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CONTEMPORARY TOPICS IN FINANCE: A COLLECTION OF LITERATURE SURVEYS

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"*For there was once a time when no such thing as money existed …. But it did not always and so easily happen that when you had something which I wanted, I for my part, had something that you were willing to accept. So a material was selected which, being given a stable value by the state, avoided the problems of barter by providing a constant medium of exchange*."

Julius Paulus Prudentissimus, about 230 A.D. (translation by A. Watson, 1985)

Finance has always played a critical role in economies, given it is at the heart of consumption, saving, and investment decisions by individuals, firms, and governments. As a practical and professional field, finance facilitates the efficient exchange of funds within economies between lenders, investors, and borrowers. Therefore, it is understandable that finance is continually evolving in practice.

However, it is important that the practical evolution of finance is complemented by active academic and policy related research. As a simple historical example, money, which lies at the core of finance and economics, has existed in practice for thousands of years, as has the temptation for its exploitation by authorities. The introductory quote is actually part of an academic argument on the key properties of money (an efficient medium of exchange, a secure store of value, and a stable unit of account) that successfully convinced Gordian III at the time against debasing the currency of Rome.

Following the theme of best practice being complemented by best research, this book comprises a collection of up-to-date reviews on eleven contemporary topics in finance. We have broadly grouped these into the three categories discussed in the following paragraph.

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Developments in finance practice, research, policy, and regulation can be triggered by many catalysts. One such catalyst is exceptional financial and economic events that can lead policy makers, researchers, and society in general to question and revisit the parameters and limits under which the finance industry operates. A broader avenue, for research in particular, is the passage of time, which allows previously new forms of financing to be bedded in, while new empirical methods and data become available for quantitative analysis. A third catalyst is technological innovations, which can alter the efficiency of existing financial transactions and flows of funding, or create new ones.

The most exceptional financial and economic event in recent history is, of course, the Global Financial Crisis (GFC) and the associated Great Recession. The first three articles in this book relate to those events. They review the literature on the effectiveness of unconventional monetary policy, the costs of implicit bank debt guarantees, and drivers of financial fraud. Estimation of inflation risk premia, advances in finance and productivity, and less traditional forms of finance including business angels, venture capital, microfinance, and relationship lending are reviewed in the next six articles. The last two reviews are on new topics in finance that have arisen from technological advances; crowdfunding and innovation and an introduction to crypto-currencies.

The immediate challenges of the GFC and Great Recession were to stabilize financial markets and the economy, and ultimately setting them on a course for an eventual recovery. Hence, in "A survey of the international evidence and lessons learned about unconventional monetary policies: Is a 'new normal' in our future?" Pierre Siklos, Domenico Lombardi, and Samantha St. Amand discuss the effectiveness of unconventional monetary policy (UMP) and implications for the future. UMP is defined as any policy action, other than the conventional setting of short-term interest rates undertaken prior to the GFC of 2007/08 that influences economic activity and/or moderates shocks to the financial system to achieve a stated monetary policy objective. UMP therefore includes the well-known quantitative easing (QE) actions, where central banks change the size and/or composition of their balance sheet, forward guidance policies, where central banks change market expectations of interest rates by sending signals about the future policy path, and inflation target announcements that can change expected inflation and hence real interest rates.

The authors find considerable evidence that UMP can be powerful in offsetting the negative economic effects of a financial crisis. In that context, the evidence suggests that a successful monetary policy response should be forceful, that a joint response from both the fiscal and monetary authorities is desirable, and that the policy response should be persistent until confidence and the conditions for full recovery are in place. From these perspectives, the authors provide a retrospective on the case of UMP in Japan, given that it so far shows few signs of producing the aimed-for economic outcomes despite long and varied attempts. They also raise related questions for the euro area, given that the specific structure of its financial system and macroeconomic policy making processes may limit the desired co-ordinated response.

Regarding the aftermath of a financial crisis, the authors interpret the evidence as showing that UMP is not necessarily sufficient or capable of promoting stronger long-term economic growth on its own. Consistent with this, central banks have been reluctant to claim that they can restore growth to pre-crisis conditions without supporting fiscal and structural policies also being enacted.

