recognizes differences between countries, and in fact often uses these differences to its advantage, it will be the first type of research classified as international. The previous research methodologies do not recognize or acknowledge the differences between countries, and thus are classified as domestic.

The majority of finance theories are not explicitly single-country theories, because they are implicitly intended to be universal theories. Nevertheless, they do not explicitly acknowledge in their assumptions or theoretical developments the existence of differences between nations. Conversely, international theories, as they are defined here, explicitly acknowledge the potential differences between nations in their assumptions and theoretical developments. Therefore, the fifth type of empirical research, the N-country data test of a multicountry theory, is implicitly international. Since the theory itself specifically acknowledges differences between countries, it must be tested using multicountry data. This is, of course, the purest form of international finance research in that both the theory and data are used with the explicit recognition of differences between nations. It should be noted that this type of empirical research also includes studies which implicitly cross countries because they involve international prices such as foreign exchange rates. By definition, a foreign exchange rate is an international concept, since it is required only when two countries are using two different currencies. Thus, studies which include foreign exchange rate forecasting, foreign exchange risk manage-

ment, currency options, futures and swaps pricing, and Euromarkets are also considered international.

The evolution and empirical verification of the well-known January effect in the finance anomalies literature may serve as a good example of the various types of empirical finance literature. The January effect, whereby stocks tend to underperform in late December and outperform in early January, relative to the rest of the year, was first discovered by Wachtel (1942). He investigated the effect using the Dow Jones Industrial Average and proposed the tax-loss selling hypothesis to explain the effect. Wachtel's study would, therefore, be classified as a U.S. data test of a single-country theory, since he used only U.S. data, and proposed a theory that does not explicitly depend upon more than one nation. The January effect was subsequently reexamined in numerous other U.S. data studies, including the notable articles by Keim (1983) and Rozeff and Kinney (1976). After the January effect had become well accepted as a phenomenon that occurred in U.S. markets, numerous attempts were made to verify its existence out-of-sample in individual foreign countries. All these studies are classified as non-U.S. data tests of a single-country theory. Notable articles that fall into this category include R.R. Officer's (1975) examination of the Australian returns around Australia's June 30 tax year-end, Berges, McConnell, and Schlarbaum's (1984) examination of Canadian returns before and after the imposition of the Canadian capital gains tax, and Jaffe and Westerfield's (1985) examination of Japanese stock return seasonality.

Gultekin and Gultekin (1983) were the first to verify the January effect in numerous foreign countries within the same paper. Their article is a little more difficult to classify, but it falls mainly into the third type of empirical literature, the N-sample, N-country data test of a single-country theory. Their paper simply verifies that the January effect exists independently within most of the 18 countries they examine. There is no explicit cross-sectional data pooling or cross-country testing of the international data, and thus the paper is not classified as a pooled cross-sectional, N-country data test of a single-country theory. A recent article by Griffiths and White (1993), however, can be classified as a pooled cross-sectional N-country data test of a single-country theory. Griffiths and White use the fact that capital losses in Canada are assumed realized on the transaction settlement date, five days after the actual transaction date, whereas capital losses in the U.S. are assumed realized on the actual transaction date. Thus, there is a five day difference between the tax year-end for tax-loss selling for Canadian and U.S. investors, with the implicit Canadian year-end five days before the last day of December. Griffiths and White use both Canadian and U.S. year-end dummy variables in their Canadian and U.S. data

regressions to determine which dummy variable is significant in which country. By doing this, among several other tests, they were able to support the tax-loss selling hypothesis that would not have been available without testing the U.S. data against the Canadian data. By explicitly pooling and testing two countries' data, their study is classified as a pooled cross-sectional N-country data test of a single-country theory.

The January effect and its associated tax-loss selling hypothesis example breaks at this point, because it is a single-country theory. Only when the tax-loss selling hypothesis evolves to include international investors with different home-country tax year-ends, for example, will this research be able to be classified as an N-country data test of a multicountry theory. Only multicountry data tests of a truly international theory can be classified as this, the fifth type of empirical research. Although unrelated to the January effect, a good example of this type of empirical research is Solnik's (1974c) test of the International CAPM. He uses, and in fact requires, five countries' stock datasets to test the International CAPM using the Black, Jensen, and Scholes (1972) methodology to determine whether there exists international pricing of risk.

The International CAPM, or any other international theory, must define economic nationhood. However, most international theoretical developments exploit the standard finance assumptions of market efficiency, free capital and goods flows, frictionless capital markets, and economic agents operating within the mean-variance framework. Consequently, international markets are assumed integrated from the onset. This assumption of integration is probably untrue, given that nations possess different cultures, languages, sovereignty, taxes, and transaction costs. Economic theory does not easily deal with these market imperfections. However, other economic definitions of statehood are available. For instance, Richardian theory differentiates nations based on their consumption preferences and technological endowments. The Heckscher-Ohlin theory of trade differentiates nations based on factors of production endowments. International monetary theory differentiates nations by the currencies each uses as a unit of account. Public finance economists differentiate nations by governments and their respective fiscal policies.

Nevertheless, as Adler and Dumas (1983) make explicit, the field of finance has for the most part chosen to differentiate nations based on purchasing power units. That is, a nation is defined as a group of economic agents who use the same purchasing power unit—or more directly, as a group of economic agents who use the same price index to deflate their expected returns. In other words, nations are differentiated from each other by deviations in purchasing power parity (PPP). If PPP held

for the whole world, then every investor in every country, using every currency, would evaluate expected real returns in the same way. If every investor in the world evaluated expected real returns in the same manner, then all their decisions would be identical despite nationhood, and there would be no need for an international theory, as defined above.

The key to this understanding is that economic agents care about real returns, while most returns are denominated in nominal terms. Thus, economic agents must deflate their expected nominal returns in order to make informed decisions. When confronted with a foreign return, investors translate it into their domestic currency via the market determined exchange rate, and then they deflate it by their domestic price index. Only if their price index differs from the exchange rate multiplied by the foreign price index will economic decisions between the domestic and foreign countries differ—that is, only when there are PPP deviations.

Adler and Dumas (1983) note that PPP deviations may be the result of international differences in consumption tastes or international differences in the prices of various commodities that economic agents face. First, modelling differences in consumption tastes is somewhat appealing, in that different cultures do, in general, demand different consumption bundles. If different nations value different consumption bundles, then they deflate their asset returns with different indices. The existence of non-traded goods also helps to ensure that different nations use different price indices to deflate. It is the differences in these indices that can cause differences in expected real returns across nations. Second, in the presence of homogeneous consumption preferences, and thus price indices, PPP deviations may be the result of deviations in commodity price parity (CPP), also known as the law of one price. This explanation for PPP deviations is less appealing, as it implies that the international price system may not be functioning correctly and thus violates the perfect markets assumption.

