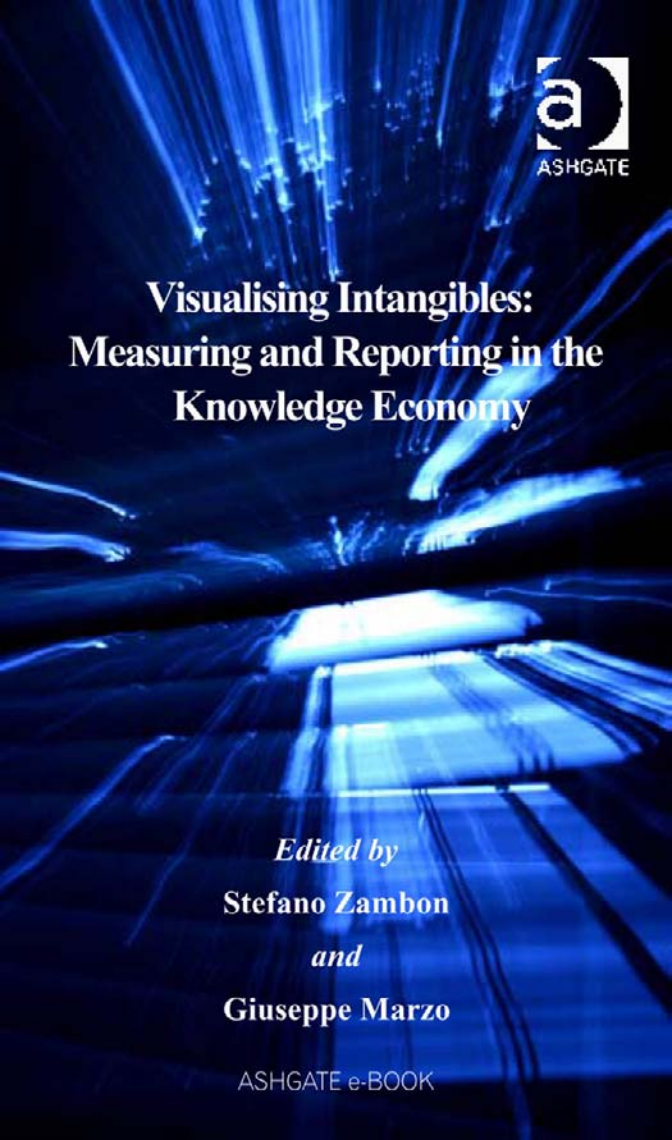
ASHGATE
Visualising Intangibles:
Measuring and Reporting in the
Knowledge Economy
Edited by
Stefano Zambon
and
Giuseppe Marzo
ASHGATE e-BOOK

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List of Contributors

Ilaria Bergamini	She worked as a research assistant at the Faculty of Economics of the University of Ferrara. Currently she is a financial analyst at an Italian bank
Patrizio Bianchi	Rector of the University of Ferrara
Michela Cordazzo	Assistant researcher, Free University of Bolzano
Vania Crosara	She worked as a research assistant at the Faculty of Economics of the University of Ferrara. Currently she is working as an Italian CPA in Ferrara.
Adele Del Bello	Post-doctoral fellow, Faculty of Economics, University of Ferrara.
Fabio Donato	Associate Professor of Business Economics and Management, Faculty of Economics, University of Ferrara
Sandrine Labory	Assistant professor, Faculty of Economics, University of Ferrara.
Baruch Lev	Philip Bardes Professor of Accounting and Finance, Stern School of Business, New York University and Director of the Vincent C. Ross Institute of Accounting Research, New York University.
Giuseppe Marzo	Lecturer of Business Strategy and Business Valuation, Faculty of Economics, University of Ferrara
Giovanni Masino	Associate Professor of Organization Theory, Faculty of Economics, University of Ferrara.
Doron Nissim	Gary Winnick and Martin Granoff Associate Professor, Columbia Business School.
Kurt P. Ramin	Chairman, XBRL International Steering Committee at the International Accounting Standards Committee Foundation, London.
Jacob K. Thomas	Williams Brothers Professor of Accounting and Finance, School of Management - Yale University.

David W. Young Professor of Management at Boston University's School of Management.

Stefano Zambon Full Professor of Business Economics and Management, Faculty of Economics, University of Ferrara

Introduction

Visualising the Invisible: Measuring and Reporting on Intangibles and Intellectual Capital

Stefano Zambon and Giuseppe Marzo
University of Ferrara

In recent years, one of the most important emerging features of economic systems and organisations is the role of intangibles in wealth creation, which are for this reason often comprehensively referred to as Intellectual Capital.