The GFC was also a catalyst for revisiting the topic, and policy framework, around implicit government guarantees for banks, given that the banking system and many individual banks received unprecedented government support at the time, although the topic also has plenty of pre-GFC history. "Limiting implicit bank debt guarantees" by Sebastian Schich reviews the literature, noting that implicit government guarantees exist for banks essentially due to the expectation by market participants that public authorities might bailout the creditors of banks that are considered to be "too big to fail" (TBTF). The policy response to the GFC might have further entrenched that perception.

While implicit bank debt guarantees might benefit some stakeholders in the short term, they create economic costs as well as additional risks. In particular, they tend to weaken market discipline, encourage bank leverage and risk-taking, and distort competition between banks and non-banks, between small and large banks, and between banking sectors from different countries. They also create contingent liabilities for the sovereign and the taxpayer.

Policy measures to limit the value of implicit guarantees, and hence their costs, differ from country to country. One overarching goal is to strengthen bank balance sheets, thus making guarantees less valuable. Another avenue is to make bank failure resolution smoother and more effective, thus reducing the perception that implicit guarantees exist. Explicitly charging a user fee, as a disincentive for banks to "use" such guarantees, is considered less attractive, given the difficulty of making appropriate valuations and also potentially reinforcing the perception that guarantees exist. The approach of identifying some banks as globally systemically important and subjecting them to a special and more intrusive regulatory treatment may be seen as an indirect charge for the "use" of implicit guarantees. However, Schich finds little evidence that this specific approach has been successful so far.

Schich summarizes the measures of implicit guarantees which, while inherently difficult to value, can be used to assess progress regarding limiting TBTF. There is evidence that the values of implicit bank debt guarantees for banks have declined from their peaks attained during the GFC, but it is not clear whether the values have fallen below those prevailing before the crisis.

Open questions that remain are how much further should the value of implicit bank debt guarantees be reduced? And at what point can their level be considered low enough so that the costs of further efforts to reduce them would outweigh the benefits of doing so?

Another topic that has been given a new lease of life in the onset and the wake of the GFC is financial fraud, given the role of the subprime mortgage markets in that event, although the topic has had a long and colourful pedigree prior to the GFC. In "Financial fraud: A literature review", Arjan Reurink surveys the empirical literature on financial fraud from three perspectives. The first is financial statement fraud, which involves false statements about investment entities, the second is financial scams, which are deceptive and fully fraudulent schemes, and the third is fraudulent mis-selling practices, where the product or service is knowingly unsuitable for clients' needs.

Reurink finds that financial fraud is widespread throughout the financial industry, including the frequent involvement of established financial institutions, and is not simply attributable to a few "bad apples". Indeed, the literature review highlights four recent developments that scholars think have facilitated the occurrence of financial fraud. First, financial deregulation has resulted in new conflicts of interest and perverse incentive structures, facilitated by incentive-based compensation structures in financial firms at all levels (and new layers of intermediaries, such as fund managers and financial advisers). Perverse incentive structures can orientate firms towards short-term profit-making and stock-price maximization, irrespective of the legal implications, and legal penalties can simply be seen as a cost of doing business. Second, financial markets have seen an influx of relatively unsophisticated investors during the last few decades, which has provided fraudulently predisposed market players with a larger pool of more easily exploitable investors. Third, the increasing complexity involved in financial market transactions provides opportunities for fraudsters to deceive other market participants. Fourth, the veil of secrecy and mystique surrounding some collective investment funds which have been on the rise over recent decades can facilitate fraud. The secrecy is justified in the context of proprietary trading models used by fund managers, but financial scams and financial statement frauds associated with the funds can thrive in the environment of incomplete disclosure.

Future research in the area, building on some existing work, could investigate the impact of fraud on the functioning of markets and the stability of financial systems, the political and economic structures that facilitate financial fraud, and the relationship between deregulation and financial fraud. Particularly relevant in the present environment of unusually low interest rates is how that might encourage excessive risk taking and facilitate Ponzi like schemes.

Within the second main category of existing topics in finance that have benefited from new research, we include six papers.

Alexander Kupfer in "Estimating inflation risk premia using inflation-linked bonds: A review" surveys studies investigating the premia in inflation-linked bonds (ILBs), which have grown in number with the availability of new data, notably in the United States over the past 20 years. Inflation expectations are an unobserved variable that are an important economic quantity for policy makers and investors. In principle, nominal bonds and ILBs should allow high frequency readings of implied inflation expectations for different horizons (unlike surveyed inflation expectations). However, nominal-ILB spreads are biased by inflation risk premia, liquidity premia, lags on indexing ILBs to inflation outturns, and embedded deflation options (some ILBs rule out indexation below face value). Allowing for those biases improves implied inflation expectations nominal-ILB spreads, and is also important for decisions on nominal versus ILB sovereign debt issuance. The sign of the inflation risk premium also offers some intuition about the state of the economy.