While the purpose of this paper is not to review the voluminous foreign exchange literature, it should be noted that the empirical evidence, reviewed by Balassa (1964) and L.H. Officer (1976), shows that PPP deviations do exist, and are large and long-lasting. The PPP deviations are mainly attributed to differences in consumption preferences between nations. However, Isard (1977) and Richardson (1978) show that CPP deviations are significant as well.

A Framework for Analysis

This section reviews the origins of academic finance and discusses the taxonomy of finance research presented in the next two sections of the paper. A review of the

field of finance as a whole is necessary to understand the development and heritage of international finance. For the purpose of this paper, finance is defined in a manner analogous to Weston (1981), who defined academic finance as the study of how individuals, firms, and societies make decisions to allocate scarce resources through a price system based on the valuation of risky assets.

Academic finance is a relatively new field of study, somewhere between 38 and 56 years old. To define its beginnings, two criteria can be used. First, the birth of finance may be attributed to the creation of its first academic association and journal. As Sweetser and Petry (1981) describe, the first academic association devoted solely to finance, the American Finance Association (AFA), was created in 1940. The AFA was created as an offshoot of the American Economic Association. The AFA held two meetings and published two issues of its new journal, *American Finance*, before World War II broke out and its work had to be postponed. Upon the resumption of AFA activities in 1946, a new journal was created, called the *Journal of Finance*. This has endured as arguably the field's most influential journal. Second, the origins of the discipline may also be attributed to the publication of the two seminal and defining articles that have become the theoretical foundations of modern finance. The first of these articles is Markowitz's (1952) "Portfolio Selection" which defined mathematically the notion of risk in asset returns. The second is Modigliani and Miller's (1958) "The Cost of Capital, Corporation Finance and the Theory of Investment," which provided the notion of the cost of capital and a theoretical methodology for valuing firms. All three authors subsequently won the Nobel Prize in economics. Their articles are widely believed to represent the foundation of the two broad streams of financial research, called capital markets and corporate finance.

Despite the fact that academic finance, as defined above, did not come into being until at least the mid-1940s, finance was taught at business schools before this period. Weston (1966) describes this pre-WW II period of finance education as descriptive and episodic. Norgaard's (1981) review of pre-WW II textbooks also shows this to be the case. The textbooks tended to focus on major corporate events such as mergers, acquisitions, selling securities, reorganization, and bankruptcy. They also tended to be solely descriptive in nature, unlike the textbooks of the modern finance discipline. These books were aimed at, and in many cases written by, lawyers and practitioners of corporate finance, and thus explain the lines drawn from law and practitioners leading into the finance discipline in Figure 1.

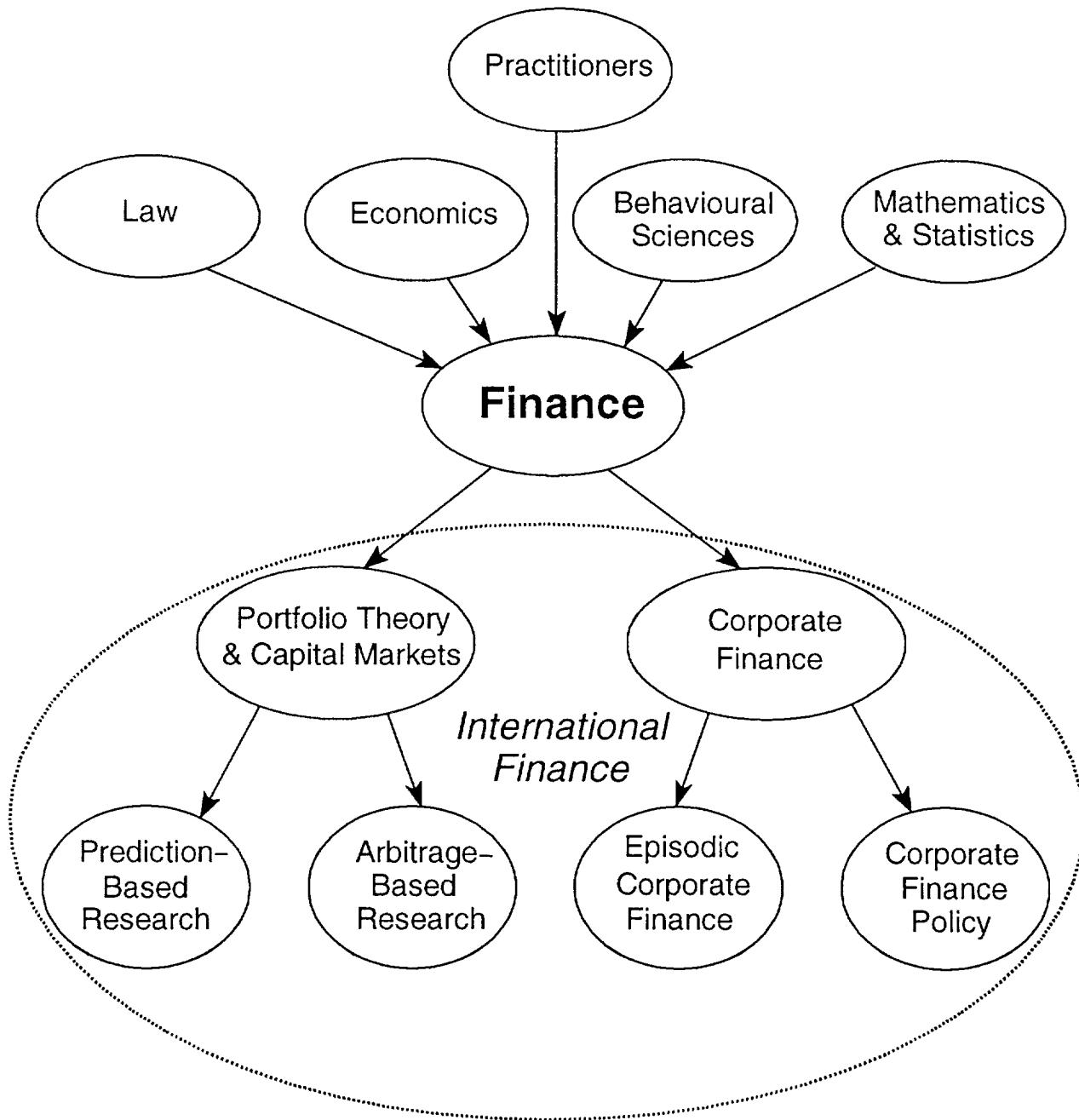
Mathematics and statistics initially fed into finance through economics, which had started to incorporate

