

# **Backing Market Forces:** How to Make Voluntary Standards Markets Work for Financial Services Regulation



**November 2013**

A joint paper from BSI, the Chartered Institute for Securities & Investment and Long Finance.

## About the Publishers



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**Z/Yen Group** is the City of London's leading commercial think-tank founded to promote societal advance through better finance and technology. Headquartered in London, Z/Yen was founded in 1994 to promote societal advance through better finance and technology and has built its practice around a core of experienced project managers, supported by technical specialists around the world so that clients get expertise they need, rather than just resources available. Z/Yen's strength is in wholesale finance strategy, intelligence and research where it applies its Z/EALOUS risk/reward methodology for banks, investors, corporate treasuries, information providers, exchanges, insurers, trade associations and alternative risk vehicles.



**The Long Finance** initiative began in 2005 when Z/Yen Group and Gresham College, with support from the City of London Corporation, began asking "when would we know our financial system is working?" This question led to Long Finance's London Accord, an agreement now shared by over 50 investment research firms to share environmental, social and governance research with policy makers and the public. Through its programmes, events and publications, Long Finance aims to expand frontiers, change systems, deliver services, and build communities through meetings, networking and events that address finance over lifetimes and centuries.

# **Backing Market Forces:**

## How to Make Voluntary Standards Markets Work for Financial Services Regulation

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## Foreword

The closing weeks of 2013 have seen another catalogue of woes for the world's big banks, even as growth seems to be rooting itself in the global economy. Investigations into the manipulation of the world's foreign exchange markets is only just beginning. In Europe, Lloyds' bills for payment protection mis-selling now tops £8 bn. Rabobank has been fined \$1 bn for rigging interbank rates. The roll-call of dishonour sometimes seems endless. It is certainly senseless.

Most big banks face a list of major misdemeanours. On the other side of the Atlantic, JP Morgan has agreed to pay a shocking \$13 bn to settle actions regarding alleged mis-selling of mortgage-backed securities.

It is high time for banks to press the 'reset' button and change their cultures for good. The Chartered Institute for Securities & Investment (CISI) is delighted to have been invited to join BSI in supporting this important research project into standards by Alderman Professor Michael Mainelli, Chartered FCSI and his team. During the course of 2014, we will be engaging with our 20,000 members around the world through our extensive events programme, our online channels and our member-led Professional Forums, in partnership with the dozens of global banks and regulators with whom we have close working relationships, to understand how we can best help develop Professor Mainelli's wide-ranging and fascinating proposals.

**Simon Culhane**, Chartered FCSI  
Chief Executive  
Chartered Institute for Securities & Investment

## About the Authors

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Michael is a non-executive director of the United Kingdom Accreditation Service [disclosure, though we do not believe this constitutes a conflict of interest] overseeing UK laboratories and quality standards, and has also worked deeply with both the Marine Stewardship Council and the Programme for the Endorsement of Forestry Certification on standards markets and governance.

Michael is a Chartered Fellow of the CISI and a Fellow of the Association of Chartered Certified Accountants.

**Chiara von Gunten**, Senior Consultant and Researcher – Chiara is an experienced researcher and project manager. She joined Z/Yen Group initially to project manage the London Accord, a collaborative initiative with leading financial organisations, academic centres and NGOs providing free access to investment research on environmental, social and governance issues. Chiara has conducted research on alternative currency and exchange systems as well as the integration and use of biodiversity related data in finance. She has also worked on system implementation, change management and performance review projects for large not-for-profit organisations in the UK. One recent project for Chiara, undertaken with Michael, was examining the use of sustainable forestry certification in finance for the Programme for the Endorsement of Forestry Certification (PEFC). Chiara holds an MSc in Environment and Development (Distinction) from the London School of Economics and an MA in International Relations (Distinction) from the Graduate Institute of International Studies.

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# 1. Executive Summary

**“For a regulator, the answer to every regulatory problem is another regulation.”**

*Dr Andrew Hilton, Director, Centre for the Study of Financial Innovation*

A voluntary standards market is “a commercial system in which actual and potential buyers and suppliers of products and services rely on conformity assessments”. Conformity assessments are carried out against standards and can consist of self-certification, second party and third party independent verification and certification. Voluntary standards markets are used widely in all industries. Voluntary standards markets bridge unregulated markets and regulated markets.

Numerous debates around the world call for more intensive regulation of financial services. Regulation, however, requires resources and changes, even reduces, competition. This report argues that voluntary standards markets could be used more widely in financial services; that voluntary standards markets would be a better approach in some existing areas of financial services regulation; and that regulators should consider promoting voluntary standards markets in areas of nascent regulation before introducing new regulations or legislation.

## Overview

Though voluntary standards markets are already used in finance, e.g. ISO 22222 (personal financial planning), BS 8453 (financial services compliance framework), ISO 27001 (information security) or ISO 20022 (universal messaging systems). BSI, the UK's National Standards Body, and the Chartered Institute for Securities & Investment (CISI) commissioned this research to have the potential of voluntary standards markets in financial services independently verified. BSI and CISI's interest in undertaking this research is threefold:

- to provide leadership within the standards and accreditation industry;
- to investigate new roles for standards markets;
- to promote awareness of the existing and potential role of standards markets in finance, with a particular focus on regulators.

To fulfil these objectives, this research project engaged directly with a cross-section of the financial services sector, including insurance, banking, asset management, trading and investment banking professionals in interviews, workshops and questionnaires. The research included engagement with the financial regulatory community, industry bodies, emerging schemes, and the accreditation and certification communities.

## Findings

The central finding of this report is that voluntary standards could play a greater role in rebuilding a safer and more trusted financial services sector.

Voluntary standards markets are already used in financial services. That said, financial services appear to be a relatively low user of voluntary standards markets compared to other sectors, as measured by published standards and standards under development at ISO level. ISO Technical Committee 68 for financial services has published over 50 international standards and has 21 more under development.

Other international bodies (e.g. Financial Stability Board, OECD, IMF, IOSCO) are involved in setting standards for financial services aimed at improving the stability of the financial system nationally and internationally. Wider international financial services standards development appears distinct from ISO standard development and better integration should be encouraged on common areas of work.

Financial services are a heavily regulated sector and financial regulation is complex, involving different actors at industry, local, national, regional (e.g. EU) and international levels. Voluntary standards markets could, however, play a greater role in increasing transparency and improving industry practices while encouraging competition, especially in light of developments at the European level towards regulation featuring voluntary standards. A ‘New Combined Approach’ to regulation in the financial services sector could bring benefits in terms of more rapid reform with participation from the sector, lower costs of regulation and increased confidence in the components of the financial system. Participants in this study indicated that they would welcome people, product and process standards alone and in combination with government regulation.

Proposals and discussions are underway to develop voluntary standards in new areas of financial services including anti-money laundering, capacity trading, central bank management, hedge funds, peer-to-peer insurance and lending, to name a few. By involving a wide range of current and potential stakeholders, we hope that the findings:

- highlight the potential role of accreditation and certification schemes for financial services at a national and international level;
- provide regulators with a basis for an informed discussion about alternative regulatory approaches;
- enhance the visibility of voluntary standards markets within financial services firms and related trade associations and professional bodies;

- contribute to a wider and more complete understanding of how voluntary standards markets can underpin innovation and enhance competitiveness.

off' when voluntary standards markets are working, which in turn should provide a benefit of reduced compliance costs.

## Recommendations

Five main areas were identified where industry stakeholders, standard-setting bodies as well as policy makers and regulators could foster voluntary standards market development for the financial services sector.

The first recommendation – **“promote ‘New Combined Approach’ for financial services regulation featuring voluntary standards markets”** – recognises the need for publicity programmes at industry, national and regional (EU) level to increase awareness of voluntary standards markets and seize opportunities for the use of voluntary standards as part of new regulatory initiatives or reforms. Included in this might be a ‘task force’, with regulatory participation, to promote the New Combined Approach.

The second recommendation – **“better coordination of existing voluntary standards development efforts relevant to the financial services sector”** – recognises that many organisations at national, regional (e.g. EU), and international level are involved in voluntary standards development for financial services, including ISO, national standard bodies (e.g. BSI) as well as the Financial Stability Board and other regulatory bodies in the sector. Coordinating efforts and consultations could bring additional benefits in terms of efficiency, but also increase the use of voluntary standards markets in the future.

The third recommendation – **“produce more evidence of voluntary standards markets benefits and costs”** – acknowledges that while there is awareness of voluntary standards markets, further understanding of voluntary standards markets, and of related costs, benefits, risks and opportunities, is needed. Such evidence would also be useful to monitor the evolution of voluntary standards markets, and better document their impact on the wider economy.

Voluntary standards markets cannot emerge without a community of stakeholders. The fourth recommendation – **“establish a financial services community around voluntary standards markets”** – is deemed necessary to build confidence in voluntary standards markets, to encourage participation, and to improve the visibility and credibility of the industry. The community should seek to promote dialogue among regulators, standard-setting bodies, trade associations and professional institutes as well as with relevant government bodies and officials.

Finally, efforts should also be devoted to **“integrating voluntary standards markets for financial services with wider government policies”** in order to increase the attractiveness of standards, improve surveillance and cost reduction of accreditation and certification processes, and to increase dialogue on the promotion of competition and development of markets. This requires regulators to ‘back

## 2. Background

### 2.1 Objectives and Scope

In June 2013, BSI and the Chartered Institute for Securities & Investment (CISI) commissioned Z/Yen to conduct research into how voluntary standards markets might be applied to financial services regulation and to provide independent verification of their potential in the financial services sector. The research was conducted from June to October 2013. The final report was intended to illustrate the use of standards in other industries, the drivers behind their development, the application of existing standards in the financial services sector, other areas in financial services to which standards markets might also be applied, and who might be the potential users of new standards for areas of financial services.

### 2.2 Approach and Methodology

Z/Yen uses Z/EALOUS, a six-stage general problem-solving approach to help make better decisions. For this project, the six relevant stages were:

1. Establish Endeavour – understand problem(s) and stakeholders needs to clarify the aims, objectives and approach to this research.
2. Assess & Appraise – gather knowledge and clarify scope through desk research, a first workshop on the role of voluntary standards markets in finance and an awareness survey.
3. Lookaheads & Likelihoods – establish current opinions, case studies and needs through semi-structured interviews.
4. Options & Outcomes – collate and analyse survey responses, carry out further desk research as required and plan a second workshop to discuss interim findings.
5. Understanding & Undertaking – feedback and review by concluding interviews and summarising findings as well as writing the draft report.
6. Securing & Scoring – evaluate and publish through reviewing, quality assuring and finalising the report; preparing presentation materials and holding a roundtable event to launch the report and publicise findings.

Desk research was carried out to understand the role and benefits of voluntary standards in financial services as well as other industries; to analyse formal standardisation in financial services including existing, 'hidden' and upcoming standards; and to identify gaps and areas in financial services where similar benefits of voluntary standards markets could emerge, including potential standards, potential buyers as well as the potential for complementarity between standards and regulation.

Semi-structured interviews attempted to ascertain how people felt about standards in financial services and in general. These interviews covered:

- the appetite for standards markets within the financial services sector;
- perception of feasibility of implementing standards in financial services;
- what standards initiatives are taking place or being planned;
- what might be the potential barriers to standards markets for financial regulation;
- what would be the priority areas for applying standards markets more widely within financial services;
- who might be potential buyers of such standards.

Face-to-face interviews were conducted in the UK, USA, Switzerland and Germany. There were numerous international telephone interviews. Interviews were conducted under conditions of personal non-attribution. Appendix 2 contains a list of interviewee titles. Interviewees came from a wide range of firms with an interest in financial services, which are credited in Appendix 5, without in any way implying that these firms support the results of this research.

Two events were held in London to discuss the role of voluntary standards markets in finance (10 July 2013) and to present interim findings (10 September 2013). Appendix 1 provides a summary of both events. Around 35 people attended each event, including financial and business services professionals, trade associations and professional institutes representatives.

An awareness survey was designed and sent to interviewees, trade associations, and members of the Long Finance community to inform the research on the level of awareness of voluntary standards markets for the financial services sector. 112 individuals answered the questionnaire, primarily from the financial and professional services sectors, but also government, regulators, industry suppliers, academia, and industry trade associations. Appendix 3 provides an overview of the responses.

### 2.3 Audience

This report has at least two distinct audiences: those who work in financial services and its regulation, and those who work in accreditation and certification. Financial services are often distinctly retail (consumer facing) or wholesale (corporate or financial firm facing). Equally, they can be

distinctly product-based, e.g. banking, insurance, investment management or trading. Financial services firms can be extremely local, e.g. a local credit union; or global, e.g. a universal bank. Financial services regulation can be local (e.g. US states), national (e.g. a central bank), regional (e.g. EU), or global (e.g. Bank for International Settlements, BIS), as well as organised by sector and type of activity.

Within the accreditation and certification sector, there are numerous sub-sectors. There is a government facilitated sector, e.g. in the UK the United Kingdom Accreditation Service and related certification bodies such as BSI or Lloyd's Register. There is a thriving non-governmental sector, e.g. sustainable fishing or forestry, or organic food. There is an EU standards system, and a global standards system based around the International Standardization Organisation (ISO).

This report is directed at both audiences, asking "why not consider the use of voluntary standards markets more often in financial services regulation?" Although writing about a broad global subject, this report was largely written in London's financial services centre and draws upon experiences and activities therein. It is beyond the scope of this report to attempt to encompass the richness of regulation, financial services and voluntary standards markets globally. Thus, many of the examples may seem UK or European-centric. That said, there is no reason to believe that the conclusion, i.e. voluntary standards markets could play a much larger role in rebuilding a safer and more trusted financial services sector, is less applicable throughout the EU, or the Americas, Asia, Africa, or Australasia.

## 2.4 Standards – Historical Context

Whenever the public perceives risk, standards start to emerge. The risk may be as simple as finding common parts that need to fit together for railways, or as complicated as specifying safety procedures for the latest nanotechnology. Standards have existed since the dawn of commerce. The Bible records measures such as the cubit, mina, bath or cor. Some researchers go so far as to try and recreate standards that may have existed, such as the megalithic yard, a theoretical unit of prehistoric measurement first suggested by the Scottish engineer Alexander Thom in 1955 and popularised in a number of books [see Knight and Lomas 2001, or Knight and Butler 2004].

Looking back a century, by 1914 London had over 70 power stations. That variety of power created a standard problem in risk. To quote Peter Ackroyd :

**The variety of lighting supplies at first had the effect of turning London into an unevenly lit city; each of its twenty-eight boroughs made their own arrangements with the suppliers of electricity, which meant that a car travelling at speed in the 1920s might pass from one street bathed in a very high light intensity to one shrouded in comparative darkness. ... The many accidents in the 1920s, however, created a demand for a level standard of illumination, which in turn led to a**

**standardisation of lamp-posts with columns 25 feet high and 150 feet apart. It is one aspect of London life which even the most knowledgeable citizens scarcely notice, and yet the uniformity of lighting in the major streets is perhaps the most significant aspect of the modern city. [Ackroyd 2000, 446]**

When a risk reaches the point of public perception that 'something must be done', two extreme points of view tend to emerge. Government economists trot out, almost by rote, 'Regulate It', the justification for government intervention being 'market failure – externalities, information asymmetries and agent problems'. These charges can be laid at any market. Almost any market has externalities, there is never perfect information symmetry and markets of any scale typically require agents to function. When things are regulated, then the Law of Unintended Consequences, Goodhart's Law, Ashby's Law of Requisite Variety and several other well-honed observations seem to recur.