Even though intangibles have always been important for running economic activity, they are nowadays at the centre of an increasing interest by the scientific community and the practice world. The attention devoted to this subject area is becoming very substantial when considering the large number of articles and books published in the last decade or so, as well as the major events and projects promoted by numerous national and international institutions (European Commission; OECD; United Nations; various country governments such as Denmark, Japan, Germany; Brookings Institution, and so on).

The underlying reason is that intangibles are strongly considered as today's major value drivers of firms, industries and regions, and therefore to measure, analyse and manage them is a crucial effort in the direction of comprehending and improving value creation with reference to the different economic levels and sectors.

However, despite their widely accepted relevance, intangibles still appear to be poorly understood and not sufficiently investigated and analysed both by academics and practitioners. What seems to be increasingly recognised is indeed the necessity for adopting fresh approaches to the measurement and management of intangibles. Although some steps have been made towards a better visualisation of these resources, a clear knowledge gap continues to exist in this field, calling for new models, tools and methodologies significant to the realms of theory and practice.

Meanwhile, recent events and phenomena have further increased the importance of intangibles to managers, infomediaries and investors. In this perspective, the accounting standards revolution in Europe requiring the implementation of International Accounting Standards/ International Financial Reporting Standards (IAS/IFRS) has emphasised the measurement and reporting of intangibles in European companies' financial statements. IFRS 3 on Business Combinations and IAS 38 on Intangible Assets in particular, are at the centre of a lively debate on the

contents these rules should have for improving annual report information and its usefulness for economic decision-making. A comparison between IAS/IFRS and the U.S. Financial Accounting Standards (U.S. GAAP) reveals also some differences in the treatment and capitalisation of intangible assets, and potentially a different degree of disclosure between the two sets of rules, with consequences in terms of appreciation of these resources.

Moreover, the interest to make company information available in a widespread and timely fashion, and the need for a detailed and rapid benchmarking between business reports of different entities, are paving the way for new technological tools such as the eXtensible Business Reporting Language (XBRL), which can be usefully applied also to information on intangibles.

A further emerging trend is that many firms, which are dissatisfied with the current accounting treatment of intangibles, have begun to produce and often publish *ad hoc* reports for better representing these key-resources. Different contents and forms of statements have been used for this purpose in recent years, and therefore an analysis of their contribution to effectively manage and disclose intangibles/intellectual capital to various audiences appears to be potentially of great interest.

The importance of intangibles is also witnessed by the largely adopted focus on knowledge management in company practices globally. Indeed, how individual knowledge can be transferred to and operates at an organisational level, and how such knowledge can be retained and renewed by firms, are two topics inherent to the field of intangibles. All types of knowledge are in fact intangible assets of an organisation, and hence the sustained attention on knowledge management is another distinctive way to emphasize the important role of these resources in value creation.

Also policy makers are increasingly recognising the crucial role of intangibles for the competitive advantage of both nations and regions, and are supporting research programmes on the subject area. Traditionally, the weight of investments on GNP and the quality level of workforce have been at the centre of policy makers' decisions. Nowadays, nations and regions are increasingly competitive in relation to the knowledge capital they possess, but economic theory and statistical indicators are still unable to capture the value and complexity of intangibles. Thus, the quest for a new approach to measuring, analysing and valuing intangibles is fastly emerging also at a meso and macro level.

The awareness of the need for new research on intangibles is the fundamental drive that stimulated this book. It derives from a two-year interdisciplinary project, funded by the Directorate General "Information Society Technologies (IST)" of the European Commission, and named PRISM ("Policy making, Reporting and measuring Intangibles, Skills development, and Management" – http://www.euintangibles.net). In particular, the research presented in this book essentially collects the revised version of the studies developed within the Ferrara University's research unit on "Accounting, financial analysis and audit in the intangible economy" led by Prof. Stefano Zambon. The research outcomes of this unit have been integrated into this publication accompanied by other works of distinguished scholars dealing with important and emerging topics in the field[1].

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1 In 2004 Ashgate published a book titled "The Economic Importance of

The book aims to offer new insights into the measuring, reporting, evaluation, and management of intangibles, and the use of associate information in a variety of contexts and settings, not only linked to profit-making entities and the micro level.