these disciplines prior to finance separating from economics. Cournot (1838) can be credited with the first attempt to integrate mathematics and economics with his book *The Mathematical Theory of Wealth*, and both Edgeworth, as the first editor of *The Economic Journal*, and Pareto, with his two political economics books in the late 1800s, can be credited with integrating statistics and economics. Nevertheless, in 1941, Irving Fisher was still professing that economics needed even more mathematics and statistics to increase its rigor. Since then, finance has adopted a significant amount of mathematics and statistics from its intellectual father, economics. In contrast, Figure 1 defines a behavioural sciences input. While the link may be considered weak by many, given the mathematical nature of the discipline, finance does use the research of the behavioural scientists as a check for its propositions concerning the decision-making process of economic agents in the presence of uncertainty.

Figure 1 shows that finance can be categorized as two broad streams of research, capital markets and corporate finance, as initiated by the articles by Markowitz (1952) and Modigliani and Miller (1958), respectively. The figure also shows that capital markets research can be further divided into prediction-based research and arbitrage-based research. Prediction-based research is characterized by inexact theoretical relationships, and thus research in this category is characterized by error terms in its relationships. While prediction per se is not necessarily the goal of every piece of research that is placed in this category, the error terms are often the result of conditioning expectations on incomplete information sets. Essentially, as defined here, prediction-based research encompasses all models that are not derived using a strict arbitrage condition which characterizes the arbitrage-based research. That is, arbitrage-based research uses some form of arbitrage condition that results in exact equalities holding between relationships. Therefore, prediction-based research is differentiated from arbitrage-based research by the presence of a theoretical error term. It is important to note that this differentiation occurs at the theoretical level, not the empirical level. In practice, even exact theoretical arbitrage relationships will possess error terms in their econometric equations.

Furthermore, Figure 1 shows that corporate finance can be subdivided into two major streams: episodic corporate finance and corporate finance policy. Episodic corporate finance research refers to the research involving corporate events that do not necessarily occur at fixed time intervals. They are often infrequent, but important corporate events, such as mergers, corporate financing initiatives, and capital budgeting. As Weston (1966) notes, pre-WW II finance education focussed on these infrequent events. The corporate finance policy stream of corporate finance research, on the other hand, is charac-

Figure 1.
The Field of Finance.



terized by long-term decisions or phenomena. The long-lasting decisions and phenomena included in this research stream include capital structure and dividend policy. It should be understood, however, that it is much more difficult to identify subfields of research in corporate finance than it is in capital market theory, because it is con-

ceivable that every corporate finance decision could represent a subfield. This, of course, would make the task at hand unmanageable, and thus some degree of arbitrariness must be accepted. Since the subfields proposed are quite broad, they may not be mutually exclusive or exhaustive.



Capital Markets Research

The tables that follow in this and the next section of the paper suggest a finer taxonomy for each of the main finance research streams shown in Figure 1. The tables also list the notable domestic and international contributions to each of these finer subfields. It should be noted that the term domestic is used here in the same manner as it was defined in the section on international finance. That is, the notable domestic contributions are those theoretical and empirical pieces that do not explicitly differentiate between nations in their assumptions, theoretical developments, or empirics. Empirical articles that are considered domestic include U.S. data tests of a single-country theory, non-U.S. data tests of a single-country theory, and N-sample, N-country data tests of a single-country theory. In the column next to the notable domestic contributions in each table, are the international contributions to each of the subfields, if any exist. International theory must explicitly acknowledge in its theoretical assumptions and developments differences between nations. In addition, international empirical articles are considered international only if they are either a pooled cross-sectional, N-country data test of a single-country theory, or a N-country data test of a multicountry theory.

Furthermore, it should be noted that the term notable contributions is used in the place of the term seminal contributions. This is because some of the papers, although being among the first to derive or test the major theory or theories in each subfield, may not be considered seminal by many finance academics. Nevertheless, for many of the articles in the domestic column of the tables, there would be no argument regarding their seminal importance. The articles in the international column of the tables are likely not considered seminal, or even notable, by many finance academics, for reasons discussed later in the paper. The international articles listed are nevertheless important and among the first international papers to enter a given subfield.

It should also be noted that the purpose of this paper is not to review all the papers listed in the tables. Nevertheless, the tables that follow are presented to serve several purposes. First, the tables suggest a taxonomy of the field of academic finance. This taxonomy may be considered somewhat arbitrary, as it reflects the author's view of the field of finance at the present time, but should be of value at least for initiating discussion regarding the structure of the field of finance. Second, the tables allow the reader to pursue any of the subfields from the notable publications in both the domestic and international domains. Third, the tables indicate which research, domestic or international, began the subfield and the number of years it took the other to catch up. Fourth, the tables allow the reader to observe the tem-

poral development of academic finance between subfields, since the order in which the various subfields are presented roughly delineates their temporal development in the finance research fields. Finally, they show where voids may still exist in the literature, and thus, where opportunities for future research exist.

Prediction-based Capital Market Research

Table 1 gives an indication of the importance and size of the research foundation in the prediction-based research stream. This type of research has been the most popular of the four subcategories during the last 25 years. First, the articles listed in the behaviour under uncertainty subfield laid the foundations for academic finance. The notable domestic articles—Arrow (1964), Friedman and Savage (1948), Pratt (1964), and Tobin (1958)—were mainly imported from microeconomics and macroeconomics. Their assumptions and hypotheses were never extended or tested at the international level. Next, the statistical behaviour of stock returns is important when modelling and testing finance theories. While stock return behaviour has been examined extensively at the domestic level by Fama (1965), and Fama and Roll (1968), few except Farber, Roll, and Solnik (1977) have examined their behaviour at an international level. Much more work needs to be done in this area. Without a good understanding of the statistical processes inherent in generating international stock returns, they may be modelled improperly and econometric tests may be invalid. The next subfield in Table 1 is diversification. Markowitz's (1952) seminal article examining diversification led to the development of the capital asset pricing model (CAPM). In this subfield, the international aspects have been well exploited. International diversification was the first area of international finance to be investigated, and the benefits of international diversification are now widely known. This research stems from articles by Grubel (1968) and Levy and Sarnat (1970).