Market economists trot out, almost by rote, 'Leave It Alone', the justification being that the costs of bureaucracy, the stifling of innovation, and the inability to regulate organisations or people who will operate outside the regulated market. Arguably, there is no example of a completely 'free market', i.e. one which doesn't use public services, depend on government enforcement via contract or force, or doesn't rely on a wider regulated economic system. When pushed, people in markets fight for self-regulation or publish codes of good practice. What both sides often seem to overlook is that markets can evolve to develop their own, quite effective regulation.

Quality and certification were originally thought of as almost solely product standards. The first UK meetings of the Engineering Standards Committee in 1901, where the number of gauges of tramway rails was reduced from 75 to 5, brought such savings that by 1903 foundations were laid for the world's first national standards organisation. The British Standards Institution (BSI) was a voluntary body, formed and maintained by industry, approved and supported by Government, for the development of technical standards. The need to show buyers that goods were 'up to standard' led to the British Standard Mark – now known as the BSI Kitemark™ and first registered as a trademark for tramway rails in 1903.

Formal quality process standards began life soon after the Second World War. The US and UK governments devised AQAPs (Allied Quality Assurance Procedures) as a means of standardising and controlling military supplies. This proved successful and appealed to large commercial businesses as a mechanism for controlling their suppliers. The task of drawing up a quality assurance standard that has universal application proved onerous; it was not until 1979 that BS 5750 (from 1987 it became ISO 9000) was first published. It was written from a manufacturing viewpoint, although it was stated that the words 'products' and 'services' were interchangeable. By the end of the 1980s, ISO 9001 was widespread in UK manufacturing and large purchasers began

to ask their service sector suppliers about quality assurance. Many professional bodies (e.g. The Law Society and the Royal Institute of Chartered Surveyors) produced profession-specific guidelines interpreting ISO 9000.

Numerous areas of commercial life seek to 'regulate' without legislation and succeed through the use of voluntary standards markets, for instance, ISO 9001/ISO 14001 or credit card IT security or test laboratories or the various television standards, NTSC, PAL, SECAM. Standards markets are also used successfully by the environmental and ethical communities and include certification schemes such as the Marine Stewardship Council, Fairtrade or Social Accountability International.

### CORGI – private sector and safety

A good example of a private sector led initiative, the Confederation for Registered Gas Installers (CORGI) was first established in 1970 to operate as a voluntary register for gas installers in the UK. The scheme was established in response to concerns over safety and following a gas explosion in 1968, which led to the partial collapse of a tower block (Ronan Point) in London.

In 1991, the Health and Safety Executive (HSE) asked CORGI to keep a register of competent gas installers in the UK. CORGI became the Council for Registered Gas Installers (CORGI) and registration became a legal requirement under the Gas Safety (Installation and Use) Regulations (1998) for any gas installation business in the UK. Around 50,000 businesses in the UK employing nearly 110,000 gas operatives were registered.

In 2006, HSE conducted a consultation on the future of domestic gas safety, which concluded that there was a need to modernise and improve the transparency of the framework, particularly as CORGI had some commercial interests, in order to bring added benefits to users, gas installation businesses and employees. Thus CORGI was replaced by a more directly controlled entity, the Gas Safe Register, on 1 April 2009, though public recognition of the old CORGI brand greatly exceeds this scheme's recognition so far.

For further information –  
<http://www.gassaferegister.co.uk/>

## 2.5 Financial Services – An Overview

The financial services industry provides key intermediation services within the financial system. A financial system is composed of five key elements: (1) money; (2) financial institutions; (3) financial instruments (including loans, stocks and bonds); (4) financial markets (like stock exchanges); and (5) central banks. Well-functioning financial systems provide good and easily accessible information that lowers transaction costs, which in turn improves resource allocation and boosts economic growth.

Financial services mobilise savings and allocate credit across time and space. Critical functions include:

- facilitating transactions and payments;
- mobilising savings and matching savers and investors;
- allocating capital funds (credit) efficiently;
- monitoring managers and providing information;
- transforming risk through pricing, pooling and trading;
- increasing asset liquidity.

Financial services typically include:

- banks – investment banks and commercial banks;
- insurance – insurance brokerage, underwriting and reinsurance;
- investment – asset management, hedge funds, pension funds;
- exchanges – equity, bond, securities, currency;
- auxiliary service providers – independent financial advisors, actuaries and intermediaries.

Companies in this industry engage in financial transactions and create, purchase, sell and liquidate financial assets such as securities, bonds, and insurance. Demand is driven by business activity, returns on investment and consumer income. Large companies often have advantages in access to cheaper capital, participation in large-scale transactions, and name recognition. Small companies can compete effectively through customer service, knowledge of the local market, and specialisation. [First Research 2013]

While many firms operate in the sector, the majority of transactions or assets tend to be concentrated. Taking banking as an example, the sector is typically dominated by a few very large financial institutions. To give an idea of the economic significance and size of the banking sector, Figure 1 provides financial information for the top five banks globally as of the end of 2012.

**Figure 1 – Top five global banks**

Bank Name	Tier 1 Capital (USD millions)	Total Assets (USD millions)	Profits (USD millions)	Return On Assets (ROA) (%)	Capital Adequacy Ratio (CAR)(%)
ICBC	160,645	2,788,905	49,075	1.76	5.76
JP Morgan Chase & Co	160,002	2,359,141	28,917	1.23	6.78
Bank of America	155,461	2,212,004	3,071	0.14	7.03
HSBC Holdings	151,048	2,692,538	20,649	0.77	5.61
China Construction Bank Corporation	137,600	2,221,435	39,974	1.8	6.19

[Source: The Banker Database 2013]

Financial markets are huge and include the lending, foreign exchange, equity and insurance markets. While it is difficult to get an accurate picture of the significance of each segment or market, Figures 2 and 3 provide an indication of financial markets share by country as well as the UK share of financial markets between 1992 and 2012.

Looking at the largest exporters of financial services helps to provide an indication of the economic significance of the industry. Financial services contribute significantly to GDP and employment. In Europe, financial services generate nearly 6 % of EU GDP and, together with related professional services,

employ over 11 million people [TheCityUK 2012]. In the UK, the financial and professional services industry accounted for 13.5 % of GDP in 2011 and employed over 2 million people [TheCityUK 2012].

The financial crises since 2007 have revealed the complexity of the financial system, the scale of systemic risks as well as the degree of interdependence between the system’s components and actors. The crises have also revealed the growing disconnect between societal objectives and the objectives of firms operating within the financial system. Financial services have still to win back the trust of society or governments.

**Figure 2 – Financial markets share by country (%)**

	US	UK	Japan	France	Germany	USMC	Hong Kong	Others
Export of financial services (2011)	11	11	11	8	8	2	1	14
Financial services turnover (2011)	11	10	6	2	2	6	1	13
Exchange listed companies, number of companies listed (2012)	7	14	2	—	8	—	1	40
Foreign direct investment in financial services (2011)	11	13	2	7	4	1	1	13
Market capitalisation of banks, end 2011	11	6	6	4	4	1	1	54
Fund management assets as a % of funds, end 2012	1	15	7	2	2	—	1	31
Money market turnover (2011)	10	15	2	1	—	7	1	14
Private equity investment in financial services (2012)	10	14	1	6	2	1	—	20
State liability – government (2011)	2	12	2	1	1	—	—	17

[Source: TheCityUK 2013, 5 – with permission]

**Figure 3 – Largest global net exporters of financial services**



[Source: TheCityUK 2013 and UNCTAD – with permission]

## 3. Voluntary Standards Markets

### 3.1 The Essentials of a Voluntary Standards Market

Standards markets are voluntary, typically industry-driven, alternatives to regulation through legislation, as well as an alternative to a purely free market approach. Standards aim to increase trust in markets by seeking improved quality while reducing risks. While regulation is imposed and typically controlled by a quota of time or resource, a standard may emerge from market choice. Standards can complement regulation while still supporting competition. Standards are part of markets.

A 'standard' is an authoritative principle, rule, model, pattern or procedure used for guidance in assessing something, by comparison with which the quantity, excellence, correctness, or other criterion of the thing is assessed. Some definitions of 'standard' include the idea of a universally agreed set of guidelines for interoperability. The military emphasise usability, such as this NATO definition of standards – "By helping to achieve interoperability – the ability of diverse systems and organizations to work together – among NATO's forces, as well as with those of its partners, standardization allows for more efficient use of resources. It therefore greatly increases the effectiveness of the Alliance's defence capabilities." [NATO] Related concepts include benchmark, criterion, gauge, measure, comparison, touchstone or yardstick.

ISO defines a standard as "a document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose". Considerations on COM(2011)315 – European Standardisation [European Commission 2011, 8], states: "The primary objective of standardisation is the definition of voluntary technical or quality specifications with which current or future products, production processes or services may comply." It points to the World Trade Organisation (WTO) founding principles of standardisation, viz.: "coherence, transparency, openness, consensus, voluntary application, independence from special interests and efficiency".

A 'market' consists of buyers, suppliers, competition and regulation. 'Market forces' are those of supply and demand. In order to have a successful market, there need to be standards, prices, settlement and enforcement. A voluntary standards market is a commercial system in which actual and potential buyers and suppliers of products and services rely on conformity assessments. Conformity assessments are carried out against standards and can consist of self-certification, second party and third party independent verification and certification. Conformity assessments can take the form of certificates or logos, such as BSI Kitemark™, which can be used to promote successful assessment.

### More on voluntary standards markets

To summarise voluntary standards markets, a joint UKAS and BSI booklet, "Standards and Accreditation: Tools for delivering better regulation" [BSI and UKAS 2013, 9], states:

"Standards are market-defined solutions that capture current good practice and encourage its use throughout the economy. They are developed on the basis of consensus of all interested parties, are subject to unrestricted open consultation and undergo systematic review to ensure their continuing validity.

Standards are voluntary in that there is no obligation to apply them or comply with them, except in those few cases where their application is directly demanded by regulatory instruments. They are tools devised for the convenience of those who wish to use them.

Standards help to:

- facilitate international trade, particularly by reducing technical barriers;
- provide a framework for achieving economies of scale, efficiencies and interoperability;
- enhance consumer protection and confidence;
- support public policy objectives;
- where appropriate offer effective alternatives to regulation.

Standards take a number of forms including specifications, codes of practice, guides, test methods, vocabularies and classifications. BSI publishes standards that are national (British Standards: BS), European (BS EN) or international (BS ISO/ BS IEC), as well as specifications called Publicly Available Specifications (PAS). PAS are fast-track documents, sponsored by a client and produced on the basis of consensus and public consultation.

Put simply: standards exist principally to highlight common expectations of a product, service or process."

## 3.2 Conformity Assessment, Certification, Accreditation

Conformity assessment is any activity to determine, directly or indirectly, that a process, product, or service meets relevant technical standards and fulfils relevant requirements. The World Trade Organisation (WTO) governs conformity assessment through the Agreement on Mutual Recognition in Relation to Conformity Assessment (4 July 2000). Conformity assessment activities can include testing, surveillance, evaluation, inspection, calibration, auditing, registration, and certification. As expected, there are standards for conformity assessment, most notably:

- ISO/IEC 17025 Laboratory testing;
- ISO/IEC 17025 Calibration;
- ISO/IEC 17020 Inspection bodies;
- EN 45011 – ISO/IEC 17065 Product certification ;
- ISO/IEC 17024 Certification of persons;
- ISO/IEC 17021 Management systems certification.

A distinction is made between ‘certification’ and ‘accreditation’ (see box on standards setting, certification and accreditation). Certification comprises all conformity assessment activities. Accreditation is assessment, in the public interest, of the technical competence and integrity of the organisations offering conformity assessment. As UKAS<sup>1</sup> states: “Accreditation is a formal, third party recognition of competence to perform specific tasks. It provides a means to identify a proven, competent evaluator so that the selection of a laboratory, inspection or certification body is an informed choice.” If certification is equivalent to ‘auditing’, then accreditation is ‘auditing of the auditors’.

The first century Roman poet, Juvenal, quipped, “Quis custodiet ipsos custodes?” (Satire VI, lines 347–8), “Who will guard the guards themselves?” In like-minded questioning, who accredits the accreditors? Constant guarding could result in an infinite series of accreditation and auditing; however the European solution, increasingly common in other jurisdictions, is to appoint a national accreditation body and to have it audited by its peers. The European cooperation for Accreditation (EA) is the peer association of national accreditation bodies. Members of EA are the nationally recognised accreditation bodies of the member countries, or the candidate countries, of the European Union and EFTA. EA operates under Memoranda of Understanding with the Commission of the European Communities and EFTA. The members agree common policies with regard to accreditation and work towards the mutual recognition that is achieved through membership of the EA Multilateral Recognition Agreement.

<sup>1</sup> Disclosure: Professor Michael Mainelli is a non-executive director of UKAS

Accreditation provides the basis for the recognition of conformity assessment bodies attesting conformity to the requirements of European Directives and Regulations. The European Commission’s New Approach is that accreditation will be defined as a service of general interest, representing the last authoritative level of control of the conformity assessment services delivered both in the voluntary sector, and in the future, in the regulated sector.

Certification must be competitive in order to enhance economy, efficiency and effectiveness, but accreditation need not be competitive. The EU perspective is –

**Where Member States decide to operate accreditation, they shall establish or have established and maintained under their jurisdiction a national accreditation body. Where accreditation is not operated by the public authorities themselves, Member States shall entrust the national accreditation body with the operation of accreditation as a public authority service and grant it formal recognition on behalf of government, authorising it to operate accreditation under the authority of the public authorities. Considering the added value of accreditation to serve as the last and authoritative level of control of conformity assessment activities with regard to technical competence in order to create mutual confidence, Member States shall ensure that accreditation operates free from commercial competition and shall entrust its operation to a single national accreditation body.**

*[European Commission 2006, 15]*

### Standards setting, certification and accreditation

Standards setting, certification and accreditation are independent activities. Conformity with standards can be verified internally, by internal audit teams or certified by an accredited independent third party.

Formal standards making is driven by the need to capture good practice through an open consensus-building process facilitated by an independent organisation. The process of standards setting involves bringing together multiple stakeholders from across a said industry to create a consensual standard that ensures all market needs have been considered. This can be a code of practice, guidelines, a methodology or a specification standard. There are different levels of consensus required depending on the type and scope of standard developed.

>> *continued overleaf*

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## BSI's role as a standards setter

BSI is the UK's National Standards Body and member of CEN (European Committee for Standardization) and ISO (the International Organisation for Standardization). BSI helps markets to develop industry-funded standards such as Publicly Available Specifications (PAS), formal British, European (EN) and International (ISO) Standards. Each involves experts, practitioners and thought-leaders from across industry, government, consumer bodies and academia. BSI's committees will usually include stakeholders from professional institutes, trade associations, consumer bodies, universities, central and local government, agencies and test houses or certifiers. BSI operates a code of conduct between its standards making activities and other parts of the BSI business including BSI certification, product testing and training to ensure independence in the process.

Certification and accreditation are often used interchangeably though they refer to distinct 'evaluation' activities. **Accreditation** is the independent evaluation of certification bodies against recognised standards to ensure their impartiality and competence. Accreditation thus requires the formal recognition by a specialised body that a certification body is competent to carry out certification in specified business sectors, and that it operates to the highest levels of quality and service. For example, BSI is accredited by about 20 national and international accreditation organisations, including the United Kingdom Accreditation Service (UKAS). Modern accreditation requires that the accrediting body conforms to ISO/IEC 17021 – "Conformity assessment – Requirements for bodies providing audit and certification of management systems" – which is also the standard that accrediting bodies apply to certification bodies.

Accreditation institutions are generally established at a national level to ensure that certification bodies are subject to oversight by an authoritative body. International agreements, such as the International Accreditation Forum Multilateral Recognition Arrangements (IAF MLA) or the European Cooperation for Accreditation Multilateral Agreement (EA MLA), exist to ensure cross-border recognition of products and services and thus support international trade.