Chapter 1 by Stefano Zambon and Vania Crosara analyses the effect that the new U.S. accounting rules on business combinations (SFAS 141 and SFAS 142) have initially produced on net income and shareholders' equity of European companies listed on the American stock exchanges (Nyse and Nasdaq). For the first time, in 2002 these companies had to prepare their consolidated accounts according to these U.S. standards. In this way, the chapter aims also to estimate the income and equity effects of the rules set by the International Accounting Standards Board (IASB) in this area – i.e. IFRS 3 – which closely reflect SFAS 141 and SFAS 142. Indeed, as a consequence of the E.U. regulation requiring the use of International Accounting Standards/International Financial Reporting Standards (IAS/IFRS) by listed European companies for their consolidated accounts from 2005 onwards, the above U.S. rules on business combinations have become *de facto* extended also to the European context. A further aim of the chapter is to assess the amount of disclosure originally released by European companies to the U.S. market in respect to the new accounting treatment of goodwill and its component parts.

In Chapter 2, Giuseppe Marzo provides an evaluation of the real options theory in analysing and measuring intangible assets. This seems to be a promising approach for valuing intangible assets. Nevertheless, a deeper understanding of how it can be effectively employed requires an accurate analysis of both the reasons and the scope of such a use. This chapter firstly highlights how a real options lens can be utilised for interpreting some characteristics of intangible assets, hence delineating the theoretical foundations to the adoption of such an approach for valuing these resources. Secondly, it focuses on the relationships between intangible assets and real options' value. Furthermore, a conceptual model addressing intangible assets' risk is framed in the light of the real options theory.

In Chapter 3, David Young focuses his attention on the evolution of accounting from the point of view of the development of Generally Accepted Accounting Principles (GAAP), highlighting that the major thrust has essentially been so far to make the financial reports of all organizations reflect these principles more accurately. In many respects, the quest has been for an appropriate combination of relevance and reliability. GAAP had defined what was relevant, and over time accounting standards were developed in an effort to improve reliability. For several reasons, however, and most notably the growing significance of intangible assets, GAAP no longer is sufficiently relevant for the financial community. The purpose of the chapter is to discuss why this is so, and to propose a set of principles to

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Intangible Assets" edited by Patrizio Bianchi and Sandrine Labory, which collects the research outcomes of the other PRISM project's research unit based at the University of Ferrara and led by Patrizio Bianchi. This unit was devoted to the study of the "Policy implications of the intangible economy". The interactions between the two Ferrara research teams within PRISM have been rich and mutually beneficial, and they are witnessed, *inter alia*, by the chapters that each of the two units' leaders have contributed to the Ashgate book edited by the other.

supplement GAAP, called Generally Accepted Intangibles Principles or GAIP. Like the GAAP, the proposed GAIP are at a very general level. Once they or a modified set are deemed relevant, efforts can take place to improve the way data are measured and reported, i.e. reliability. These efforts would likely be the responsibility of a standard-setting body, comparable to the Financial Accounting Standards Board (FASB) in the United States.

The increasing importance of intangible assets as the fundamental value drivers has brought about some criticism to the traditional financial statements, since their inadequacy in addressing the issue of intangibles, and has stimulated the emergence of an alternative intangibles-oriented form of corporate reporting, i.e. the Intellectual Capital (IC) statement. However, in the recent past other innovative reports are being more and more frequently produced by companies, such as environmental and social reports. Michela Cordazzo, in Chapter 4, addresses whether IC statements have some points of contact with those reports, or whether they should be considered as a brand new reporting model, independent of and completely detached from the other two. Through an empirical analysis with specific reference to the Italian context, the study reveals that there is a high level of dispersion in the information composing of environmental and social reports; that a significant overlapping of data between these two sets of documents exists; and more importantly that a quite relevant set of information is in common between the environmental and social reports on the one hand, and IC statements on the other hand.

The usefulness of disclosure on intangibles displayed by traditional financial statements is at the core of Chapter 5 by Baruch Lev, Doron Nissim and Jacob Thomas, who investigate as to whether capitalisation and subsequent amortization of R&D expenditures improve the information conveyed by earnings and equity book value about intrinsic equity value. Indeed, under U.S. GAAP reported balance sheets and income statements are based on immediate expensing of R&D expenditures. These authors proceed to capitalise those expenditures, and derive adjusted equity book values and earnings using simple amortization techniques (straight-line over assumed industry-specific useful lives). After confirming that such adjustments increase the association of book values/earnings with contemporaneous stock prices (and future earnings), Lev, Nissim and Thomas examine the relationship between those adjustments and future returns. Despite the approximate nature of those adjustments, they are able to predict stock price movements over the next 20 months. Apparently, capitalization and amortization of R&D provides information not fully reflected in stock prices.