The next two subfields have become extremely significant in finance. The Lintner (1965) and Sharpe (1964) CAPM is one the most significant developments in finance theory. Theoretical extensions and empirical tests of the CAPM were literally an industry in finance during the 1970s. On the international side, Solnik (1974a, 1974b, 1974c, 1977) was the major innovator. He was the first to extend and test the CAPM at the international level. Notable extensions to Solnik's international CAPM have come from Grauer, Litzenberger, and Stehle (1976) and Stulz (1981). Since these are general equilibrium models which define risk, their importance flows into almost all international finance subfields, as well as to practitioners. Unfortunately, empirical tests to date have not shown them to be promising models of international risk

Table 1
Prediction-based Capital Markets Research—Notable Domestic and International Contributions

Prediction-based capital market research subfields	Notable domestic contributions	International contributions
Behaviour under uncertainty	Friedman & Savage (1948, JPE), Tobin (1958, REStud), Arrow (1964, REStud), Pratt (1964, E)	l.t., l.e.
Statistical behaviour of stock returns	Taussig (1921, QJE), Cowles & Jones (1937, E), Fama (1965, JB), Fama & Roll (1968), Granger & Morgenstern (1963, Kyklos)	l.t., l.e.
Diversification	Markowitz (1952, JF), Lintner (1965, REStat), Samuelson (1967, JFQA)	Grubel (1968, AER), Levy & Sarnat (1970, AER), Lessard (1973, JF), McDonald (1973, JF)
CAPM type asset pricing models	Sharpe (1963, MSci), Sharpe (1964, JF), Lintner (1965, REStat), Merton (1973a, E), Breeden (1979, JFE)	Solnik (1974a, JET), Grauer, Litzenberger & Stehle (1976, JFE), Stulz (1981, JFE), Stulz (1984, JIBS)
Asset pricing tests	Black, Jensen, & Scholes (1972, Praeger), Fama & MacBeth (1973, JPE), Roll (1977, JFE), Hansen & Singleton (1982, E), Hansen (1982, E)	Solnik (1974b, JFQA), Solnik (1974c, JF), Solnik (1977, JF)
Market structure and segmentation	King (1966, JB), Blume (1971, JF), Rubinstein (1973, JFQA), Lintner (1977, Ballinger Publications)	Grubel & Fader (1971, JF), Agmon (1972, JF), Black (1974, JFE), Lessard (1974, JF), Solnik (1974a, JET), Solnik (1974c, JF), Subrahmanyam (1975, JFE), Stehle (1977, JF), Roll (1992, JF)
Anomalies	Wachtel (1942, JB), Banz (1981, JFE), Reinganum (1981, JFE), Keim (1983, JFE)	l.t., Griffiths & White (1993, JF)
Volatility and bounded rationality models	Shiller (1981, AER), LeRoy & Porter (1981, E), De Bondt & Thaler (1985, JF), Black (1986, JF)	l.t., l.e.
Market microstructure	Copeland & Galai (1983, JF), Wood, McInish, & Ord (1985, JF), Harris (1986, JFE)	l.t., l.e.
Stock market predictability	Burns (1930, Twentieth Century Fund), Cowles (1936, E), Keim & Stambaugh (1986, JFE), Campbell (1987), Fama & French (1988a, JFE), Fama & French (1988b, JPE)	Solnik (1983b, JF), Harvey (1991), Keppler (1991, JPM), Campbell & Hamao (1992, JF), Ferson & Harvey (1993, RFS)

Note. Research codes are: n.a. = not applicable; l.t. = little theoretical work to date; l.e. = little empirical work to date. Journal codes are: AER=*American Economic Review*; BJE= *Bell Journal of Economics*; E=*Econometrica*; FAJ=*Financial Analysts Journal*; FM=*Financial Management*; JB=*Journal of Business*; IER=*International Economic Review*; JBF=*Journal of Banking and Finance*; JBFA=*Journal of Banking Finance and Accounting*; JET=*Journal of Economic Theory*; JF=*Journal of Finance*; JFE=*Journal of Financial Economics*; JFQA=*Journal of Financial and Quantitative Analysis*; JIBS=*Journal of International Business Studies*; JIMF= *Journal of International Money and Finance*; JPE=*Journal of Political Economy*; JPM=*Journal of Portfolio Management*; MSci=*Management Science*; QJE=*Quarterly Journal of Economics*; REStat=*Review of Economics and Statistics*; REStud=*Review of Economic Studies*; RFS=*Review of Financial Studies*; Other=Publisher of Book.

and return. Thus, more research in this area at the international level is certainly warranted.

Market structure and segmentation research became important after the CAPM was devised. Domestic studies in market structure and segmentation were performed by Blume (1971), King (1966), Lintner (1977), and Rubinstein (1973). There have also been many attempts to determine whether international markets are integrated or segmented. Some of these studies include Black (1974), Grubel and Fader (1971), and Lessard (1974). Solnik (1974a, 1974c) and, more recently, Roll (1992) have examined the international market structure. It should be noted, however, that Adler and Dumas (1983) state that the market integration/segmentation issue is not resolvable, since it is always a joint test of integration/segmentation and a model of international asset pricing equilibrium.

The remaining subfields listed in Table 1 were the research industries of the 1980s and 1990s. First, anomalies research is concerned with detecting priced factors in stock returns that are not indicated in general equilibrium asset pricing models. This research stems from the work of Wachtel (1942), but it was not revitalized until Banz (1981) and Reinganum (1981). Much domestic research has been done in this area since Banz, but there have been few notable international contributions, with Griffiths and White's (1993) international examination of the January effect being a recent exception. Secondly, LeRoy and Porter (1981) and Shiller (1981) have shown that stock returns are much too volatile to be explained by the 'rational' dividend discount model. Bounded rationality models, such as those proposed by Black (1986) and DeBondt and Thaler (1985), have been created to explain this observation. There has been little international research in this area to date. This is also true of the recent research investigating market microstructure. While some interesting results have been illustrated by Copeland and Galai (1983) and Wood, McInish, and Ord (1985), there has been little international work in this area, possibly due to the lack of good international transaction level data.