The International Accreditation Forum (IAF) is the world association of Conformity Assessment Accreditation Bodies, whose primary function is to develop a global program of conformity assessment to reduce non-tariff barriers to trade. Some sample members include:

- Australia and New Zealand – Joint Accreditation System of Australia and New Zealand (JAS-ANZ);
- Brazil – General Coordination for Accreditation (CGCRE);

- China – China National Accreditation Service for Conformity Assessment (CNAS);
- France – Comite Francais d'Accreditation, (COFRAC);
- Germany – Deutsche Akkreditierungsstelle GmbH (DAKKS);
- Italy – Accredia;
- Switzerland – State Secretariat for Economic Affairs, Swiss Accreditation Service (SAS);
- United Kingdom – United Kingdom Accreditation Service (UKAS);
- United States of America – American Association for Laboratory Accreditation (A2LA), American National Standards Institute (ANSI), American National Standards Institute – American Society for Quality National Accreditation Board LLC (ANAB), International Accreditation Service (IAS).

In the context of voluntary standards, **certification** refers to the issuance of written assurance by an independent, external body (such as BSI) that has audited an organisation's performance against a set standard and verified that it conforms to the requirements specified in the standard (conformity assessment). Not all standards require certification, but in many cases certification provides complementary benefits. Typically these can include added assurance from knowing that an independent third party has verified conformity with a standard.

Certification bodies tend to be either largely private, or companies owned or managed by foundations. Many certification bodies exist around the world, for example, 48 in the UK, 33 in France, 30 in Germany, 13 in Switzerland, and 41 in the US according to Standards.org. At national level, certification bodies tend to consist of either local representations of major international certification bodies or local specialists (e.g. cables, financial planning). Most of the major certification organisations started in the 19th century in either the maritime or railway industries. Today, a few companies hold the majority of the independent assurance and certification global market. Figure 4 compares leading international certification companies and organisations, representing some of the major players in the global market.

**Figure 4 – Leading certification companies and bodies**

Name	Type	Expertise	Since	Headquarters	Country presence	Employees	Turnover	Sectors served
BSI Group	Not-for-profit	Standards Testing Training Assessment Certification	1901	London, UK	150 countries	c. 2,800	2012 – GBP 254.6 million (c. USD 400.23 million)	Aerospace; automotive; construction; commerce and finance; energy; engineering; fire; food and drinks; ICT and telecommunications; medical devices; manufacturing; mining; quality and business improvement; security; transport and logistics.
Bureau Veritas	Listed company	Testing Inspection Certification	1828	Paris, France	> 1,300 offices in 140 countries	c. 59,000	2012 – Euros 3.9 billion (c. USD 5.17 billion)	Marine; industry; in-service inspection and verification; construction; certification; commodities; consumer products; government services and international trade.
Det Norske Veritas Group (DNV)	Foundation	Risk management (including inspection, testing, verification, certification)	1864	Oslo, Norway	300 offices in over 100 countries	c. 10,000	2011 – NOK 10,156 million (c. USD 1.7 billion)	Maritime and oil and gas; business assurance; energy and sustainability; business assurance.
Lloyd's Register Group	Company owned by a foundation	Independent assurance (including inspection, testing, verification and certification) Expert advice – safety, risk and technical advice	1760	London, UK	245 locations	c. 7,600 employees	2011 – GBP 855 million (c. USD 1.34 billion)	Aerospace; automotive; built environment; food; healthcare and medical; IT and telecommunications; marine; power; rail and metro; utilities sectors.
Société Générale de Surveillance (SGS)	Company	Inspection Testing Verification Certification	1878	Geneva, Switzerland	>1,500 offices and laboratories around the world	c. 79,000	2012 – CHF 5.6 billion (c. USD 5.99 billion)	Agriculture and food; automotive; chemical; construction; consumer goods and retail; energy; financial services; industrial manufacturing; life sciences, logistics, mining, oil and gas.

### 3.3 Principles Shaping Voluntary Standards Markets

Well-recognised standards tend to abide by certain principles, which in turn support their effectiveness and use. While the terminology is evolving, some general principles can be discerned across many voluntary standards markets:

- **transparency** – outputs such as certifications and grades awarded are published; ideally some benchmarking on the degree of pass or fail is given to participants;
- **openness** – standards should be available to all for inspection, processes for audit, complaints and violations to challenge;
- **consensus** – development of the standard is an open, structured, inclusive process involving interested stakeholders, conflicts of interest are eliminated and comparators available;
- **voluntary** – certification agencies compete for audit business – thus encouraging rational interpretation(s) of the standard and controlling cost and quality via reputational risk and competition, and the system can prove exclusion, e.g. certifiers actually mark down organisations that fail to meet the standard;
- **independence from special interests** – accreditation bodies are independent from commercial conformity assessment activities; accreditors can sanction certifiers, for instance ensuring that certification is separate from improvement, e.g. there are no conflicts of interest where firms sell consultancy services to attain a standard alongside certification services;
- **efficiency** – a functioning market should evolve and improve over time; onerous standards should be simplified; best practices should improve; less time should be spent on checking the obvious as practices become common;
- **coherence** – there is an authorised, responsible accrediting body for certification agencies that helps to ensure proportionality and consistency; accreditors ensure the separation of standards development from the commercial elements of implementation and review; accreditors regulate the market of standards certifiers; accreditation is probably best left to a sole entity, i.e. non-competitive.

Principles help to clarify and strengthen the concept of international standards as well as to improve their effectiveness. Such principles have also been endorsed by international organisations. WTO's Committee on Technical Barriers to Trade agreed in 2000 on a set of principles concerning transparency, openness, impartiality and consensus, effectiveness and relevance, coherence, and developing country interest [WTO 2000]. In its "European Interoperability Framework for pan-European eGovernment

Services" [European Commission 2004, 9], the European Union set out the following criteria for 'openness':

- "the standard is adopted and will be maintained by a not-for-profit organisation, and its ongoing development occurs on the basis of an open decision-making procedure available to all interested parties (consensus or majority decision, etc.);
- the standard has been published and the standard specification document is available either freely or at a nominal charge. It must be permissible to all to copy, distribute and use it for no fee or at a nominal fee;
- the intellectual property – i.e. patents possibly present – of (parts of) the standard is made irrevocably available on a royalty-free basis;
- there are no constraints on the re-use of the standard."

### 3.4 Types and Impact of Voluntary Standards

Standards focus on different things. For this research project, we distinguished among People, Product, Processes and Systems standards:

- **people standards** may be defined as standards focusing on people's behaviour and qualifications such as training and professional qualifications and codes of conduct;
- **product standards** are widely used and focus on the characteristics or specifications of products including design, size, weight, safety, environmental performance, interoperability and materials [WTO 2005];
- **process standards** focus on production processes and can be introduced for different reasons: to address how goods are produced, to improve production process efficiencies or to address externalities (e.g. pollution standards). Process standards are considered to include management system standards [WTO 2005];
- **system standards** constitute a different type of standards particularly relevant to the financial services industry in that they provide rules and principles addressing risk at a systemic level including risks related to systemic stability, competition, macroprudential regulation and leverage.

During discussions respondents frequently referred to this typology. People standards, e.g. training and professional qualifications, were reasonably well-understood, although there were doubts about the comparability of professional qualifications with one another, remarks about professional institutes as trade barriers (and 'trades unions'), and concerns about widely varying degrees of difficulty in qualifying for professions. Product standards were highly praised, though the intangible nature of financial services products led many to assume that product standards did not apply in many cases, and the long time periods for some products (particularly pensions, but also some investments or

mortgages) led to concerns about the ongoing nature of the 'product'. Process, or 'management', standards drew significant ire. For example, one respondent emailed: "technical standards, as the internet has 'proved' over thirty or forty years 'work' because they are testable in a scientific sense. A SWIFT or FIX message is either valid or it isn't. There are often conformance testing suites that show this to be true, or not. Of course, there are a lot of private and cartel-style technical standards whose purpose is to lock 'non-members' out too. Soft standards don't 'work' because they just become webs of semi-corrupt complicity." Respondents were genuinely curious to see if there was hard evidence of management system or process standards adding value.

**"Where there is business benefit, ACORD standards flourish."** *Lloyd's Underwriter*

An interesting survey by Swann [the next four bullets summarise freely from Swann 2000, pages 4–8] categorises standards into four types according to their primary purpose:

- **compatibility (or interfaces)** that reduce switching costs and increase network effects, the benefits that follow from being part of a network of users, i.e. if we all use the same telephone system or petrol pumping systems we have a better network than if we are divided. Of course we have the danger of getting 'locked-in' to inappropriate, inferior or antiquated standards, sometimes described as 'an uncommon tragedy'. When it is a proprietary standard, the owner may develop undesirable monopoly power, e.g. Microsoft Windows;
- **minimum quality (or quality discrimination)** that help to avoid the traditional interpretation of Gresham's Law that 'bad drives out good'. By helping to lower information asymmetries between buyers and sellers, e.g. distinguishing high quality from low quality before purchase, some power is transferred to the buyer, and consequently the likely demand will rise as the search costs (e.g. what is safe?) and the transaction costs (e.g. time spent validating safety equipment) fall;
- **variety reduction** that minimise the wasteful proliferation of minimally differentiated models. Reducing variety can also reduce the risks faced by suppliers – even if this also means that they face more competition;
- **information standards (or measurement compatibility)** that help transmit information about what is to be sold (e.g. petrol grades). The user benefits from knowing that things are interchangeable. The supplier meets a norm that reduces the risks of compensation or litigation. Certified measurement helps reduce transaction costs.

Swann [2010, 22] puts forward a more detailed "Model of Economic Effects of Standardization" (see figure 5), showing purposes of standardisation with both intermediate and ultimate economic effects:

**Figure 5 – Model of Economic Effects of Standardisation**

Aspects or Purposes of Standardisation	Intermediate Economic Effects	Ultimate Economic Effects
Variety Reduction	Scale Economies	Price
Quality & Performance	Division of Labour	Productivity
Measurement	Competencies	Entry
Codified Knowledge	Barriers to Entry	Competition
Compatibility	Network Effects	Innovation
Vision	Transaction Costs	Trade
Health & Safety	Precision	Outsourcing
Environmental	Trust & Risk	(Preventing) Market Failure

The economic impact of standards has been the focus of research for some time. Standards are regularly said to bring benefits to the economy and society by facilitating trade, supporting the spread of knowledge, disseminating innovative advances in technology, and by sharing good management and conformity assessment in practice [ISO 2012].

Evidence of the impact of standards at the global level is fairly scarce. Estimates by the OECD and the US Department of Commerce show that standards and related conformity assessments have an impact on 80 % of the world's trade in commodities. The WTO recommends that its members use international standards to avoid technical barriers to trade arising from differing national and regional standards, therefore suggesting that international and harmonised standards can facilitate trade [ISO 2012]. This is confirmed by econometric studies focusing on standards concerned with removing technical trade barriers, which have shown that the adoption of international standards by a country leads to increases in exports from and imports into that country [Swann 2010].

At national level, evidence exists for some countries but methodologies differ (see box on methodologies on page 14). It is generally argued that standards can bring macroeconomic gains in terms of both labour productivity (better production efficiency) and capital productivity (better decision-making), although it is difficult to distinguish what benefits arise from standards alone or in conjunction with other factors such as technological innovation [DTI 2005]. Lambert and Frenz [2013] estimated the benefits to the UK of accreditation alone at £600 million per annum. They focused on the multiplier effect of accreditation, where institutions in

the quality infrastructure amplify one another's effects. They also highlighted the 'market' forces behind accreditation, whereby 50 % of the measurement and testing organisations in their survey thought accreditation provided a marketing advantage; 16 % considered it a customer requirement; while 20 % reported benefits in efficiency and service quality. They concede difficulties with any methodology assessing benefits, but note that economic benefits are likely to be much higher as their study did not take into account contributions to health and safety, trade facilitation or error reduction, for example. The German government believes that "standardization is a task undertaken by its stakeholders that benefits everyone in one way or another" [DIN 2004, 6] and represents an annual benefit to the German economy of around 1 % of German GNP. Likewise, the UK Department of Trade and Industry (DTI, now largely the Department for Business, Innovation & Skills, BIS) estimated that from 1948 to 2000, during a period of 2.5 % GDP growth for the UK on average per annum, standards were responsible for 10 % of that growth, i.e. 0.25 % annually, or 13 % of total productivity improvement over those five decades [DTI 2005].

Standards generally emerge in response to market needs to address identified risks. At industry and company level in particular, standards can lead to improvements in quality and interoperability; risk reduction and security management; better customer relationship and reputation; performance and benchmarking; cost reduction; and, assurance provision at company and industry levels.

Existing evidence of the impact at industry or company level arises primarily from case studies. At an industry level, a study of the global automotive industry conducted in 2009 found, for example, that the total gross profit contribution of standards on the three core business functions (engineering, procurement and production) for auto manufacturers and parts suppliers was estimated in the range between 1.3 % and 1.8 % of total sales; that is between USD 38 and 55 billion if projected onto the total industry revenues for 2008. At company level, a series of case studies based on 11 companies operating across various sectors in 10 countries showed that implementing standards can provide economic benefits from between 0.5 % and 4 % of their annual sales revenues. [ISO 2012]

## Methodologies to estimate the macroeconomic benefits of standards – taking the UK as an example

Estimating the macroeconomic benefits of standards is complex and imprecise. In a DTI study review of the Empirical Economics of Standards [DTI 2005], three research projects using different methodologies were conducted to explore the connections between the development of standards, the associated process of standardisation and the long-run growth of productivity in the UK.

Project 1 aimed to provide benchmark estimates of the contribution of standardisation to long-run productivity growth in the UK using data on the number of standards published between 1948 to 2002. It found that standards contributed to about 13 % of the growth in labour productivity in the UK over the same period. Moreover, this is reinforced by a 2010 report by Swann which states that studies carried out for the UK, Germany, France, Canada and Australia have shown that the growth of the standards catalogue over recent years may account for between one eighth and one quarter of productivity growth over the period [Swann 2010, i].

Project 2 examined the impact of standards on productivity for the UK and three other European countries – France, Germany and Italy – using data covering 12 manufacturing sectors. Project 2 attempted to separate the impact of standards from that of innovation (using patents as a proxy).

The study results show that the contribution from standards is statistically significant whether or not patents are included as an additional explanatory variable.

Project 3 sought to determine empirically whether standards hinder or enable innovation by exploring the 'condition' (or quality) of the standards stock reflected in the number of standards (as in project 1 and 2) and the median age of the standards stock. The latter indicator is deemed to provide an indication of whether standards are established in a timely fashion. The study results suggest that either standards are both informative and support innovation, or they do neither. In other words, there is a positive correlation between the number of standards, their age and innovation up to a certain point. This finding suggests that standards may hinder innovation when they are too new – thus possibly challenging innovation, or too old – when they lock users into legacy systems.

Standards can bring benefits at all levels – global, national, industry and company level. The macroeconomic studies mentioned above tend, however, to suggest that timing, content and the market need for standards should be considered carefully for benefits to be maximised, and to avoid a case where standards may hinder other drivers of growth such as innovation.

## 3.5 Pros and Cons of Voluntary Standards Markets

When discussing the value and effectiveness of voluntary standards, their design and how they are implemented should be taken into account. Voluntary standards are said to bring positive effects in terms of supporting competition and enhancing trust. However, their value and effectiveness is sometimes questioned with respect to their enforcement, their impact on other factors such as innovation, and in some cases their depth. The following sub-sections provide an overview of aspects of voluntary standards that are regularly debated.