Kupfer finds that strategies to estimate the inflation risk premium vary considerably throughout the literature, including regression-based approaches, term structure models (with and without inflation data), and macro-finance term structure models. These studies generally find that the magnitude and variation in the inflation risk premium is material. Regarding the liquidity premium, it was highest in the first years of ILB issuance and around the time of the GFC. The indexation lag and deflation option are found to be negligible, apart from during the GFC in the latter case.

The survey also presents potential directions for future research. One is building on limited work so far using term structure models that allow for the effective lower bound in nominal yields, while ILB yields are free to evolve to negative values. Similarly, further and in-depth analysis is needed on ILB liquidity premia and their determinants because eliminating that premium would present a large fiscal saving when issuing ILBs. Finally, a further area for future research is to extend recent term structure approaches that gauge the equilibrium real rate using ILBs, and to investigate two-(or multi-)country term structure models that include ILB data.

Another topic that has evolved rapidly in the past decade, due in part to greater availability of firm-level and plant-level data and policy agenda priorities, is the relationship between finance and productivity. In "Finance and productivity" Mark Heil surveys the empirical literature, after providing an introduction to the long-term trends in productivity and finance, and a stylized view of key policy mechanisms that influence productivity.

Regarding empirical results, mounting evidence shows that financial development has been an important contributor to productivity growth. Conversely, financial frictions that impede the efficient flow of finance can mitigate the positive effects through a variety of channels. For example, inefficient insolvency regimes that impede the exit of low-productivity firms inhibits productivity growth. The magnitudes of frictional costs in general appear to be modest in financially developed economies, but are considerably larger in developing economies.

A primary driver of productivity growth is knowledge production, yet evidence that the availability of financing facilitates higher educational attainment is tenuous. On the whole, merger and acquisition activity is associated with gains in productivity, but the direct contributions of the financial sector to productivity are mixed; improvements during the late 1990s were substantial, but might be associated with the tech bubble at the time. Cross-country and single-country studies agree that financial liberalization, such as stock market opening and lifting of foreign capital controls, is associated with economically meaningful aggregate productivity gains.

The research suggests that the availability of equity financing is particularly valuable for the growth of young and small enterprises and it remains the primary external source for funding research and development. Recent studies of both periods of economic decline and booms suggest that business cycle influences on productivity are inconclusive.

As the author notes, the recent empirical literature provides fresh insights that may inform policy development to help enact finance related measures that more effectively promote productivity growth. However, it will be important in future research to identify empirical regularities, as well as differences across countries.

Angel finance is a non-traditional source of funds that has become more commonplace in recent decades, in practice and in the literature. In “Business angels research in entrepreneurial finance: A literature review and a research agenda”, Francesca Tenca, Annalisa Croce, and Elisa Ughetto provide a summary of findings of prior literature and a bibliometric analysis. Business angels are high wealth individuals who provide seed or growth capital, advice, and hands-on assistance to business start-ups in exchange for ownership equity. They invest at the earliest stages of ventures’ lifecycle typically long before institutional investors. Business angels play a complementary role to venture capitalists. They are typically more involved in the selection phase and first contact with entrepreneurs, while venture capitalists head the deal-structuring phase. In the post-investment phase, business angels are more involved in mentoring while venture capitalists are more engaged in monitoring through contracts and supervisory board involvement.

The authors categorize the literature on business angels into three thematic areas. The first is business angel characteristics, which was the first research stream to emerge. The second is business angel market, and the third is business angel investment process, which has become the most extensive research stream following increased growth in the number of papers published since 2011. However, a significant research gap has emerged between developed and emerging economies. Emerging markets are often characterized by political uncertainty, corruption, lack of supporting institutions for early stage investment, and legal protection for minority shareholders. Business angels manage such difficulties by adopting investment strategies of informal networking and co-investment. In emerging countries business angels co-invest to reduce high levels of financial, legal, currency, political, economic, and market risks while in developed economies they typically co-invest to reduce financial risks.