Finally, stock market predictability was highly studied pre-academic finance, and has only been revitalized in the academic literature in the last eight years. Practitioners led the early drive to investigate stock market predictability, which resulted in many pieces of early research including Burns (1930) and Cowles (1936). However, until recently, academic finance did not investigate this phenomenon, due to its apparent violation of the market efficiency paradigm. Recent theoretical models have been derived to justify stock market predictability, and hence its empirical examination. This has led to a wealth of domestic stock market predictability research stemming from Campbell (1987), Chen, Roll, and Ross

(1986), Fama and French (1988a, 1988b), and Keim and Stambaugh (1986). There are now numerous articles appearing in the literature showing that international stock returns are also predictable. These articles include Campbell and Hamao (1992), Ferson and Harvey (1993), Harvey (1991), and Keppler (1991).

Arbitrage-based Capital Market Research

Arbitrage-based capital markets research is the newest subcategory of academic finance, and holds much promise. Some of its theories and paradigms have been transferred to macroeconomics with great success. As shown in Table 2, arbitrage-based capital market research can be divided into four subfields: market efficiency, option pricing, arbitrage pricing theory, and arbitrage pricing tests.

The first subfield, market efficiency, is much more than a theory in finance. It is a paradigm in the Kuhnian sense. It is an assumption in almost every theory in academic finance, whether it is made explicit or not. Market efficiency is, at its essence, an arbitrage argument. If economic agents are rational, then they will arbitrage away any unexploited profit opportunities that may exist in competitive markets. While the market efficiency literature is vast, Fama's (1970, 1991) two review articles are excellent summaries of the theory and its empirical tests. In addition, the popular event study methodology pioneered by Fama, Fisher, Jensen, and Roll (1969), and further examined by Brown and Warner (1985), is an offshoot of this field. Since market efficiency is considered a universal paradigm, there exists no international theory equivalent, and there exists very little international empirical work verifying the theory.

The second subfield, option pricing theory, has also become very important in the field of academic finance and its importance has spilled over to practitioners. Following the seminal work of Black and Scholes (1973), other authors including Cox and Ross (1976), Cox, Ross, and Rubinstein (1979), and Merton (1973b), have made notable contributions to the contingent claims literature. The option pricing subfield also possesses the implicitly international foreign currency option pricing and international interest rate swaps literatures. Articles in these areas include Feiger and Jacquillat (1979), Garman and Kohlhagen (1983), and Mahajan and Mehta (1986).

The final two subfields of arbitrage-based capital market research are the arbitrage pricing theory (APT), and its tests. The Ross (1976) APT is analogous to the CAPM. However, it is derived using arbitrage conditions. Notable extensions and clarifications of the APT include Connor (1984), Grinblatt and Titman (1983), and Huberman (1982). The domestic version of the APT was tested by Chen, Roll, and Ross (1986) and Roll and Ross

Table 2
Arbitrage-based Capital Markets Research—Notable Domestic and International Contributions

Arbitrage-based capital market research subfields	Notable domestic contributions	International contributions
Market efficiency	Roberts (1959, JF), Fama, Fisher, Jensen, & Roll (1969, IER), Fama (1970, JF), Brown & Warner (1985, JFE), Fama (1991, JF)	I.t., I.e.
Option pricing	Black & Scholes (1973, JPE), Merton (1973b, BJE), Cox & Ross (1976, JFE), Cox, Ross, & Rubinstein (1979, JFE)	I.e., Feiger & Jacquillat (1979, JF), Garman & Kohlhagen (1983, JIMF), Mahajan & Mehta (1986, JBF).
Arbitrage pricing theory	Ross (1976, JET), Huberman (1982, JET), Grinblatt & Titman (1983, JFE), Connor (1984, JET)	Solnik (1983a, JF), Ross & Walsh (1983, RBIF), Levine (1989, EI), Ikeda (1991, JF)
Arbitrage pricing tests	Roll & Ross (1980, JF), Dhrymes, Friend & Gultekin (1984, JF), Chen, Roll, & Ross (1986, JB)	Cho (1984, JF), Cho, Eun, & Senbet (1986, JF)

Note. Research codes are: n.a. = not applicable; I.t. = little theoretical work to date; I.e. = little empirical work to date. Journal codes are: AER=*American Economic Review*; BJE=*Bell Journal of Economics*; E=*Econometrica*; FAJ=*Financial Analysts Journal*; FM=*Financial Management*; JB=*Journal of Business*; IER=*International Economic Review*; JBF=*Journal of Banking and Finance*; JBFA=*Journal of Banking Finance and Accounting*; JET=*Journal of Economic Theory*; JF=*Journal of Finance*; JFE=*Journal of Financial Economics*; JFQA=*Journal of Financial and Quantitative Analysis*; JIBS=*Journal of International Business Studies*; JIMF=*Journal of International Money and Finance*; JPE=*Journal of Political Economy*; JPM=*Journal of Portfolio Management*; MSci=*Management Science*; QJE=*Quarterly Journal of Economics*; REStat=*Review of Economics and Statistics*; REStud=*Review of Economic Studies*; RFS=*Review of Financial Studies*; Other=*Publisher of Book*.

(1980). As with the CAPM, Solnik (1983a) was the first to extend the APT to the international level. Later notable international extensions include those of Ikeda (1991), Levine (1989), and Ross and Walsh (1983), while the basic model was tested by Cho, Eun, and Senbet (1986). As with the comments made regarding the international CAPM, much more work would appear necessary on the international APT. Both represent equilibrium models for pricing risk and thus are extremely important to the field of finance as a whole. It is possible that the lack of a good equilibrium model for pricing international assets has impeded the progress of internationalizing finance. The international CAPM and APT account for exchange rate risk in a nonintuitive manner, and neither is capable of capturing the complexity of international asset markets.

Corporate Finance Research

Episodic Corporate Finance Research

Table 3 summarizes the subfields in the episodic corporate finance literature: capital budgeting; mergers, acquisitions, and restructuring; and security issues and repurchases.

Much has been written within the subfield of capital budgeting. Notable domestic contributions include the various capital budgeting approaches of Bogue and Roll (1974), Fama (1977), Gehr (1981), Lorie and Savage (1955), and Ross (1979). Among those to extend the domestic ideas to multinational enterprises are Mehra (1978), Oblak and Helm (1980), and Shapiro (1978), while Shapiro (1983) examines international capital budgeting. Hodder (1986), on the other hand, compares and contrasts U.S. and Japanese manufacturing firms' capital budgeting practices. The capital budgeting subfield is one of the oldest in finance, and a relatively large amount of international work has been done. This, however, is untrue of the mergers, acquisitions, and restructuring subfield. While much research has been done on the domestic side, as evidenced in Jensen and Ruback's (1983) review of the literature, there has been little theoretical or empirical research done at the international level. Nevertheless, exceptions include Adler and Dumas (1975), who examine optimal international acquisitions, and Doukas and Travlos (1988) who examine the effects of international acquisitions on the multinationals shareholders' wealth.