### 3.5.1 Competition

**“By dividing the whole circulation into a greater number of parts, the failure of any one company, an accident which, in the course of things, must sometimes happen, becomes of less consequence to the public. This competition, too, obliges all bankers to be more liberal in their dealings with their customers, lest their rivals should carry them away.”**

*Adam Smith [1776], “The Wealth of Nations”*

Lee [2011, 320] points out that, “The intensity of competition in a market can affect the relative merits of different allocations of regulatory powers; and conversely, different allocations of regulatory powers can also affect the intensity of competition in a market.” He highlights four aspects of regulation and competition. First, “self-regulation can be used for anti-competitive activity”. Second, too intense competition can lead to under-provision of regulatory services. Third, that competition among regulatory jurisdictions might lead to overall lower standards. Fourth, that competition between regulators might either be desirable, or a fact of life. Competition in voluntary standards markets occurs at several levels.

First and foremost, there is competition among standards, including competition with the idea of ‘no standards’ at all. The gatekeeper for standards efforts is the market, not a constrained budget or a politically sensitive regulator. One interviewee pointed out that standards arise where competition among participants is counter-productive. For example, the International Air Transport Association (IATA) finds promoting standards fairly straightforward on common issues such as fuel grades, security, safety, ticketing, or baggage, where successful competitors have little to gain. However, standards on fuel pricing, an area of great competitive advantage, is one where standards do not arise. There are long-running discussions about whether competition among standards is to be discouraged or encouraged. A plethora of standards leads to confusion and diminishes many of them, yet several case studies show that competition among a limited number of standards has helped to develop and disseminate them more rapidly. That said, an interesting counter-factual from the shipping industry would be whether two standards for containers might only have achieved a quarter of the enormous benefits.

According to The Economist,

**Zouheir El-Sahli, of Lund University, and Daniel Bernhofen and Richard Kneller, of the University of Nottingham, looked at 157 countries from 1962 to 1990. ... In a set of 22 industrialised countries containerisation explains a 320 % rise in bilateral trade over the first five years after adoption and 790 % over 20 years. By comparison, a bilateral free-trade agreement raises trade by 45 % over 20 years and GATT membership adds 285 %. [The Economist 18 May 2013]**

Second, there is competition among certification bodies. Users of certification bodies have choices. As a market for buyers and sellers, if a standard is not relevant, it is hard to sell. Standards markets have competitive certifiers to choose from. These certifiers, e.g. BSI, Det Norske Veritas (DNV) or Lloyd’s Register, to name a few, compete on the cost of certification for things like ships, oil rigs, quality systems or environmental management systems. Certifiers often promote standards, or the accreditation/certification markets, jointly in order to build their markets. They must promote appropriate improvements to the standards, or users will find them irrelevant or too onerous for the information or risk involved. Certifiers can be flexible about local interpretations of the standard, but cannot be too flexible or users will not value their certification over their competitors. Poor certifiers, those who are too strict or too loose, have to lower charges. Standards markets self-focus on relevance.

Third, standards can increase competition along the supply chain. By aiding comparability, voluntary standards markets can facilitate outsourcing, external procurement of components, and other forms of reliance on external suppliers. As a respondent in the ICT sector pointed out “Standards simplify contracting. They save the expense of agreeing on how to trade every time.”

Fourth, there is competition among those certified. Voluntary standards markets rely on the pressures of the marketplace on firms to seek the additional benefits of standards. In areas where competition is low, e.g. some nations’ retail banks, external standards are often ignored. McElwee and Tyrie [2000] argue strongly that competition is a fundamental requirement for successful financial services regulation. It could be worth exploring further whether voluntary standards markets work better in environments with vigorous competition, while regulation is increasingly required among oligarchies and semi-cartels.

### 3.5.2 Enforcement

**“Little point in having a standard where you cannot lay claim regarding the quality of standard.”** *Pension Fund Administrator*

Compliance to the standard has value for the user. A user that cheats devalues the standard. There has to be a process whereby a standard protects its value. As one interviewee said, “You have to be prepared to kick people out if they

cheat.” Interestingly, interviewees wanted the process of verification to be authoritative, even costly. “Standards should be costly to comply with, yet should lead to a cost advantage for the user. The reward to the user is that their product becomes more acceptable – i.e. they will sell more.” Or as another respondent pointed out, for the standard to have value then “breach of the standard is the one thing to avoid”.

With simple conventions, it becomes obvious when someone does not follow them. Unfortunately, in many cases, adherence to convention is not directly observable. Therefore verification is needed. One financier provided an example of the EFFAS Bonds Commission setting out how to build bond indices and associated algorithms. Although there is a standard, with indices it is not always clear whether there is compliance, hence verification is needed. And strong verification requires enforcement. That said, voluntary standards markets can almost only enforce through market forces and market entry, i.e. higher quality/cost ratio or expulsion of the lower quality. A number of interviewees, particularly US ones, wanted legal sanctions as well, including fines and incarceration for some infringements.

Third party verification requires an accepted universal standard (e.g. ISO 9001) and a body of credible, independent (third party) assessors. While first party verification has some benefits (e.g. stating “we are an equal opportunities employer”), the benefits are significantly enhanced when an independent assessor verifies the claim. One respondent said, “Standards as aspirations is the area which is probably most abused. Classic illustration – every fund manager in the world would say transparency is a good thing until you ask to be transparent themselves. Where ethics and morals collide with profit, things get very messy.” The credibility of the standard therefore requires some form of enforcement.

In workshops, enforcement was a large issue. Attention was drawn to the importance of being able to trade. The large credit card networks were seen to have enormous power to pull the ‘license to trade’ unless participants complied with their standards, e.g. Payment Card Industry Data Security Standard (PCI DSS), or share settlement, e.g. CREST over SWIFTNet. An interesting discussion point was whether standards enforcement needed regulatory enforcement when there were multiple points of market access, but could rely on removal of market access for enforcement when there were essential gates with restricted entry, e.g. credit card networks.

A Secretary General of a major trade body described current financial services international enforcement as being principally transparency and peer pressure. The WTO dispute settlements procedures and their basis in treaty were praised as a great non-financial services example of regulation, but there seemed to be little understanding of the fact that market access withdrawal was often a strong factor, e.g. airlines refusing to work with an airline that had not complied with standards. Peer-to-peer access enforcement might be a strong force in financial regulation. Peers and their

procurement policies constitute part of the supply chain, and cross-recognition of compliance, particularly international cross-recognition, should be a crucial part of market access in finance. Nevertheless, regulators have an important role to play, if they choose, as the people who provide stronger sanctions, ‘pulling the licence to trade’ when organisations fail to meet audited standards.

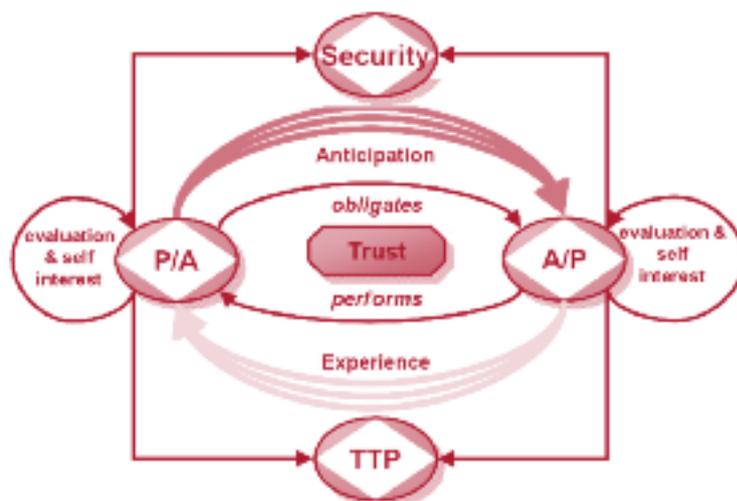
### 3.5.3 Trust

Following the financial crises since 2007, public and government trust in the financial services sectors remains low. Voluntary standards markets could help restore trust in the industry through better practices, increased transparency, reduced risk, and greater quality assurance.

One definition of trust is that it is the ratio of obligation over reputation, where reputation is the sum of all experiences minus anticipations. If the obligation is small compared with the reputation, little trust is involved. When the obligation is large compared with the reputation, then much trust is involved. Note that an excessively large reputation contrasted with a tiny obligation implies low trust. However, each side of the equation has a principal and an agent and the equation has to take account of relative trust, and to whom.

To put forward a model for trust, the following diagram has two people. One is the principal (P); the other is the agent (A). The principal is the one who will depend upon the agent to do something. This dependence or reliance can either be involuntary – the principal has no choice, or voluntary – the principal places trust in, or obligates, the agent to perform something. Of course, the situation can be richer. The agent is often a principal too (A/P), while the principal (P/A) is often partially an agent.

Figure 6 – Trust



[1] Reliance establishes the relationship of trust. However, evaluation of this reliance will be based on two human factors. [2] First, the principal has an expectation or anticipation of the performance. Likewise, agents believe they understand the obligation and the anticipation of

performance when they make decisions about how well they intend to perform. [3] Second, the experience of the performance compared with the anticipation forms the evaluation. No deep mathematical understanding of Information Theory is required to realise that this trust system has great scope for miscommunication and mistrust. There are information cycles from the principal to the agent, and from the agent to the principal, with roles for senders, messengers and receivers. There is a feedback loop of experience and a feed-forward loop of anticipation. Each loop readjusts expectation. Trust is a human system with feed-through loops that is people's perceptions change anticipations. Thus, a system of trust exhibits bubbles and fat-tails of anticipation, which in turn drive evaluations and future decisions, as well as fads and fashions.

[4] There are trusted third parties (TTP) such as trade financiers who guarantee payment upon successful shipment. Trusted third parties take many forms: bankers, insurers and guarantors. [5] There are also various forms of security, ranging from putting up money in advance through escrow accounts of various forms, where money or deeds or software are held in trust. Humankind has tried many mechanisms to establish trust. Finally, it is worth noting the difference between a 'one-off' transaction and a continuing relationship. Jenny Rayner defines reputation as "A collection of perceptions and opinions, past and present, about an organisation which resides in the consciousness of its stakeholders" [Rayner n.d.]. [6] Reputation is formed during multiple rounds of interactions.

Standards can play a large role in this trust process by setting the point of evaluation. Too high and few firms earn appropriate trust. Too low and trust seeps out of the system. One fund manager said: "The biggest single problem in financial markets was that trust was destroyed. Now consumers do not trust banks, do not trust fund managers. This used not to be the case, there was trust before." The sale of most investment products is one based on trust with the fund manager or the bank. When something goes wrong, the consumer is reminded that all that matters is the contract (very long, with a lot of exclusions). PAS 125 on Vehicle Damage Repair is an example where a standard has benefitted both the insurance industry and consumers by providing a means for vehicle repair shops to demonstrate quality and promote confidence in auto repair. Voluntary standards deemed to increase quality and confidence in financial services products and processes could similarly help to restore trust with consumers and regulators.

Morrison and Wilhelm [2007] argue that "Investment banking became necessary because the informational demands of the capital markets were too complex to be met through the type of arm's-length contracting that the courts can enforce." Morrison and Wilhelm [2013] point out that "Social orderings rely upon the ability of individuals to make extended commitments to one another." Financial products and services are sold on trust, but when things go wrong move swiftly to contract enforcement. Investment products need long-term trust which can often conflict with strict contractual interpretation. Some legal sanctions can remove

financial services firms ability to trade fairly with clients. Some interviewees claimed that this dichotomy might be mitigated with an extension of fiduciary responsibility through standards.

### 3.5.4 Promoting or Hindering Innovation

One of the great tensions in standards is whether they accelerate or inhibit innovation. One danger is over-standardising, with the consequent result of not just stifling innovation and productivity [Conway, et al. 2006; Griffith, et al. 2006] but also destroying trust. When standards seem to take years to alter, then standards markets seem to favour stasis over change, long-term signals over short-term signals, or reduce variety in the neighbourhood of the standard. Paradoxically, standards can increase innovation. By pruning unnecessary or non-advantageous competition, standards markets improve innovation by forcing it to focus on areas of competitive advantage. Hunt, et al. [2007] and Ernst [2013] explore the paradoxes inherent in innovation and standards, drawing particular attention to the complex interactions with intellectual property.

To quote from an article about the development of NTSC (the National Television System Committee) by Fink, it is clear that standards and innovation have many complex interactions:

**Casual observers of technical progress often assume that the basic forces at work are merely those of new science and improved technology. But seasoned veterans of the technical wars know that many other forces are also at work. Prominent among them are the pride and prejudice of technical, industrial, and political leaders; the pursuit of power and profit; the rivalry for command of patents and markets; as well as the forces of government: inertia, misunderstanding, and, occasionally, foresight.**

In a DTI study review of the Empirical Economics of Standards [DTI 2005], one of three research projects sought specifically to determine empirically whether standards hinder or enable innovation by exploring the 'condition' (or quality) of the standards stock reflected in the number of standards (as in project 1 and 2), and the median age of standards stock. The latter indicator is deemed to provide an indication of whether standards are established in a timely fashion. The study results suggest that either standards are both informative and support innovation, or they do neither. In other words, there is a positive correlation between the number of standards, their age and innovation up to a certain point. Standards may hinder innovation when they are too new, preventing early innovations, or too old, when they lock users into legacy systems.

### 3.5.5 Standards as Brands – Shallow but Wide or Deep but Narrow

By working to a standard, suppliers mutually reinforce the standard's familiarity and expectations about the type of standard it is. A successful standard attracts 'counterfeits', i.e. people who claim to have the standard and don't; 'free riders', i.e. people who claim to follow the standard but not bother with the expensive processes (a bit like someone who says they are a lawyer but didn't get round to sitting the legal or bar entrance examination); and 'grey markets', i.e. people who sell something into the market that may not quite be the same. For instance, some groups of fish food companies have launched 'industry label' schemes for sustainable fish that are much easier to get (or even just handed out) than independent, audited schemes.

Ponder briefly brands and trust. You see that other people have great trust in something, say a Harley-Davidson motorbike or Caterpillar construction machinery. Suddenly they are buying unrelated apparel or footwear based on the reputation established over repeated feed-through loops. Further, there are informational cascades and herd behaviours, as well as situations where people adjust their anticipation post hoc (i.e. if everyone else liked something, perhaps I did too but failed to notice my delight at the time).

This in turn leads to the question of whether a standard is better when it is 'deep but narrow', or better when it is 'shallow but wide'. Basically, a gold-plated but difficult-to-achieve standard can appear to exclude all but the best or most traditional firms. Likewise, an easy-to-achieve but inclusive standard can appear almost meaningless. If a 'deep but narrow' standard is attractive enough, enough organisations may decide that the cost-benefit equation is worthwhile to attract consumers. If a 'shallow but wide' standard is too shallow, no one will bother to make the effort to attain it as it is worthless to consumers. On the other hand, if 'deep but narrow' is too difficult to attain, competitors will undermine it, while 'shallow but wide' might just get a movement going that permits year-on-year standard improvement.

### 3.5.6 Awareness of Standards

**"Typically the challenge is dissemination and awareness of current standards rather than a lack of standards."** *Chairman, financial services firm*

Consumer awareness of standards may not be essential, for instance where they underpin certification marks. BSI published the "Top 10 Standards that Matter to Consumers", but would not expect consumers to know the relevant standards:

- BS 8300 Accessible buildings;
- PAS 88 Accessibility of hotels;
- BS 9999 Fire safety;

- BS EN 71 Safety of toys;
- BS 10012 Personal data protection;
- PAS 74 Internet safety for children;
- BS EN ISO 14021 Environmental labelling;
- BS 8477 Customer service;
- PAS 125 Vehicle body repair;
- BS 8848 Adventurous activities.

There remain numerous bodies of standards that matter to consumers of which consumers are unaware, or do not need to be aware, e.g.:

- ISO 9001 Quality management;
- ISO 3166 Country codes;
- ISO 26000 Social responsibility;
- ISO 50001 Energy management;
- ISO 31000 Risk management;
- ISO 27001 Information security;
- ISO 1496 Freight containers;
- ISO 22000 Food safety management.