Quantitative analysis is the most frequent methodology used in business angel research. However, a key challenge is that business angels are often anonymous and invisible and hence difficult to identify which makes sampling problematic and most studies rely on convenience samples.

Venture capital is another non-traditional source of funds, sometimes described as the 'business of building businesses', which is reviewed by David Devigne, Sophie Manigart, Tom Vanacker, and Klaas Mulier in "Venture capital internationalization: Synthesis and future research directions". Venture capital investments are long-term, illiquid, minority equity investments for the launch, growth, or expansion of privately held companies. In recent years the importance of foreign investments in venture capital has been increasing. But foreign venture capital firms face geographical, cultural, and institutional distance which constrains domestically used strategies to reduce information asymmetries. The authors review the literature on venture capital internationalization and suggest avenues for future research. They discuss which venture capital firms invest across borders and in what countries, how venture capital firms address liabilities of foreign investing, and the outcomes of international venture capital investments.

Foreign venture capital firms source, fund, syndicate, and monitor portfolio companies differently than domestic venture capital firms. A venture capital firm's internationalization strategy is typically influenced by the institutional environment in target countries and determined by the experience of its managers (human capital), and its network of syndication partners including international technical communities of immigrants (social capital). Investment deal features and legal contracts are used to reduce problems of information asymmetries, monitoring, and resource transfer. Another strategy of foreign venture capital firms is syndication with local venture capital firms which outsources monitoring and value adding functions to local co-investors who do not face geographical, cultural or institutional distance. Regarding outcomes of international venture capital investments in terms of development of portfolio companies and financial returns earned by venture capital investors upon exit from portfolio companies the authors find that the evidence is mixed and conclude that more research is needed.

A more traditional source of funding is through relationship lending, which Andi Duqi, Angelo Tomaselli, and Giuseppe Torluccio address in "Is relationship lending still a mixed blessing? A review of advantages and disadvantages for lenders and borrowers". A key challenge for small businesses is that they generally do not have audited financial statements and traded debt or equity. A common lending technology is relationship lending which can help overcome these information difficulties because banks use proprietary information obtained over time through contact with firms, their owners, and local community to decide whether or not to lend to a firm and at what terms. Relationship lending thus differs from transactions based lending (or arm's length lending) where banks mostly use verifiable and hard information derived from financial statements, credit scoring or guarantees. In the review, the authors assess how the main determinants of relationship lending impact on benefits and costs for lenders and borrowers. They find that relationship lending helps banks screen out bad from good borrowers and reduces credit rationing compared to arm's length lending to small and medium-sized businesses but the benefits for borrowers appear to depend on borrowers' ability to signal their reputation in the market. In particular, it is not optimal for firms to have many banks because this sends a signal of low quality to the market.

Relationship lending is typically practiced by small banks that are located near their customers, while large banks tend to rely on transactions based lending, possibly because they have the tools to implement and benefit from transactions based lending. During times of crisis the evidence suggests that relationship banks extend credit at better terms than transactions banks possibly because they charge higher interest rates in good times to compensate for during a crisis.

Relationship lending may lead to two problems. The first problem is a soft budget constraint which arises when a borrower is in financial distress or a project becomes more risky and the bank extends lending to avoid bankruptcy of the firm. The second problem is a hold-up problem which occurs when relationship lending gives banks a monopoly on information allowing them to charge higher interest rates.

Under the various Basel accords, which are a series of recommendations on banking laws and regulations, banks are increasingly adopting screening technologies that rely on the use of hard information. The authors venture that the Basel accords will discourage banks from gathering and processing soft information and recommend further research on optimal banking practices and their links with regulation, bank stability, and the real economy.

Microfinance is a recent introduction to the field of finance that now has more data and research available for analysis. Marek Hudon and Niels Hermes review the literature on the performance of microfinance institutions in "Determinants of the performance of microfinance institutions: A systematic review". Microfinance institutions provide financial services to poor households who are excluded from the formal financial system. Their performance has typically been evaluated by their success in improving the lives of the poor and their independence of donor support in the long run. However, more recently there has been a shift in focus from social to financial performance. The attention is mainly on cost efficiency because lower costs of providing financial services maximize the contribution that the provision of financial services can make to reducing poverty.