Finally, the corporate financing subfield possesses much domestic research spread over many topics such as initial public offerings, debt instrument choice, equity

Table 3
Episodic Corporate Finance Research—Notable Domestic and International Contributions

Episodic corporate finance subfields	Notable domestic contributions	International contributions
Capital budgeting	Lorie & Savage (1955, JB), Bogue & Roll (1974, JF), Fama (1977, JFE), Ross (1979, JB), Gehr (1981, FM)	Shapiro (1978, FM), Shapiro (1983, MCFJ), Mehra (1978, JFQA), Oblak & Helm (1980, FM), Hodder (1986, FM)
Mergers, acquisitions, and restructuring	Manne (1965, JPE), Lewellen (1971, JF), Mandelker (1974, JFE), Galai & Masulis (1976, JFE), Jensen & Ruback (1983, JFE), Jensen (1986, AER)	Adler & Dumas (1975, JF), Doukas & Travlos (1988, JF)
Corporation financing: security issues and repurchases	Shaw (1971, JF), Logue (1973, JFQA), Dann (1981, JFE), Ritter (1984, JB), Rock (1986, JFE)	Naumann-Etienne (1974, JFQA), Severn & Meinster (1978, FM), de Faro & Jucker (1975, JFQA), Alexander, Eun, & Janakiramanan (1988, JFQA)

Note. Research codes are: n.a. = not applicable; l.t. = little theoretical work to date; l.e. = little empirical work to date. Journal codes are: AER=American Economic Review; BJE= Bell Journal of Economics; E=Econometrica; FAJ=Financial Analysts Journal; FM=Financial Management; IER=International Economic Review; JB=Journal of Business; JBF=Journal of Banking and Finance; JBFA=Journal of Banking Finance and Accounting; JET=Journal of Economic Theory; JF=Journal of Finance; JFE=Journal of Financial Economics; JFQA=Journal of Financial and Quantitative Analysis; JIBS=Journal of International Business Studies; JIMF= Journal of International Money and Finance; JPE=Journal of Political Economy; JPM=Journal of Portfolio Management; MCFJ=Midland Corporate Finance Journal; MSci=Management Science; REStat=Review of Economics and Statistics; REStud=Review of Economic Studies; RFS=Review of Financial Studies; Other=Publisher of Book.

buybacks, etc. The domestic literature is too broad, varied, and extensive to list comprehensively. With respect to international research, this subfield appears to be serviced better than most. Nevertheless, due to the sheer breadth of this subfield, there exists much more opportunity for future research. International contributions include Alexander, Eun, and Janakiramanan's (1988) empirical study of international stock interlistings, de Faro and Jucker's (1975) and Severn and Meinster's (1978) examination of multicurrency financing, and Naumann-Etienne's (1974) review of the multinational's financing decision.

Corporate Finance Policy Research

Five subfields are identified in Table 4: capital structure and the cost of capital, dividend policy, agency theory and corporate control, international financial management, and multinational enterprises (MNEs).

The corporate finance policy stream of research was initiated by Modigliani and Miller (1958, 1963) in their analyses of the optimal capital structure and the cost of capital. Their work spawned many other papers on

capital structure including notable domestic papers by DeAngelo and Masulis (1980), Miller (1977), Myers and Majluf (1984), and Ross (1977), to name only a few. The international research in capital structure began in the mid-1970s with articles by Adler (1974) and Cohn and Pringle (1973) which investigate the cost of capital in an international setting. Mehra (1978) demonstrates that all the Modigliani and Miller (M&M) propositions continue to hold in an integrated two-country world with identical taxes, while Senbet (1979) shows that the M&M propositions fail if the two countries possess different tax rates. Rutherford (1985) discusses the international capital structure puzzle, while Hodder and Senbet (1990) and Lee and Zechner (1984) internationalize Miller's (1977) model to obtain international equilibrium models of capital structure.

Miller and Modigliani (1961) were also instrumental in creating the dividend policy subfield of corporate finance policy. Other notable domestic contributions include works by Black and Scholes (1974), Friend and Puckett (1964), and Lintner (1956). While this subfield is older than most in finance, almost no international work appears to have been done. Michel and Shaked

Table 4
Corporate Finance Policy Research—Notable Domestic and International Contributions

Corporate finance policy research	Notable domestic contributions	International contributions
Capital structure and the cost of capital	Modigliani & Miller (1958, AER), Modigliani & Miller (1963, AER), Miller (1977, JF), Ross (1977, BJE), Leland & Pyle (1977, JF), DeAngelo & Masulis (1980, JFE), Myers & Majluf (1984, JFE)	Cohn & Pringle (1973, JF), Adler (1974, JF), Mehra (1978, JFQA), Senbet (1979, JFQA), Lee & Zechner (1984, JIMF), Rutherford (1985, MCFJ), Hodder & Senbet (1990, JF)
Dividend policy	Lintner (1956, AER), Miller & Modigliani (1961, JB), Friend & Puckett (1964, AER), Black & Scholes (1974, JFE), Bhattacharya (1979, BJE), Miller & Rock (1985, JF)	l.t., Michel & Shaked (1986, JBFA)
Agency theory	Manne (1965, JPE), Jensen & Meckling (1976, JFE), Jensen & Ruback (1983, JFE)	l.t., i.e.
International financial management: hedging policy	n.a.	Baron (1976, AER), Dumas (1978, JF), Adler & Dumas (1984, FM), Black (1990, JF)
Multinational enterprises	n.a.	Agmon & Lessard (1977, JF), Lee & Sachdeva (1977, JF), Jacquillat & Solnik (1978, JPM), Errunza & Senbet (1981, JF), Brewer (1981, JFQA)

Note. Research codes are: n.a. = not applicable; l.t. = little theoretical work to date; i.e. = little empirical work to date. Journal codes are: AER=*American Economic Review*; BJE= *Bell Journal of Economics*; E=*Econometrica*; FAJ=*Financial Analysts Journal*; FM=*Financial Management*; IER=*International Economic Review*; JB=*Journal of Business*; JBF=*Journal of Banking and Finance*; JBFA=*Journal of Banking Finance and Accounting*; JET=*Journal of Economic Theory*; JF=*Journal of Finance*; JFE=*Journal of Financial Economics*; JFQA=*Journal of Financial and Quantitative Analysis*; JIBS=*Journal of International Business Studies*; JIMF= *Journal of International Money and Finance*; JPE=*Journal of Political Economy*; JPM=*Journal of Portfolio Management*; MCFJ=*Midland Corporate Finance Journal*; MSci=*Management Science*; REStat=*Review of Economics and Statistics*; REStud=*Review of Economic Studies*; RFS=*Review of Financial Studies*; Other=Publisher of Book.