Yet respondents to our survey and interviewees placed a great deal of importance on standards being recognised.

**"Enforcement relies on sanctions, e.g. removing business from those who do not comply. This requires informed clients, and the ability to switch suppliers quickly and cheaply."** *Manager, financial services firm*

Raising awareness and promoting standards is a clear priority for standard-setting bodies such as ISO and BSI. A well-recognised standard gains both value in attainment, because customers should prefer a firm which has achieved certification, and power of enforcement, because not having certification is costly. Of Swann's four categories (see page 13), two – minimum quality and variety reduction – seem to benefit most from awareness, while two – compatibility and information standards – seem to be of technical use.

Awareness of voluntary standards markets for financial services is also essential among professionals, companies, industry bodies and regulators. Our awareness questionnaire revealed that nearly 70 % of respondents were familiar with voluntary standards markets and answered more specific questions on standards, certification and accreditation bodies, though the majority work in financial and professional services (see Appendix 3 for an overview of the

questionnaire results). Interviewees generally indicated that efforts should focus on raising awareness of voluntary standards markets (and how they work) with both consumers and regulators.

### 3.6 Government Regulation, International Policies and Voluntary Standards

Voluntary standards can exist alongside or interact with government regulation, whether multilateral agreements or national law. This section explores how voluntary standards interact with government regulation, and how recent developments are affecting the prospect for voluntary standards market development in theory and in practice.

#### 3.6.1 Government Regulation and Voluntary Standard Markets

Government regulation generally consists of governmental or ministerial orders that have the force of law and are administered and enforced by government itself. This pure form of government regulation does exist, e.g. taxation, policing, defence. However, government regulators do have a wide choice of models to choose from that incorporate voluntary standards markets.

Figure 7 compares three different types of regulation between trade association codes (industry self-regulation), government regulation and voluntary standards markets.

**Figure 7 – Types of regulation**

	Trade Association Codes	Government regulation	Voluntary standards markets (self-regulation, earned recognition, co-regulation)
Governance	Membership	Government	Stakeholders
Monitoring	Variable	Inspection	Regular
Feed-back	Conformist	Sanction	Reputation
Feed-forward	Reactionary	Political	Evolutionary
Process	Minimal	Inquisitory / Adversarial	Service purchase
Quality	Asserted	Budgetary	Published
Costs	Subscription	Levy	Market

Voluntary standards markets and government regulation seem to interact in three cases reflecting distinct regulatory approaches:

- self-regulation – where businesses voluntarily agree to meet standards, although sometimes because government is threatening direct government regulation;
- earned recognition – where regulators recognise standards and thus reduce oversight and inspection on firms who participate in a voluntary standards market;
- co-regulation – where regulators set high-level principles and let voluntary standards markets set technical compliance (the European ‘New Approach’ to technical harmonization has over 4,000 standards supporting regulators; auditors enforce company and tax laws; SROs in financial services are incorporated into legislation but left to enforce their markets, often through voluntary standards markets).

One standards expert opined, “It is easier to create standards than to get people to use them”. Earned recognition and co-regulation provide additional benefits to people who go through the effort and expense of gaining and maintaining certification. This seems to be reinforced by recent developments promoting the use of voluntary standards wherever possible, in combination with regulation.

## History of financial audit – a public-private voluntary standards admixture from the UK goes global

By the 13th century in northern Italy double-entry bookkeeping was well established and bookkeepers were moving towards the use of Arabic numerals. In 1494 in Venice, Luca Pacioli published “Summa di Arithmetica” which codified double-entry bookkeeping. In 1553 in London, James Peele issues the first English work on double-entry bookkeeping, “The maner and fourme how to kepe a perfecte reconyng after the order of the moste worthie and notable accompte, of debitour and creditour, set foorth in certain tables, with a declaration thereunto belongyng, verie easie to be learned, and also profitable, not onely vnto suche, that trade in the facte of marchaundise, but also vnto any other estate, that will learne the same.”

Financial audit arose in the public sector for sovereigns and in the private sector for investors. The British model of public and private sector audit spread to the Commonwealth and Anglophone nations. Public audit's first recorded mention is a reference to the Auditor of the Exchequer in 1314. In 1559 Queen Elizabeth I established the Auditors of the Imprest. Commissioners for Auditing the Public Accounts supplanted the Auditors of the Imprest and were appointed by statute in 1780. As Chancellor of the Exchequer, William Ewart Gladstone initiated major reforms of public finance and Parliamentary accountability, requiring all departments from 1866 to produce annual accounts known as appropriation accounts and established a cycle of accountability for public funds.

During the 18th century, private sector economic activity increased markedly in both England and Scotland and was accompanied by a rise in new forms of economic organisations, particularly joint stock companies. According to the Institute of Chartered Accountants in England and Wales (ICAEW), the earliest firms of accountants can be traced back to the 1780's in Bristol. The Big 4 firms of today trace their earliest antecedents to the first half of the 19th century – EY to Young & Co (1840), KPMG to John Moxham (1818), PricewaterhouseCoopers to Robert Fletcher & Co (1818), and Deloitte to James Kerr (1804).

During the 19th century, successive waves of economic expansion, followed by scandals and insolvencies, e.g. banks or railway companies, resulted in greater government specification of audits and winding up arrangements. During the 19th century a long series of Companies Acts and Bankruptcy Acts responded to the changing economy: the

1831 Bankruptcy Court Act, 1837 Chartered Companies Act, 1844 Joint Stock Companies Winding Up Act (“Directors shall cause the Books of the Company to be balanced, and a full and fair Balance Sheet to be made up”), 1844 Act for Registration Incorporation and Regulation of Joint Stock Companies, 1845 Companies Clause Consolidation Act (which defined a balance sheet), 1848 Winding Up Act, 1855 Limited Liability Act, 1856 Companies Act (which established a model set of accounts), 1862 Companies Act, 1861 Bankruptcy Act, 1867 Companies Act, 1869 Bankruptcy Act, and the 1883 Companies Act, as well as railway and life assurance acts. The Companies (Consolidated) Act of 1908 truly enshrined the auditor's role by making them mandatory and setting out terms of appointment, remuneration, powers and duties.

In turn, investors increased their demands for the professional services of accountants and auditors. During the 19th century, accountants established the Society of Accountants in England and regional societies of accountants in Liverpool, London, Manchester and Sheffield. In 1853, the Society of Accountants in Edinburgh was founded. In 1880, Queen Victoria granted a Royal Charter leading to the creation of a national body for England and Wales, the Institute of Chartered Accountants in England and Wales with 587 founder members. The Charter recognised the Institute's ‘pre-eminence, stability and permanence’, as well as its public interest role. The basic functions of the ICAEW were to set out a professional qualification, maintain standards of professional conduct, and regulate the audit and accountancy system.

The evolution of financial audit is neither wholly that of public regulation nor wholly that of a voluntary standards market, but an admixture. The private sector response in the mid 19th century to improper reporting and fraud was that investors required company audits. Public audit standards and private sector standards co-evolved. While company audits may have been largely of private sector origin, after a century of evolution the private sector audit was made mandatory through government regulation. Further legislation and complexities, such as tax, have led to the audit and accountancy profession being more entwined with interpreting national legislation than setting universal standards, and with less control over its ability to change standards without government.

### 3.6.2 Combining Voluntary Standards and Mandatory Regulation – the Example of the European Union

The European Union's Single Market offers an interesting example of the evolution of voluntary standards markets. A European Council Resolution of May 1985 set out the 'New Approach' to directives for achieving the single market. The 'New Approach' was directed at technical harmonisation for many products and services outside financial services. The 'New Approach' clearly separates responsibilities between the EC legislator and the European standards bodies – European Committee for Standardization (CEN), the European Committee for Electrotechnical Standardization (CENELEC) and the European Telecommunications Standards Institute (ETSI) – in the legal framework allowing for the free movement of goods and services. European Commission directives should define essential requirements, e.g., health and safety levels that goods and services must attain in the single market. European standards bodies should specify corresponding technical specifications, where compliance provides a presumption of conformity with the essential requirements. Such specifications are 'harmonised standards'.

A Council Resolution (2003/C 282/02) on 10 November 2003 acknowledged the importance of 'New Approach' and 'Global Approach' directives that place more reliance on conformity assessment as opposed to regulation, along with the need for clearer framework for accreditation and conformity assessment. The EU recognises that standards markets are superior to regulation wherever they are possible, and it will recognise standards as acceptable in place of legislation when implementing EU directives.

The European Commission expects increased transparency, coherence and cooperation in both the regulatory and voluntary areas for 'New Approach' directives. The EU is trying to minimise competition at the accreditation level, while encouraging it at the certification level. Of course, the European Commission expects accreditors to undertake peer reviews of quality (which already occur among EA members). Further, there is still competition for accreditation services among firms working in numerous markets (e.g. an international certifier can choose from numerous accreditation agencies) or from firms willing to look outside their home market for an accreditation organisation. 'New Approach' directives are based on the following principles:

- harmonisation is limited to essential requirements;
- only products fulfilling the essential requirements may be placed on the market and put into service;
- harmonised standards, the reference numbers of which have been published in the Official Journal and which have been transposed into national standards, are presumed to conform to the corresponding essential requirements;
- application of harmonised standards or other technical specifications remains voluntary, and manufacturers are

free to choose any technical solution that provides compliance with the essential requirements;

- manufacturers may choose between different conformity assessment procedures provided for in the applicable directive.

However, progress on widespread use of voluntary standards markets in preference to direct regulation has been slow. In the UK, government departments continue to issue numerous regulations despite several better regulation organisations supporting voluntary standards markets, 'one in, one out' and 'one in, two out' rules, or required regulatory impact assessments.

In the EU, few have noted that the 'New Approach' might also apply to financial services. Michael Snyder, in the foreword to Mather and Vibert [2006] states: "The task of turning positive policy intentions in the better regulation field into effective results requires a very determined and systematic approach across the Commission, the Parliament and Council of Ministers."

### 3.6.3 International Standards and Trade

International standards are generally thought to reduce transaction costs and facilitate trade by ensuring compatibility, providing common and understandable information and by ensuring that minimum requirements (for example on safety, specification conformance, or quality) are being met.

The World Trade Organisation (WTO) sees as first among its eight 'main activities' – "negotiating the reduction or elimination of obstacles to trade (import tariffs, other barriers to trade) and agreeing on rules governing the conduct of international trade (e.g. antidumping, subsidies, product standards, etc.)". WTO agreements encourage the creation and use of international standards, based on the assumption that countries applying international standards also apply WTO-consistent policies [WTO 2005]. As one respondent pointed out, "If a country like China is committed to using international standards with their current regime, it demonstrates the traction potential." The relationship between standards and trade is not necessarily a simple one as it depends on the type of standards, whether they are national or international, voluntary or mandatory, the sectors where they apply, the costs of implementation and the size of companies, among many other factors.

Standards can, however, create additional barriers or constraints to trade, especially when they differ across regions or countries. National standards or technical regulations, although optimal from a national point of view, may hinder trade by reducing the scope for international arbitrage or by increasing the costs or constraining market access for foreign companies compared to domestic ones [WTO 2005]. The WTO Agreement on Technical Barriers to Trade (TBT) [WTO 1995] obliges WTO Members to ensure that technical regulations and standards do not create

unnecessary obstacles to international trade, though member countries should not be prevented from using standards to pursue other legitimate policy objectives. The WTO Dispute Settlement Mechanism has regularly had to decide on cases involving standards (e.g. genetically modified organisms used in food) and decide whether these comply with WTO law even when they are not directly focused on trade (see for example EC-Asbestos and EC-Hormones). When national standards vary across countries, various options exist for policy-makers to deal with 'technical barriers to trade', including full harmonisation, harmonisation of essential requirements, equivalence, and mutual recognition of standards. For purely voluntary standards (that are not mandated by government regulation), harmonisation is likely to be led by industry groups aided by relevant standard-setting bodies. [WTO 2005]

### 3.6.4 Other Standards Gaining Traction Internationally

Outside the WTO, EU and national government systems, there is an equally vibrant set of social and ethical labelling schemes. The International Trade Commission provides a 'Standards Map' comparing 120 voluntary standards operating in over 200 countries, and certifying products and services in more than 80 economic sectors. The mining industry, for example, has used voluntary standards markets for a well-regarded sustainable mining programme, and also for safety issues. The ISEAL Alliance is a global membership association for sustainability standards on agriculture, water, fishing, forestry, carbon and climate, manufacturing and textiles, as well as mining and minerals. It has members such as the Marine Stewardship Council and Fairtrade.

There do remain areas of controversy. In many non-governmental schemes there is confusion between accreditation and certification. In several schemes there are conflicts of interest between accreditation and certification, or between commercial and non-commercial interest, e.g. paying a certifier for consultancy on how to pass a conformity assessment. A long-running debate concerns indemnity, with some insisting that a certifier bears some indemnity if it is found that a certified organisation is sub-standard, and that indemnity can, along with the price paid by the buyer, be made publicly available.

## Standards and forestry – supply chain standards

Standards play an important role in the forestry sector. There are about 50 certification programmes worldwide, of which two have emerged as global forest certification systems in the past twenty years – the Programme for the Endorsement of Forest Certification schemes (PEFC) and the Forest Stewardship Council (FSC). Together, these organisations account for some 98 % of the world's certified forests and chain of custody certificates.

PEFC is the largest forest management certification scheme with nearly 250 million hectares of forest certified (compared to over 180 million hectares for FSC). PEFC adopted a 'bottom-up' approach, implying that it endorses national forest certification systems developed through multi-stakeholder processes and tailored to local priorities and conditions.

PEFC uses two types of certification: PEFC Sustainable Forest Management certification and Chain of Custody

certification. Sustainable Forest Management provides forest owners and managers with independent recognition of their responsible management practices, which in turn enables them to access the global marketplace for certified products. Chain of Custody certification provides assurance that forest products (wood and non-wood) originate from sustainably managed forests by outlining requirements for tracking certification material from the forest to the final product. To date, over 15,000 companies have obtained PEFC Chain of Custody Certification.

Between them, the global area of certified forest endorsed by FSC and PEFC amounted to 394 million hectares in May 2012, nearly 10 % of global forests. Further, the proportion of global industrial roundwood supply from certified forests in 2012 was approximately 26.5 %. [UNECE/FAO 2012, 107]

For further information – [www.pefc.org](http://www.pefc.org) and [www.fsc.org](http://www.fsc.org)

## 4. Financial Services Regulation

**“What we need is regulation that is intelligent and smart”** *Michel Barnier, European Union’s Commissioner for Financial Services (October 2013)*

### 4.1 Financial Services Regulation

Bartle and Vass (2005) describe five categories of self-regulation and provide numerous UK examples exhibiting a variety of self-regulatory organisations:

- ‘Co-operative’: co-operation between regulator and regulated on the operation of statutory regulation – energy networks, electricity trading, airports, railway networks, railway safety and standards, pollution prevention and control, drinking water, financial services practitioner and consumer panels, qualifications and curriculum authority;
- ‘Delegated’: the delegation of the implementation of statutory duties by a public authority to self-regulatory bodies – broadcast advertising, premium rate telecommunications, telecommunications dispute resolute, telecommunications network access, telecommunications local loop access, national curriculum tests, legal profession (part);
- ‘Devolved’: the devolution of statutory powers to self-regulatory bodies, often thought of as ‘statutory self-regulation’, i.e., the specification of self-regulatory schemes in statute – medical and dental professions, architects, legal profession (part), mail performance targets, railway timetabling, rail passengers’ charter, national railway enquiries, Royal Charters;
- ‘Facilitated’: self-regulation explicitly supported by the state in some way but where the scheme itself is not backed by statute – Internet Watch Foundation, Safe Sludge Matrix, energy marketing, OFT Codes of Practice, postal service company performance, water consumer debt, banking (closed 2009 though part still in Lending Standards Board and the Business Banking Code of the BBA and Apacs 2008) and mortgage (from 1997 to 2004) codes;
- ‘Tacit’: close to ‘pure’ self-regulation – self-regulation with little explicit state support, but its implicit role can be influential – Press Complaints Commission, complementary health practitioners, planning mobile masts, rail engineering best practice and manpower plans, responsible drinking, travel agents, media content, family law solicitors, water voluntary customer codes, chemical industries ‘responsible care’.