Hudon and Hermes draw some conclusions from the literature. The size and scale of operations positively affect financial but not always social performance of microfinance institutions. The impact of subsidized funding on financial performance is mixed, but subsidies tend to improve social performance. Most studies focus on subsidies probably because most microfinance institutions are still dependent on subsidies from governments and only a few studies consider other funding sources, e.g. deposits, equity, and debt. The lack of attention to deposits as a funding source has consequences for the social performance of microfinance institutions because deposits and savings help manage fluctuations in income. Only a few studies have considered the relationship between the development of the domestic financial system and microfinance institutions' performance. Regarding governance most papers focus on the role of boards and few discuss the importance of transparency and disclosure.

The last two papers are on new topics in finance that have arisen from technological advances. Technology can lead to innovations in finance through efficiencies that facilitate latent markets that might otherwise not be viable. Or pure technological advances can lead to entirely new financial products.

Fabrice Hervé and Armin Schwienbacher in "Crowdfunding and innovation" review a new form of finance called crowdfunding for small firms. Crowdfunding campaigns take place on dedicated platforms that facilitate the launch of campaigns by standardizing processes and create greater visibility of projects. A broad range of projects now raise money through crowdfunding and different types have emerged ranging from rewards based, donations based, loans based, and equity crowdfunding. Many projects financed by crowdfunding are artistic and social.

Crowdfunding can provide equity financing to small, innovative firms that often is not available from professional investors, and it has some important differences with business angels and venture capital also surveyed in this issue. Crowd investors do not purchase equity *per se* but securities such as participating notes. In contrast, angel investors and venture capital funds typically purchase common shares and convertible preferred shares. Crowd investors, in addition to providing financial resources, may also participate in the development of projects by providing feedback and ideas to entrepreneurs.

Obtaining information and feedback from the crowd however may not always support the development of innovative projects, for example, when entrepreneurs have to spend significant time interacting with the crowd. Moreover, crowdfunding discloses more information about a project in the public domain than projects funded by professional investors because of the participation of a large number of individuals. As a result, projects that are difficult to replicate or only marginally innovative may be more likely to seek crowdfunding. Research on crowdfunding has mainly been theoretical and predictions remain to be tested empirically.

An example of a pure technological advance that has led to a new financial product is the use of computer encryption technology to create so-called crypto-currencies. In "Crypto-currencies: An introduction to not-so-funny moneys", Christie Smith and Aaron Kumar provide an introduction to the key concepts and what to look out for with potential future developments. Smith and Kumar summarize the rise and potential future implications of crypto-currencies and distributed ledger technology, in particular highlighting some of the risks associated with crypto-currencies, and discussing some of the potential implications of these technologies for payments systems, financial institutions, markets, and regulators.

The authors conclude that crypto-currencies do not have the three basic attributes of money, given they are not yet generally accepted or used as a unit of account, and their volatility makes them an uncertain store of value. However, crypto-currencies possess some features that make them attractive, which help to explain the growing demand for them. For example, crypto-currencies allow quicker cross-border transactions, possibly lower transaction fees, transaction irreversibility, and pseudo-anonymity (even while related prosecutions illustrate there is no guarantee of absolute anonymity).

Crypto-currencies currently facilitate a very small proportion of global transactions, and so do not yet pose material competition to traditional financial systems and intermediaries. Similarly, while some efforts have been made to adapt crypto-currencies to the provision of credit, the economies of scale that financial intermediaries have for evaluating and monitoring borrowers means that those intermediaries will likely continue to play a dominant role in facilitating credit.

The future growth of crypto-currencies and their use as transaction media is by no means clear. Crypto-currencies and decentralized ledger technology could well become an important part of global payment systems (and distributed ledgers and the use of cryptography also have wider uses). But the wide-scale adoption for transactions would depend on competition from alternative transaction technologies, and scalability issues would need to be addressed in order to compete in intermediating the volume of transactions undertaken globally. What does seem clear is that the regulatory and legal status of crypto-currencies must be resolved if crypto-currencies are to play a prominent role in exchange. Regulatory and legal reform will need to account for the decentralised nature of most crypto-currencies, and for their capacity to transcend national borders. Undoubtedly there will be more to review on crypto-currencies in future given the relatively brief time since inception and common usage.

The eleven articles in this book provide up-to-date surveys on contemporary topics in finance—a field that continues to evolve in practice and research. We hope the reviews will prove useful to academics, governments and policy makers, financial analysts and anyone interested in critical insights into developments in finance.

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