(1986) compare Japanese and U.S. dividend policies, but little other empirical and theoretical work can be found. This subfield, therefore, represents a very promising area for future research. The same is true of the agency theory subfield. It was initiated by Manne (1965), but did not become popular until Jensen and Meckling (1976). The agency theory subfield possesses very little international theoretical or empirical research and thus offers great opportunity for future international research.

The final two subfields listed in Table 4 are the only subfields in finance that exist without a domestic counterpart. First, the international financial management subfield has grown out of a need for corporate finance managers to hedge the foreign currency risks of international cashflows. This did not, of course, become necessary until 1973 when the Bretton Woods fixed exchange

rate system broke down. Thus, the first papers on the subject started appearing in the mid-1970s. Included among these papers are Baron (1976) and Dumas (1978), who show that foreign currency hedging is irrelevant to firm value, despite a corporation's currency exposure in integrated and complete markets with symmetric information. Nevertheless, Adler and Dumas (1984) examine foreign exchange risk using a portfolio framework, and Black (1990) defines an optimal hedge ratio within this framework. Second, with the growth in the number of multinational enterprises (MNEs), finance academics have become involved in modelling and measuring their potential for international diversification and market integration. Agmon and Lessard (1977), Brewer (1981), and Jacquillat and Solnik (1978) examine the international diversification benefits of MNEs for their stockholders.

The conclusion tends to be that MNEs are poor tools for international diversification. Errunza and Senbet (1981) and Lee and Sachdeva (1977) examine MNEs for indications of market segmentation. The international financial management and MNE subfields have become well established and therefore offer modest potential for international finance research.

Observations and Discussion

Several revealing observations can be made from the previous two sections regarding the heritage of international finance. First, there are many subfields in finance that have been left almost untouched by international research. These subfields include investment with uncertainty, anomalies, volatility and bounded rationality models, market microstructure, market efficiency, dividend policy, and agency theory. Several other subfields possess only limited international research. While this observation can be viewed as an advantage, since it demonstrates that there are numerous untapped research opportunities, it could also be interpreted as a suggestion that the field as a whole may have been denied some insights that could have had a dramatic impact on the domestic literature base.

Second, review of the chronology of the international literature indicates that the field of international finance was initiated with Grubel's (1968) examination of international diversification. Thus, international finance can be viewed as approximately 28 years of age. Nevertheless, without exception, international research chronologically followed domestic research by 5 to 30 years, averaging roughly 10 years. This has occurred in fourteen of the 14 domestic subfields that possess some international content. Thus, first-mover advantages in internationalizing domestic theory may be easy to obtain.

Third, international theory, with few exceptions, is an extension of domestic theory, and rarely a significant innovation. Generally, international theories add an assumption or two, add a foreign investor, or introduce multiple price indices. Ironically, generalizing a domestic model to the international level often requires the addition of more restrictive assumptions. Additionally, international empirical work is generally not very comprehensive. In many cases data from only two countries are examined, and rarely do these studies go beyond the G7 nations. Consequently, it is not surprising that none of the international literature listed in the tables is regarded as seminal. In fact, Cooley and Heck (1981) only list one international article as significant in their survey of significant contributions to finance literature. Similarly, in a recent financial research citation study by Borokhovich, Bricker, and Simkins (1994) that examined citation fre-

quencies in finance journals during the years 1990 and 1991, not a single international article made their extensive lists of highly cited, seminal, and important finance articles.

Fourth, there are only two subfields where international research stands on its own without any domestic counterpart. However, even these two subfields—MNEs, and international financial management—are limited, since they are quite specialized.

Finally, much of the listed international finance research was done in the mid-to-late 1970s. This may be the result of several factors that occurred almost simultaneously: the breakdown of the Bretton Woods fixed exchange rate system, large and increasing international capital flows, and increased awareness of the benefits of international diversification.

Therefore, there has been deficiency in terms of quantity, timeliness, and quality of international research. Why has international finance been neglected? Several barriers to international research in finance can be hypothesized.

First, many of the subfields in finance require a solid definition of risk and an equilibrium model for pricing this risk. On the domestic level, the CAPM serves this purpose and has influenced many of the domestic subfields. As suggested earlier, however, international finance does not possess a strong, well-accepted, equilibrium-based international asset pricing model. Although there have been a few devised, these international models suffer in several ways. To begin with, international asset pricing models have developed in two distinct frameworks—the international CAPM and the international APT frameworks. Both these models were initially developed directly from their domestic counterparts by Solnik (1974a, 1983a) and therefore they share their parent's shortcomings as well as the shortcomings intrinsic in internationalizing a domestic model. In the second place, both models, and their extensions, suffer from problems operationalizing many of their constructs. For instance, one needs to define N national market portfolios, the world market portfolio, and N national price indices to operationalize the international CAPM. In the third place, most suffer from very poor empirical test results, indicating at best only marginal acceptance of the models. Finally, the models do not price nominal exchange rate risk. While it is true that nominal exchange risk can be hedged, most investors do not, and thus are exposed to the risk. Either these investors are irrational, or they perceive that exchange rate risk is priced—that is, they are compensated for the risk they bear. All of these issues undermine the effectiveness of these two classes of models. Therefore, the need for an accepted, operationalizable, and empirically valid international asset pricing model still exists. This need should be the first one satisfied in international finance because without such a

model, many of the other subfields will continue to stagnate.

The second reason international finance has been neglected may be a consequence of the fact that finance theory is not yet capable of handling partial market segmentation. Most international finance models assume perfect market integration and simply introduce different purchasing power units to differentiate between nations. Perfect market integration is an unrealistic assumption due to differences in national institutions, which result in differences in taxes, transaction costs, and freedom of goods, information, and capital flows. If any of these differences exist in the real world, as they surely do, then expected real returns between nations will differ despite deviations in PPP. Furthermore, differences in culture may make the mean-variance paradigm in finance invalid for certain countries. The mean-variance framework assumes that rational investors care only about expected real returns and variance risk. Some cultures may consider more than these two factors when making financial decisions. In addition, risk may be defined differently across cultures. None of these issues is easily resolvable given the dependence on mathematical modelling in finance—modelling national institutions and culture with mathematics presents a significant challenge.