The financial services industry has always been a heavily regulated sector. While the sector often presents a ‘free-wheeling’, intensely private-sector, capitalist image, it is in reality one of intense government regulation. Formal

regulation of the sector in many countries began with the founding of a central bank. Central banks are concerned with securing national finances and the national currency, so have a natural interest in the safety and conduct of financial firms. In the UK, following the formation of the Bank of England in 1694, during the 1700’s numerous acts were passed governing the Bank of England, life assurance, and gaming. While the 1800’s were a period of *laissez-faire*, since 1895 increasingly regular finance acts have accreted a vast amount of legislative regulation of financial services.

New financial services regulation has almost always been a reaction to a crash or scandal. The Great Depression of the 1930’s led to a host of new regulation in financial services, most of which remained in place until the 1980’s. The US Banking Act of 1933, Glass–Steagall, limited commercial bank securities activities and affiliations between commercial banks and securities firms. Globally, since the 1930’s there have been a number of international responses to crises:

**Figure 8 – Financial services regulation: international responses to crises**

Crisis	Initiative /institution	Period
First World War/German reparations	Bank for International Settlements	1931
Great Depression/ Second World War/postwar reconstruction	International Monetary Fund, World Bank, Organization for Economic Cooperation and Development	1945-48
Herstatt Bank failure	Basel Committee on Banking Supervision	1974
Latin-American crisis/savings and loan crisis	Basel Capital Accord	1988
Transition in former communist countries	European Bank for Reconstruction and Development	1991
Asian financial crisis	Financial Stability Forum, Financial Sector Assessment Program, G-20	1999
Enron/various accounting scandals	International Forum of Independent Audit Regulators	2006
Global financial crisis	G-20 Summits, Financial Stability Board	2008-09

[Source: Rottier et Veron, 2010]

Nationally, various crises around the world have led to direct legislation, for example on pensions in the UK due to local pension crises. A regulatory reaction to financial crises is the norm, and the piecemeal nature of the reactions makes the resulting financial services regulation complex. Different nations have different regulatory regimes ranging from relatively few regulatory bodies to a plethora. The USA gushes with financial services regulatory bodies – Securities and Exchange Commission (SEC), Financial Industry Regulatory Authority (FINRA), Commodity Futures Trading Commission (CFTC), Federal Reserve System ('Fed'), Federal Deposit Insurance Corporation (FDIC), Office of the Comptroller of the Currency (OCC), National Credit Union Administration (NCUA), Office of Thrift Supervision (OTS), Consumer Financial Protection Bureau (CFPB), National Association of Insurance Commissioners (NAIC), as well as over 100 state banking and insurance regulators. A slightly wider look that includes financial reporting brings in a host of accountancy bodies and regulators. Alongside so many official bodies, a welter of trade organisations has been set up by industry to lobby and influence regulators and legislators.

## 4.2 Trends in Financial Services Regulation – the UK Perspective

### 4.2.1 Self-regulation

During the 1980's the UK began to introduce a modern financial regulatory system. The Banking Act 1979 formalised the Bank of England's supervisory role over banks. Statutory oversight of insurers was provided by the Department of Trade and Industry. A particularly interesting period in UK financial services regulation was of 'self-regulating' from 1986 to 2000. Financial services deregulation in the early 1980s led to many new retail investment products and more small investors. The lifting of exchange controls and increasing internationalisation of London's financial markets led to numerous new exchanges and clearers.

The Financial Services Act 1986 Act mixed government regulation and self-regulation, creating a Securities and Investments Board (SIB) presiding over various new self-regulating organisations (SROs), which included professional bodies (accountancy and law), exchanges (London Stock Exchange, London International Financial Futures and Options Exchange, and London Commodities Exchange), and clearing houses. The original five SROs were the Association of Futures Brokers and Dealers (AFBD), the Financial Intermediaries, Managers and Brokers Regulatory Association (FIMBRA), the Investment Management Regulatory Organisation (IMRO), the Life Assurance and Unit Trust Regulatory Organisation (LAUTRO), and The Securities Association (TSA). SROs authorised persons carrying on investment business in respect of certain investments for the purposes of investor protection. The Securities and Futures Authority (SFA) replaced the AFBD and TSA in 1991. The Investment Management Regulatory Organisation (IMRO) and the Personal Investment Authority (PIA) replaced FIMBRA and LAUTRO in 1994. By the end of this period, the three core SROs were the SFA, the IMRO and the PIA.

### 4.2.2 Unitary Regulation

A number of perceived regulatory failures, e.g. Maxwell pension scandals (1991), Bank of Credit and Commerce International failure (1991), and Barings Bank failure (1995), was blamed on the separation of regulatory functions and led to a commitment to a unitary single-tier regulator. Meanwhile, the EU Investment Services Directive 1993 (ISD) imposed some capital and reporting requirements upon managers on an EU-wide basis which interfered with pure self-regulation. A new UK government in 1997 gave independent monetary policy-making to the Bank of England and attempted to overhaul financial services regulation.

The Financial Services and Markets Act 2000 set up the Financial Services Authority (FSA) in 2001. This combined the idea of a single regulator for financial services – banking, insurance, and investment – and a focus on 'principles-based regulation'. The FSA had four statutory objectives supported by a set of principles of good regulation. The objectives were:

- market confidence (maintaining confidence in the UK financial system);
- public awareness (promoting public understanding of the financial system);
- consumer protection (securing an appropriate degree of protection for consumers);
- financial crime reduction (reducing the possibility of regulated businesses to be used for purposes connected with financial crime).

The Cruickshank report of 2000 had concluded that the UK banking sector suffered from a lack of competition. Despite this, the FSA was not assigned 'competition' as a core objective. Elements of good self-regulation remained, often largely unnoticed. A good example might be the Panel on Takeovers and Mergers. The Panel is an independent body set up in 1968 to administer the City Code on Takeovers and Mergers, to supervise and regulate takeovers, and to ensure fair treatment for all shareholders in takeover bids.

In 2007, the Centre for the Study of Financial Innovation (CSFI) published a report of their Working Group on Effective Regulation, "Principles in Practice: An Antidote to Regulatory Prescription" [CSFI 2007]. The report covered the objectives and formulation of regulation, working through some of the problems with implementation and enforcement. In the report, Andrew Hilton OBE sets out the downside of regulation, starting with "all regulation is bad". He makes some serious points that, despite its apparent necessity, regulation is not a free good, is difficult to cost, has no natural enemy, favours the big, provides barriers to entry, inhibits innovation, hurts consumers and "has a tendency to migrate", i.e. regulatory creep. The report concludes, "formal regulation should be a last resort", "benefits should outweigh the disadvantages", and "market participants should be embedded in the regulatory process".

A long-running, simplistic, two-sided debate, such as 'more regulation' versus 'less regulation', is unlikely to find resolution. 'Regulators exist to regulate; compliance officers exist to comply'. The financial services community should present alternative visions to just 'more' or 'less' regulation. Many of the current examples of flexible regulation, such as moves to IFRS, are a return to the idea of self-regulation, but self-regulation with teeth, in a competitive market for certification, with open standards.

Some quick points to summarise so far: (1) the current international regulatory system is messy and can conflict with interfering national regulatory systems; (2) voluntary standards markets have had a role in the history of finance, e.g. accounting being a 19th century standard market response; (3) voluntary standards markets do resemble SROs, but SROs in a market framework.

### 4.2.3 Twin Peaks Regulation

Following intense government intervention and support globally for financial services since 2007, numerous international organisations have pushed strongly into national financial services regulation. In the UK, HM Treasury and the Bank of England became involved in FSA regulation. Financial stability is the key objective. Within the UK from 2013 there has been a 'Twin Peaks' system; one peak focused on prudence, the other on conduct. Another way of describing 'Twin Peaks' is that one peak ensures the safety of financial firms, while the other provides consumer protection. The Prudential Regulation Authority (PRA) is part of the Bank of England supervising 1,700 banks, insurers and large investment firms. The Financial Conduct Authority (FCA) is a separate and independent agency to protect investors, police markets and promote competition among 25,000 or so brokers, investment advisers and money managers. There is also a third regulator, the Financial Policy Committee, charged with spotting and dealing with broad threats to financial stability.

However, a large number of other UK bodies do participate in financial services regulation. Again, bringing in financial reporting, the most notable might be the Financial Reporting Council, as well as the accountancy-based bodies such as the Institute of Chartered Accountants in England and Wales, the Association of Chartered Certified Accountants, the Institute of Chartered Accountants in Scotland, the Chartered Institute of Public Certified Accountants. Again, trade organisations proliferate. CSFI catalogued at least 47 UK-based trade associations involved in UK or EU financial regulation. [Patel, 2013]

### 4.2.4 International Regulation

While the UK example is specific, the general trend of self-regulation, unitary regulation, and 'Twin Peaks' regulation has been echoed in other countries.

In the USA, most of Glass-Steagall was repealed in 1999 by the Gramm-Leach-Bliley Act, though Glass-Steagall had been dented over the years through lenient supervisory

interpretations and a proliferation of loopholes. Deregulation trends led to increasing freedoms for financial institutions before the 2007 crises. Since then, the USA has moved towards rationalisation, somewhat along the 'Twin Peaks' model. The USA is going through a major overhaul of all financial services regulation. The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 affects all federal financial regulatory agencies and almost every portion of the USA's financial services industry. Given the importance of the USA in financial services regulation it has been particularly problematic globally due to its extraterritorial effects. The Sarbanes-Oxley Act of 2002 (SOX), 'Public Company Accounting Reform and Investor Protection Act' (in the Senate) and 'Corporate and Auditing Accountability and Responsibility Act' (in the House) set new standards for all USA public company boards, management and public accounting firms. SOX standards affected many international organisations, even those that were not located in the USA. Other USA legislation has affected non-USA firms from anti-money laundering processes due to the 2001 USA PATRIOT Act (Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism) to the onerous reporting provisions of the 2010 Foreign Account Tax Compliance Act (FATCA) now taking effect. Numerous areas of conflict exist ranging from tax havens and tax withholding to the illegality of online gambling in the USA conflicting with online gambling entities legal in other jurisdictions.

Internationally, financial services regulation only gets more complex. At the European level in 2011 three new European authorities for the supervision of financial activities began operations: the European Banking Authority, European Securities and Markets Authority, and European Insurance and Occupational Pensions Authority. At the global level, there is the Bank for International Settlements ('Basel'), G20, the Financial Stability Board (FSB), the International Monetary Fund (IMF) and the World Bank (comprising the International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), International Finance Corporation (IFC), Multilateral Investment Guarantee Agency (MIGA), International Centre for Settlement of Investment Disputes (ICSID)). Following the financial crises from 2007, major banks are required to have recovery and resolution plans ('living wills') for their supervisors, while national supervisors face greater harmonisation of practice at EU level and internationally (via the Basel Accords) in hopes of avoiding systemic crises. Again, the accountants have a number of organisations, e.g. the International Accounting Standards Board (IASB). And again, numerous trade organisations are involved, e.g. the OECD.

In short, global financial services regulation is complex, confusing and confused. The FSB has made great strides in consolidating information about standards initiatives at a global level (see Appendix 4), though interestingly does not include ISO among its list of standard-setters.

### 4.3 Regulatory Issues

Financial regulation suffers from lack of clarity of purpose. Three primary goals seem to dominate financial services regulation, viz. safety, conduct, and tax. Safety, and related stability, have become the core international, regional, national, and state concerns. In its early days, financial services regulation was about 'policing'. A significant part of policing was to ensure competition and enforce anti-trust regulation. Later, regulators found themselves verifying the truth and fairness of statements about firms and products, a 'quasi-judicial' role. From at least the Great Depression, regulators were held responsible for the 'stability' of the financial systems, drawing regulators into arguments about lending credibility, credit and leverage. This was followed by regulators needing to regulate 'agency' conflicts, where insiders would take advantage of outsiders. A long-running example of an agency conflict is 'softing', where investment managers pay higher brokerage fees and pass the costs on to clients, but take unpaid goods or services, such as research. The result is that the investment managers' cost ratios look better because many of their costs are concealed as brokerage fees. Finally, by 2000, regulators were responsible for 'confidence' by consumers and firms in the financial system as a whole. Conduct has now become more distinct from safety, as the trend towards 'Twin Peaks' emphasises. However, taxation is increasingly causing conflict while not traditionally perceived as a regulatory function.

Financial regulation faces a number of issues, which may be summarised for the purposes of this paper as:

- proliferation – the scale of legislation and regulation being written to interpret legislation is enormous;
- conflict – legislation and regulation are increasingly conflicting with each other across sectors and national boundaries;
- proportionality – legislation and regulation are expensive tools and the requirements for both have increased to the point that UK financial services' regulatory costs have increased some 15 % per annum recently – [Financial Times 2013]

**“[Voluntary standards can be] a useful stepping stone, a testing ground for the scope of regulation”**  
*Sustainable finance expert, UK*

## Estimating the costs of regulation and standards

The cost of regulation can be huge, and the estimates controversial. According to The Economist, in the USA, “One study for the Small Business Administration found that regulation cost \$1.75 trillion a year in 2008, though many object to the analysis.” [The Economist, “Deleting Regulations: Of Sunstein and Sunsets”, 18 February 2012, pages 38-39]. Anderson and Russell [2011] conclude that: “Self-regulation offers a number of advantages over legislation for small businesses.” They note that Crain [2005], also drawing on US experience, points out that small firms (fewer than 20 employees) pay \$7,647 per annum which is about \$2,400, or 45 %, more than larger firms. Still, fixed costs can be high. A median estimate of accreditation costs, based on 11 to 12 days to accredit a certification body,

ranges from £9,000 to £20,000 across five European countries, the USA, Australia, New Zealand and Hong Kong. Such high-fixed charges can be a barrier for smaller firms. Numerous attempts have been made to help small firms achieve certification quickly. A notable success was IEMA Acorn that, through process standardisation and simplification, helped smaller firms moving towards Environmental Management Systems (ISO 14001). UKAS-accredited Acorn Inspection Bodies provided confirmation that firms had successfully implemented the relevant Phases of the British Standard BS 8555 (phased implementation of an environmental management system including the use of environmental performance evaluation) and saved smaller firms significant system design costs.

## 5. Voluntary Standards Markets in Financial Services

### 5.1 Existing Voluntary Standards Markets in Financial Services

A major premise of this report is that voluntary standards markets work well in helping other industries bridge the free-market regulatory divide, so why not financial services? It is important to recognise that voluntary standards markets are already in use in financial services. Figure 9 provides some examples of standards in use in the financial services sector according to their purpose.

#### 5.1.1 ISO Voluntary Standards for Financial Services

Founded in 1947, the International Organization for Standardization (ISO) is the world's largest developer of voluntary international standards. ISO counts 163 member countries (as of September 2013) represented by their national standard bodies (such as BSI for the UK). National standard bodies contribute to standard development at ISO level and represent ISO in their country. Since its creation, ISO

has published nearly 20,000 standards, of which standards on financial services represent only a modest fraction (51 as of August 2013) compared to other sectors.