In Chapter 6, Stefano Zambon and Ilaria Bergamini investigate and rank the level of publicly available disclosure on intangibles provided by Italian, French, German and U.K. listed companies, using a model jointly developed in 2002 by the University of Ferrara and the Italian Association of Financial Analysts (AIAF). The basic framework of this model is three-dimensional: it divides information between forecast and actual; it distinguishes six communication dimensions for intangibles (strategy and business model; innovation & IPRs; human resources; organisation; customers and market; corporate governance); and it catalogues companies according to diversified communication levels depending on the completeness and depth of information provided (“minimum” information, “reasoned” information, extended

information). The results seem to outline quite distinctive patterns of intangibles disclosure in the examined national contexts, which are somewhat surprising with reference to the standard views elaborated by the international accounting theory on the general disclosure level of those countries' companies.

Chapter 7 by Adele Del Bello addresses a rather unexplored but significant issue, i.e. the attitude and methodologies of credit rating agencies vis-à-vis intangible assets during their rating process. The paper probes into the methods utilised in this area by the three most important international rating agencies: Standard and Poor's, Moody's, and Fitch Ratings. As a result of an analysis of these agencies' rating methodologies and some semi-structured interviews, it emerges that for all three entities ratings are essentially based on financial data. Despite the frequent reference to specific intangibles in the internal manuals, it appears that there is no official structured algorithm or procedure followed by these agencies to track down in an organic and formalised way the role of intangibles in their evaluation process. Nevertheless, the presence of these assets, and in particular of qualified human capital, company reputation and branding, and good management credibility and track record, seems often to be related to the granting of higher level ratings. Hence, some common informal guidelines aiming at valuing intangibles appear to emerge, even though the rating of these resources is still largely based upon individual analysts' experience.

Chapter 8 by Kurt Ramin focuses on eXtensible Business Reporting Language (XBRL), a dialect of the internet language XML (eXtensible Mark-up Language), which applies specifically to business reporting with a particular focus on financial reporting. XBRL enables both preparers and users of accounting information to process, publish and exchange information more efficiently, and to analyse data more quickly. XBRL aims to bring standardization to the business information supply chain, thus improving the efficiency of communications to investors, financial markets, and other stakeholders. In the context of Intellectual Capital, this technology introduces an efficient way to understand the treatment of intangibles and related information from entity to entity and from country to country. Finally, XBRL enables the consumer of the information to distinguish different forms of "capital" in company reporting. Monetary, financial, and intellectual capital can then be disclosed in a coherent manner by sharing a common set of definitions and tags.

In Chapter 9, Giovanni Masino addresses the necessity of building a better "intangible assets-based theory of the firm". He focuses his attention on the role of power, pointing out the lack of attention to power issues by the intangibles scientific community, while examining some reasons for their importance. The chapter explores why power is a very relevant intangible in itself, and analyses its relationships with other intangible resources. It finally highlights the benefits of exploring different epistemological directions from the standpoint of such a central but neglected intangible.

Fabio Donato in Chapter 10 opens up a new, fresh perspective, dealing with the management and reporting of intangible assets in non-profit entities, and in particular cultural organisations. Through the analysis of two case studies (the Royal Opera House in Covent Garden, London, U.K.; and the Teatro dell'Opera in Rome, Italy) and their performance measurement systems, the chapter underlines

the "ontological" importance of these resources for cultural organisations, their objectives, and day-by-day operations. It also suggests an innovative categorization of intangibles suitable for opera houses, which can be fruitfully used either on a quantitative or a qualitative/descriptive basis.

In Chapter 11, Patrizio Bianchi and Sandrine Labory argue that there are four main policy indicators of intangible assets at macro level, corresponding to four main intangible assets: human capital, innovation and knowledge base, organisational capital, and social capital. Existing indicators of such assets are imperfect, so that these resources result in either being badly measured or not measured at all. Therefore, policy prescriptions based on such indicators cannot be optimal. As a consequence, in order for policy to be effective in the intangible economy, a first step is to improve macro indicators. Authors suggest a number of ways to ameliorate the measurement of such indicators, which include the use of surveys, the stress on the local level relative to the global one, and the emphasis on the need to take account of complementarities.

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Stefano Zambon
Giuseppe Marzo
University of Ferrara
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