Another factor propagating the neglect of international finance research is the lack of adequate treatment of international issues and research in contemporary finance textbooks. In most finance textbooks, both at the junior and senior level, international finance theory and management is simply an add-on at the end of the book. For example, from a convenience sample of recent finance textbooks: Brealy, Myers, Sick, and Whaley (1986) devote the third-last chapter of 34 to international financial management; Copeland and Weston (1988) devote the last two of 22 chapters to the exchange rate system and international financial management; Davis and Pinches (1991) use the last of 26 chapters to address international financial management; Elton and Gruber (1991) devote one chapter of 24 to international diversification; Ross and Westerfield (1988) devote the last of 28 chapters to international finance; Van Horne, Dipchand, and Hanrahan (1989) devote the twenty-fifth of 27 chapters to international finance, while Hatch and Robinson (1989) devote none of 19 chapters. With the chapters on international financial theory and management left to the end of the textbooks, they are at best given only a cursory look in finance classrooms by professors and students, and are, in fact, often left off course syllabuses altogether, to devote more time to “standard” finance theory. Furthermore, by simply adding international chapters to the end of the books, students and future researchers are led to believe that international finance is simply a small and inconsequential aspect of finance. The treatment

does not promote the idea that international theory is intertwined with domestic theory, and that international issues permeate, or should permeate, all subfields of finance. Moreover, it does not reflect the level of globalization experienced today, or more important, in the future.

Finally, international research has been hampered by difficulty in obtaining good international data. This is particularly true of the corporate finance stream of research. Corporate finance data is difficult to obtain at the domestic level, let alone at the international level. The magnitude of the problem compounds dramatically with every country added to a study. In recent years, however, the availability of international capital markets data has increased dramatically. The creation of international databases, such as the Morgan Stanley Capital International Perspectives international stock database and the Solomon Brothers international bond database, has made international capital market research much more practical, and has encouraged increased activity in this area in recent years.

Summary and Implications for Canadian Researchers

This paper examines the international heritage of academic finance. Accordingly, international finance research and economic nationhood are also defined. First, international empirical research is defined as encompassing pooled cross-sectional, N-country data tests of single-country theories, and N-country data tests of multicountry theories. Second, international, or multicountry, theories have been defined as those theories that explicitly recognize potential differences between nations in their assumptions and theoretical developments. Finally, economic nations are defined by their unique purchasing power unit. This unique purchasing power unit leads to PPP deviations that are generally assumed the result of heterogeneity in national consumption preferences.

The paper also shows that academic finance was established as a separate and distinct discipline between 38 and 56 years ago, while international finance was established approximately 28 years ago. Their foundations are traced to economics, law, finance practitioners, the behavioural sciences, mathematics, and statistics. Academic finance is subdivided into two major streams of research: capital markets and corporate finance. Each of these major streams of research is subdivided further into subfields to generate a taxonomy of the finance discipline. In the taxonomy, notable domestic and international research is referenced for each of the proposed subfields. The taxonomy illustrates a dramatic neglect of international research in academic finance, as well as suggesting possible areas for future research. The taxonomy also shows that even when international research in a

particular subfield emerges, it is usually a simple extension of a domestic theory that has been in the subfield for many—often 10 to 15—years. This apparent neglect may be explained by high barriers to entering the field. These barriers to entry likely include the lack of a good equilibrium model of international asset pricing, problems modelling partial market segmentation and culture, lack of good international treatments in finance textbooks, and the lack of good international datasets.

What are the implications of this review for Canadian finance academics, research opportunities, and pedagogical concerns? To begin with, Canadian researchers often complain about the difficulty of getting articles published in the top U.S.-based finance and economics journals when they use Canadian data. While Canadian data products such as the Canadian Financial Market Research Centre's TSE database are of the highest quality, journal editors often immediately reject Canadian data studies, or recommend that the results be reproduced with U.S. data. Consequently, the availability of large, high-quality international databases and the apparent easy-to-gain first-mover advantages in publishing international studies create what would seem to be a very good opportunity for non-U.S.-based researchers to share the advantage U.S.-based researchers have always possessed. This opportunity, however, will not last long. As international data becomes even easier to obtain, first-mover advantages will diminish greatly. This can now be observed in the market structure and stock market predictability areas of the capital markets stream of research. The recent growth of the international literatures in these areas is primarily due to the now widespread availability of the Morgan Stanley Capital International Perspectives database. It is, therefore, incumbent on Canadian researchers to find or create good international databases and to use them productively, as quickly as possible, so as to capture the first-mover advantages. In particular, the corporate finance stream of research, with its hitherto lack of consistent international data, offers easy-to-gain first-mover advantages.

However, researchers need good, well established, international frameworks and models to use the international data effectively. Unfortunately, the taxonomy shows that international theory is scarce in most finance subfields, and where it does exist, it is often a simple extension of a domestic theory. International theory should encompass domestic theory, not be a simple subset of domestic theory. The first order of business, however, is to develop a well accepted and intuitive notion of the pricing of international risk. Until an intuitive international asset pricing model that goes beyond simple purchasing power parity deviations is developed, many of the subfields in international finance may continue to stagnate. In Canada, for example, using the domestic version of the capital

asset pricing model or arbitrage pricing theory to price domestic assets is surely in error. Canadian asset prices are strongly influenced by foreign capital flows, and the days when foreign interests could be ignored in our small open economy are gone. Likewise, corporate decisions in Canada are no longer made with a closed economy view. They are made within an international marketplace, where risk must be viewed in an international context.

Finally, this review also highlights the pedagogical deficiency many undergraduate, Masters, and PhD level business finance courses possess. Students are encountering far too little international finance training relative to their standard domestic finance training. The textbooks used in junior and senior finance courses are extremely deficient in the treatment of international issues, with international finance completely ignored or left to the last chapter or two of most textbooks. This creates the inappropriate impression, for professors and students alike, that international finance is a separate and disparate field of financial study that is neither important nor relevant. However, for Canadian business students who will be doing business in our small open economy, nothing could be farther from the truth. All Canadian financial managers will encounter international issues frequently during their career, if not daily. Without the introduction of more comprehensive and integrated international content in our finance courses, Canadian professors will be doing their students a great disservice.

These two concerns, deficient international models and international finance training, can also be viewed as opportunities. Canadian academics and learning institutions are always looking for a competitive advantage over our American counterparts, and moving quickly into international finance research and teaching may be ways to obtain that advantage. Never has it been more important for Canadians to take an international view of the world when making financial decisions.

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