Standards are developed by panels of experts called Working Groups (WGs) within technical committees (TCs) in response to a request from an industry or its stakeholders, usually coming through ISO national members. Experts sitting in WGs can come from industry, consumer associations, academia, NGOs, or governments. They can be nominated either by ISO members having declared an interest in participating in the TC's work, or by organisations in liaison with the TC in question. To date, ISO has established formal liaisons with more than 600 organisations. Once the need for a standard has been established, experts meet to discuss and draft a standard. When experts have reached consensus the draft is then sent out to ISO's members (countries), who will vote on it and provide comments. Comments are considered and the draft is reworked and improved until it gains both experts' and countries' consensus.

**Figure 9 – Examples of standards in use in the financial services sector**

Category	Example
Compatibility (or interface)	ISDA documentation standards for OTC derivatives ISO 20022 – universal financial industry message schemes SEC's Nationally Recognised Statistical Rating Organisation
Quality	AS 3806 – compliance systems BS 10500 – anti-bribery management system BS 8453 – compliance framework for regulated financial services firm ISO 22222 – personal financial planners ISO 22301 – business continuity management ISO 27001 – information security systems ISO 31000 – international risk management standard Fairbanking Hedge Fund Standards Board
Variety reduction	BS 8477 – customer service IFRS – accounting standards ISO 10002 – guidelines for complaints handling ISO 14001 – environmental management systems ISO 9001 – quality management systems Professional bodies – lawyers, accountants, actuaries, securities professionals SAS 70 – auditing of financial controls
Information standards	ACORD standards for insurance document exchange numerous ICT standards covering security, messaging, magnetic cards, etc. SWIFT – numerous information transmission standards

ISO currently comprises 236 technical committees (TCs) including TC 68, the technical committee designated to develop standards and technical reports for the financial services businesses and transactions [ISO 2012]. Created in 1948, TC 68 counts 30 participating countries and 48 observing countries. In addition to countries' delegations, seven organisations are in liaison with ISO TC 68: the Association of National Numbering Agencies, the European Central Bank, the European Payment Council, MasterCard, the Society for Worldwide Interbank Financial Telecommunication (SWIFT), the UN Centre for Trade Facilitation and E-business (UN/CEFACT) and VISA.

**“In financial services, standards exist to support our business processes, to make business more efficient, predictable, and sustainable. We develop and use standards to mitigate business and operational risks, to improve efficiency and drive out cost, since standards reduce transaction errors, failures and fraud. Standards lessen or eliminate the financial consequences of not having secure, complete and clear information needed to complete financial transactions. The wave of reform regulation and legislation resulting from the global financial crisis relies on transparency in terms of data gathering to support risk analysis. Without standards, effectively monitoring the global financial markets will be extremely difficult. The transparency that standards can help achieve is essential in maintaining efficient financial and capital markets going forward, demonstrating that our work in standardization is truly a public good.”** *Karla McKenna, Chair, ISO Technical Committee 68, ISO/TC 68 Financial Services*

TC 68 comprises three subcommittees (SCs):

- SC 2 – Financial services, security
- SC 4 – Securities and related financial instruments
- SC 7 – Core banking

As stated in TC 68's business plan [ISO 2012, 5]:

“ISO standardization by TC68 for global financial services aims to realize the following benefits and address the following solutions:

- Increasing use of ‘straight through processing’ or STP in all business transactions;
- End-to-end security of financial services transactions, data and infrastructure, facilitated by the development and adoption of information security standards;
- Decrease or elimination of paper-based business processes to fully electronic environments;
- Interoperability within and between business processes;
- Harmonization of business processes, globally if possible,

to realize the above; and for the ability to leverage standards globally;

- Confidence and reliability of financial services transaction and reference data;
- Data consistency, allowing for comparison and analysis of data and information;
- Transparency;
- Reduction in operating expenses and avoidance of unwanted recovery cost from malicious business disruption;
- Reduction of risk – business, operating, counterparty, systemic.”

To date, TC 68 and its subcommittees have published 51 standards (the full list is available in Appendix 4). TC 68's work is deemed to “continue to grow in importance as new technologies, financial products, cross-border processes evolve and the needs for information security increase in our modern global economy” [ISO 2012, 1]. TC 68 has 21 standards under development at the time of this report.

### 5.1.2 Other Voluntary Standards for Financial Services

The Financial Stability Board, which coordinates at the international level the work of national financial authorities and international standard setting bodies, lists 13 organisations and associations involved in setting international voluntary standards for financial services, though interestingly it does not mention ISO (see Appendix 4 for a description of the organisations listed below). These include:

- The Basel Committee on Banking Supervision (BCBS)
- The Committee on the Global Financial System (CGFS)
- The Committee on Payment and Settlement Systems (CPSS)
- The Financial Action Task Force on Money Laundering (FATF)
- The Financial Stability Board (FSB)
- The International Association of Deposit Insurers (IADI)
- The International Association of Insurance Supervisors (IAIS)
- The International Accounting Standards Board (IASB)
- The International Auditing and Assurance Standards Board (IAASB)

- The International Monetary Fund (IMF)
- The International Organisation for Securities Commissions (IOSCO)
- The Organisation for Economic Cooperation and Development (OECD)
- The World Bank (WB)

The Financial Stability Board designates 12 key policy areas and corresponding standards as “key for sound financial systems and deserving of priority implementation depending on country circumstances”, which are reproduced in Figure 10.

**Figure 10 – Key policy areas and system standards in financial services**

Area	Standard	Issuing Body
<i>Macroeconomic Policy and Data Transparency</i>		
Monetary and financial policy transparency	Code of Good Practices on Transparency in Monetary and Financing Policies	IMF
Fiscal policy transparency	Code of Good Practices on Fiscal Transparency	IMF
Data dissemination	Special Data Dissemination Standard / General Data Dissemination System	IMF
<i>Financial Regulation and Supervision</i>		
Banking supervision	Core Principles for Effective Banking Supervision	BCBS
Securities regulation	Objectives and Principles of Securities Regulation	IOSCO
Insurance supervision	Insurance Core Principles	IAIS
<i>Institutional and Market Infrastructure</i>		
Crisis resolution and deposit insurance	Core Principles for Effective Deposit Insurance Systems	BCBS(IADI)
Insolvency	Insolvency and Creditor Rights	WB
Corporate governance	Principles of Corporate Governance	OECD
Accounting and auditing	International Financial Reporting Standards International Standards on Auditing	IASB IAASB
Payment, clearing and settlement	Principles for Financial Market Infrastructures	CPSS/IOSCO
Market integrity	FATF Recommendations on Combating Money Laundering and the Financing of Terrorism and Proliferation	FATF

[Source: FSB website]

Between 2008 and 2012 alone, the FSB's list of non-ISO organisations has issued at least 93 standards (see Appendix 4 for list of standards). Compared to ISO TC 68's 51 standards issued in the past 65 years, it seems that the bulk of standards activities in financial markets takes place outside ISO.

Possible explanations for this relate to the type of standards and the targeted audience. The key standards mentioned above as well as other standards issued by the FSB and related bodies tend to focus on 'system standards'; that is standards that have beneficial effects on the stability of the financial system, both at national and international levels [FSB]. By way of contrast, ISO TC68 standards tend to fall in the 'product' and 'process' standards categories, and tend to focus more on information security, interoperability and compatibility, variety reduction and minimum quality. System standards tend to be developed for use by financial regulators, while ISO standards are developed for use by financial services firms and the sector as a whole.

## 5.2 Contrasting Voluntary Standards Markets in Finance with Other Industries

Briefly exploring two other industries by way of comparison provides interesting insights regarding the use and significance of standards. The first, food safety, shows a 'consumer' market using standards for chain of custody and safety. The second, shipping industry, shows a 'wholesale' market using standards in a complex regulatory environment.

While both food and shipping provide analogies for financial services regulation, it is extremely difficult to estimate whether any industry is, or is not, using standards at an appropriate level. A direct comparison with other sectors at ISO level (see Figure 11) shows that financial services, as measured by raw numbers of sub-committees, published standards and standards under development, is a low user of standards.

## Voluntary standards in the food industry

Many standards can be found in the food industry, often developed to address concerns and risks related to quality control, consumer protection, health and safety, and information disclosure. The globalisation of food production has resulted in a complex and interconnected system for food production and distribution which in turn has led to additional risks in terms of quality and health and safety control, supply chain management and cross-border trade. Moreover, the food industry has suffered on many occasions due to the bad publicity associated with food safety scandals. In response to public outcry and calls for government intervention, industry self-regulation and international standards initiatives have emerged to address related risks and concerns and to help restore trust.

International standards provide a global framework for the industry. While tastes may differ depending on location and culture, there is a need for common health and safety processes as well as minimum requirements for safe food production and distribution worldwide. International standards thus help to provide common terms of reference within both companies and supply chains, but also with consumers, civil society and governments.

In 1963, the Food and Agriculture Organisation (FAO) and the World Health Organisation (WHO) established the Codex Alimentarius Commission (Codex) to develop harmonised international food standards, guidelines and codes of practice to protect consumer health and ensure fair practices in the trade of food. Over 320 food-specific standards and guidelines have been published since its creation. Codex

standard development is an inclusive process involving member countries' delegations, experts, and also governmental and non-governmental organisations as observers. While the implementation of Codex standards is voluntary for member countries, they often constitute a basis for national legislation.

At the ISO level, over 1,000 standards, out of nearly 20,000, are specifically dedicated to food and deal with subjects as diverse as agricultural machinery, logistics, transportation, manufacturing, labelling, packaging, and storage. Major international standards include ISO 22000 for food safety management systems, the International Food Standard for food retailers and logistics as well as Hazard Analysis Critical Control Points (HACCP), a major platform for hazard compliance standards and good manufacturing practices in all sectors of the food industry. In the UK, BSI standards comprise PAS 221 (2013) prerequisite programmes for food safety in food retail and PAS 223 (2011) prerequisite programmes and design requirements for food safety in the manufacture and provision of food packaging; the British Retail Consortium has developed a Global Standard for Food Safety as well as one for Packaging and Packaging Materials.

As several food safety issues are being debated at national and international levels, for example on genetically modified organisms (GMOs), pesticides and nutrition labelling, standards are likely to continue to play a significant role in helping to develop harmonised and common requirements, whether ahead of, or in combination with, government regulation.

## Voluntary standards in the shipping industry

Maritime shipping is very much an international industry, as it underpins the global economy and helps to fulfil international trade. International standards help to regulate the industry given the international nature of the industry, the fact that the ownership and management chain surrounding ships can embrace many countries, and that ships move between different jurisdictions.

International standards for the maritime shipping industry often emerge in conjunction with international law that is treaties and conventions. While the first treaties on maritime safety date back to the 19th century, it is only in 1948 that the International Maritime Organisation (IMO) was established, based on the IMO convention (which entered into force in 1958). IMO is a United Nations specialised agency whose mission is to promote safe, secure, environmentally sound, efficient and sustainable shipping through cooperation. IMO counts 170 member countries (as of September 2013). In addition, 63 intergovernmental organisations have signed agreements of cooperation and 78 international NGOs (including ISO) have a consultative status with IMO.

However, the industry regularly faces criticisms, especially following ships' accidents and their often-disastrous consequences in terms of human casualties and environmental pollution. While a single party would be easier to blame, most shipping accidents are actually the result of a complex chain of events and causes which in turn reflects the difficulty of managing and monitoring effectively such complex supply chains.

Currently the responsibility for safety and environmental standards in international shipping is handled through a tripartite arrangement. Standards are adopted by the IMO, implemented by ship owners and operators and enforced or policed by countries, whether flag states or port states

[O'Neil 2003]. Major conventions include: (1) measures aimed at the prevention of accidents including standards for ship design, construction, equipment, operation and manning; (2) rules concerning distress and safety communications and procedures; and (3) conventions establishing compensation and liability regimes.

IMO does not, however, have the mandate or the resources to enforce standards [O'Neil 2003]. Inspection and monitoring of compliance are therefore the responsibility of member countries, but the adoption of a Voluntary IMO Member State Audit Scheme plays a key role in enhancing the implementation of IMO standards. While the first voluntary audits were completed at the end of 2006, the scheme is likely to become mandatory in 2015.

ISO also develops standards relevant to this industry with 286 standards published to date under the supervision of Technical Committee 8 on Ships and Maritime Technology and its nine subcommittees. These standards tend to be more technical in nature and deal with marine structure and ship specifications, design and technology as well as marine environment protection.

Raising world standards in the shipping industry is a never-ending task given the fast changing and complex world we live in, as well as the (re)emergence of security and safety issues such as modern day piracy. Standards are likely to continue to play an important part in the international regulatory regime governing the industry with a continuous focus on the human element, as well as safety and environmental protection. Recent standards discussions show the variety of areas where standards might apply; anti-piracy, security guards, slow steaming, antifouling, noise reduction for cetaceans, particulate emissions, ballast discharge, tanker walls.

**Figure 11 – Comparing selected areas of standards development at ISO level**

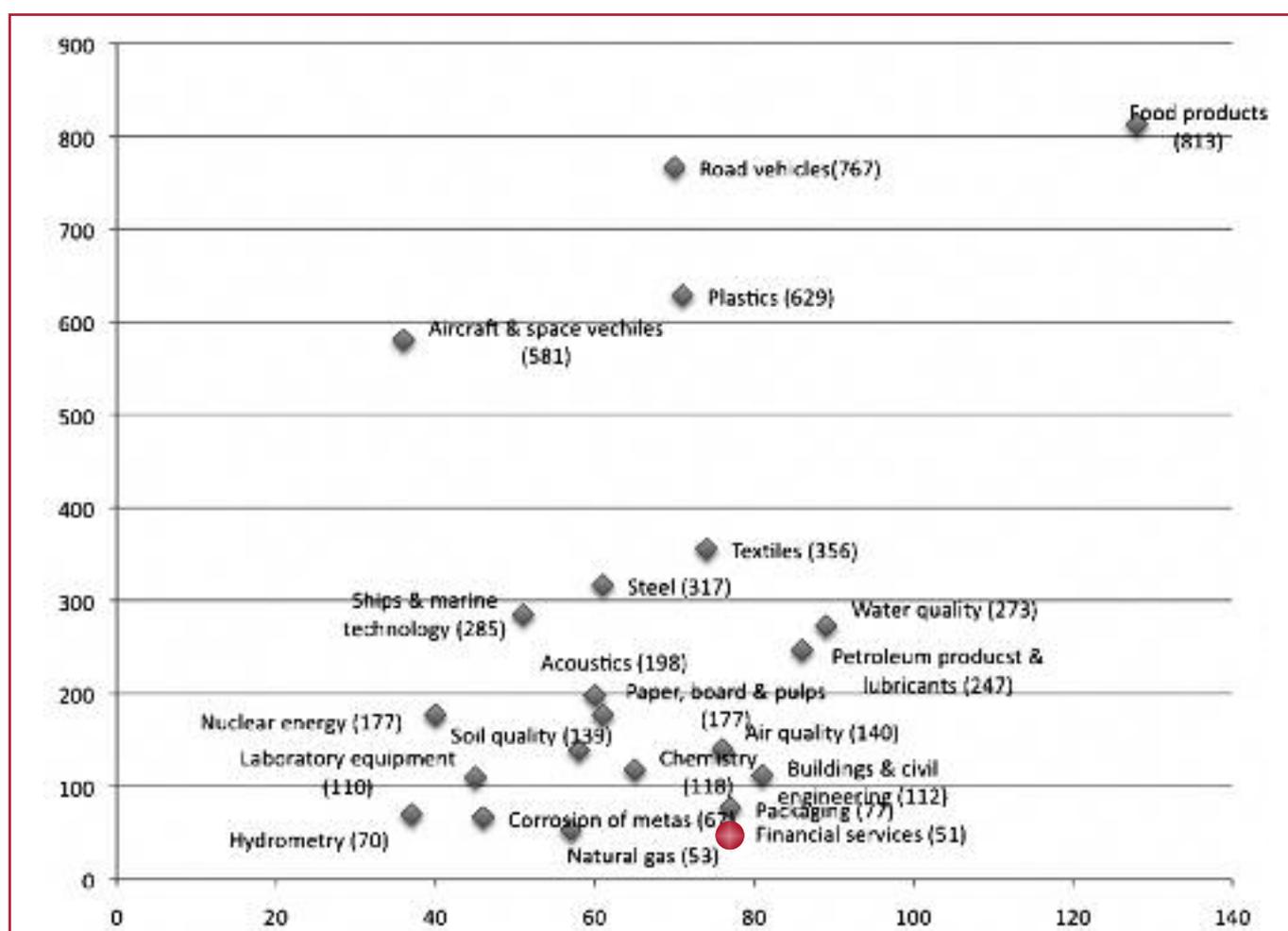
Area	Created	Sub-Committees	Published Standards	Standards Under Development
Financial services	1948	3	51	21
Ships and marine technology	1947	9	285	64
Aircraft and space vehicles	1947	8	581	88
Food products	1947	15	813	75
Plastics	1947	10	629	92
Fire safety	1958	4	120	28

At ISO level, the technical committee on information technology (IEC JTC 1) has been the most active with over 2,600 published standards. Figure 12 contrasts standard activity (in terms of published standards, Y axis) with member countries' involvement (comprising both participating and observing countries, X axis) for selected technical committees set up by ISO between 1947 and 1990.

It would have been interesting to contrast ISO standards activity per sector with the economic significance at a global level. Unfortunately, this was not possible. Global GDP per sector data is incomplete and contradictory. Categorisations in ISO are not necessarily those of economic activity, e.g. is 'fire safety' an economic sector. Then there are problems with raw comparisons of standards:

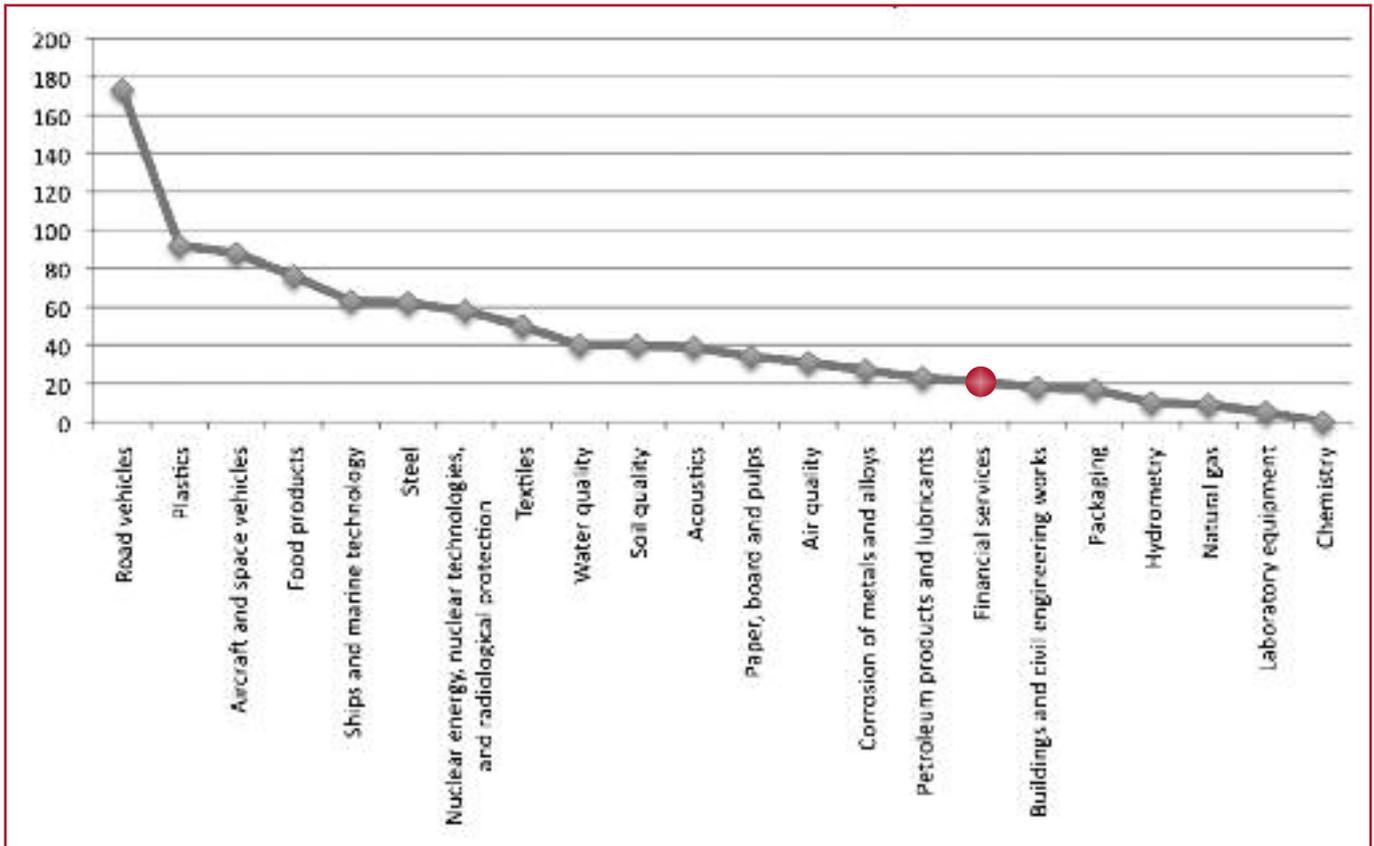
- standards are not standard – some standards are long and complex, others short and simple;
- some management or governance standards, e.g. ISO 9001 (Quality Management) or BS 13500 (Effective Governance), apply to numerous industries;
- some standards apply to more than one industry or sector, e.g. Bill Of Lading Electronic Registry Organisation (BOLERO) which is relevant to shipping and related financial services;
- some standards, e.g. ISO 27001 (Information Systems Security), apply to departments or functions contained in most large organisations.

**Figure 12 – Standard activity contrasted with country involvement for selected ISO TCs**



The number of standards under development at ISO can also provide a useful indication of the level of identified needs for different TCs. Once again, the financial sector has a moderate level of standards under development (21 up to August 2013) compared to other technical committees, as shown in Figure 13 for the same selection of TCs as in Figure 12.

Figure 13 – Standards under development for selected ISO TCs



## SWIFT and SIBOS – towards an industry forum for standards development?

The Society for Worldwide Interbank Financial Telecommunication (SWIFT) is a member-owned cooperative providing secure financial messaging services. Today SWIFT enables more than 10,000 financial institutions and corporations in 212 countries and territories to connect and exchange financial information securely and reliably.

Originally set up in Brussels in 1973 with the support of 230 banks from 15 countries, SWIFT was first tasked to create a shared worldwide data processing and communications link as well as a common language for international financial transactions.

SWIFT has become a significant actor in the financial services industry and has gradually become involved with standard development for the industry. SWIFT is a liaison organisation at ISO, closely involved with the standard development and maintenance work of ISO Technical Committee 68 for Financial Services (TC68) and its three subcommittees. SWIFT was also selected in 2011 as the primary ISO registration authority for ISO 17442, the standard on the Legal Entity Identifier (LEI) published in 2012 [ISO 2011].

In the wake of post-crisis regulatory efforts and associated uncertainty, SWIFT has regularly advocated the use of collaborative solutions such as open and flexible standards as an effective way to implement new regulations, reduce risk and improve efficiency [SWIFT 2012].

SWIFT seeks to bring the financial community together to work collaboratively on shaping the market, defining standards and debating issues of mutual interest. One way it does so is through SIBOS – the SWIFT International Banking Operations Seminar. SIBOS is an extremely popular (circa 10,000 attendees) annual conference exhibition and networking event for the financial industry, which includes a Standards Forum as one of the four dimensions of the event. It is possibly the biggest gathering of people in global banking every year, borne of standards discussions. SIBOS 2013 Standards Forum explored topics revolving around the benefits and challenges of implementing standards and explored the future of standards for the financial services industry.

# 6. Voluntary Standards Markets in Future Financial Services

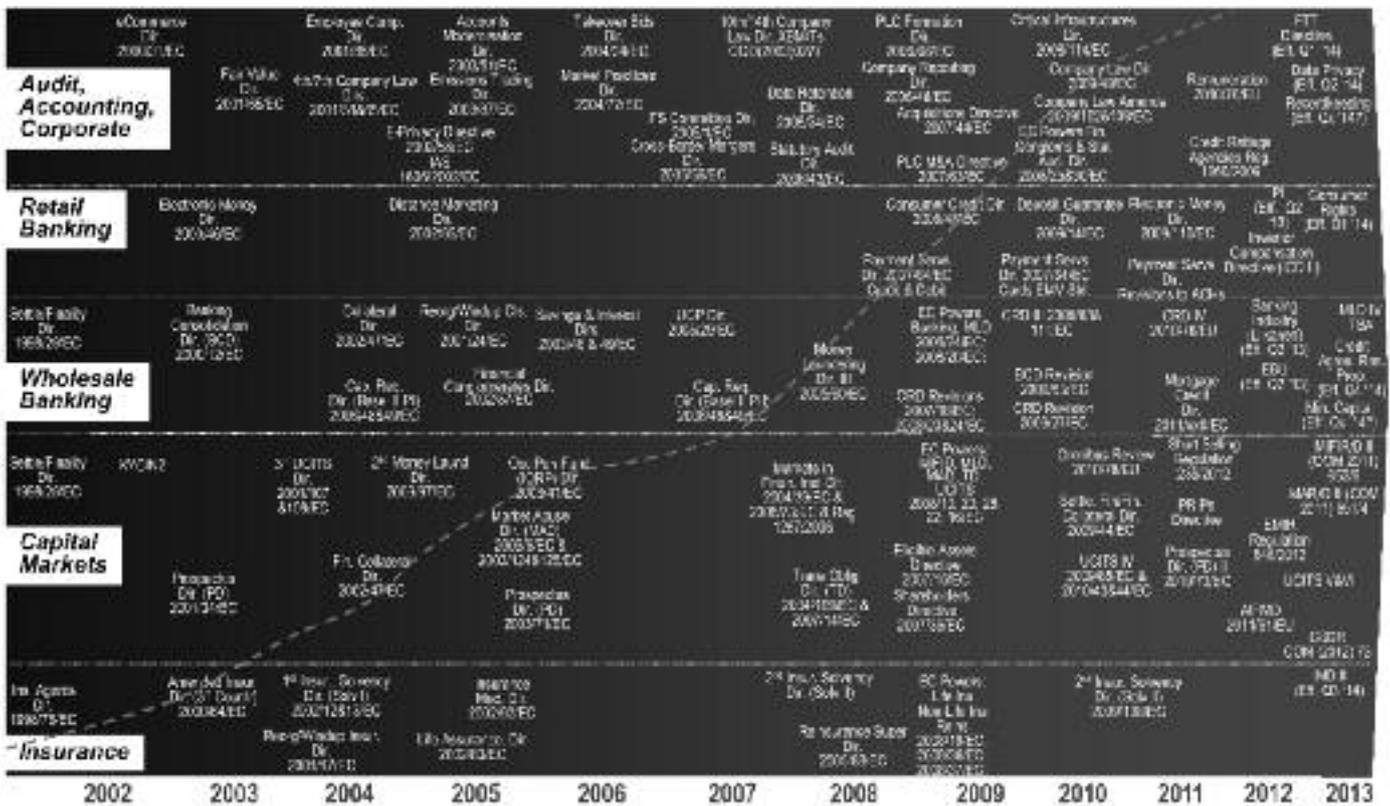
**“Most areas of financial services could benefit from voluntary standards regulation but until the fundamental flaws in the banking and economic system are addressed, they will make little difference to systemic risk, market rigging and banking fraud.”**  
*Director, FS consultancy*

The scale of future financial services regulation is daunting. By the end of 2013 there will be 45 EU financial services directives brought in over 15 years. Dr Anthony Kirby of Ernst & Young estimates that cumulative expenditure by EU financial services firms on new regulation will exceed

26 billion Euros between 2013 and 2016. Figure 14 gives an overview of Dr Kirby’s ‘tsunami of regulation’.

Voluntary standards are not part of these regulatory developments driven by regulators. As John H. Cochrane states “We are accepting a big increase in resources devoted to financial regulation and compliance, and a potentially larger reduction in the efficiency, innovation, and competitiveness of financial institutions and markets, in an attempt (misguided or not) to avoid runs and crises.” [Cochrane 2013, 2]

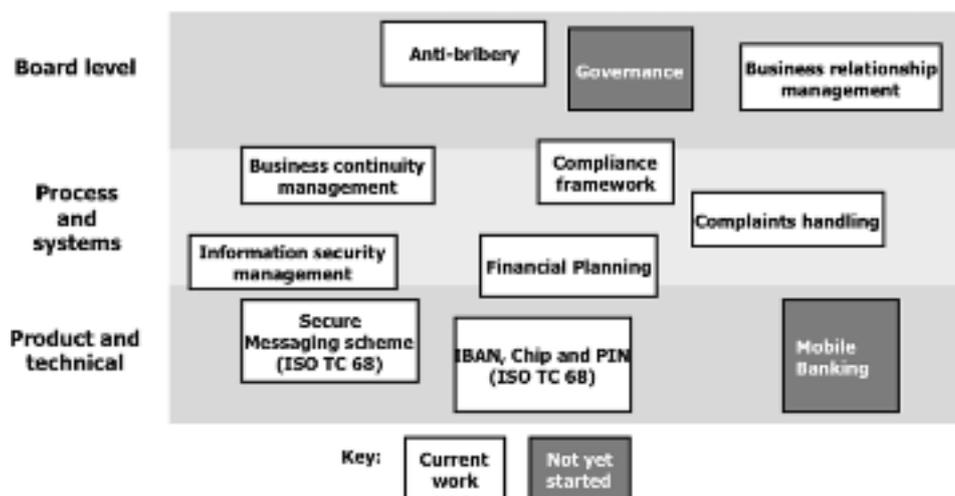
**Figure 14 – Tsunami of regulation**



[Source: Dr Anthony Kirby, EY, 2013 – with permission]

Standards could help to harmonise regulation for financial services while safeguarding efficiency, innovation and competitiveness of financial firms and markets. BSI shared their forward view of financial services standards development as of July 2013, see figure 15.

**Figure 15 – BSI’s view of financial services standards development**



[Source: BSI, 2013 – with permission]

In addition, voluntary standards are already being discussed and developed in novel areas of financial services. During the course of this research a number of standards were put forward that were either under discussion or partially developed, for example:

**Figure 16 – Examples of financial services standards under discussion or development**

Issue	Standard Idea or Initiative	Risk Area
Anti-money laundering	Seal of approval for anti-money laundering processes	Process
Bitcoin	Buying and selling Bitcoins	Product, service
Capacity Trading	BSI PAS for barter and local currencies	Product, service
City Local Infrastructure Project Finance	Classification and audit of local initiatives for investor confidence and securitisation	Product
Climate Bond Standards	Screening tool for climate investors	Product
Central Bank Management Standard	A peer-accreditation process on the management of central banking functions	Process
Chartered Banker: Professional Standards Board	Developing and supporting the implementation of industry-wide professional standards	People
Customer Risk Profiling	Seal of approval for customer risk profiling	Process
Data Management	Enterprise Data Management Council	Process
Family Offices (particularly multi-family)	A standard on basic processes and also perhaps fiduciary responsibilities	Process

Figure 16 – continued

Issue	Standard Idea or Initiative	Risk Area
Fiduciary ratings	Responsible management of other people's assets	People, process
Hedge Fund Standards	Hedge Fund Standards Board	Process, service, product
Indices and Benchmarks	Index Industry Association Code of Conduct in the wake of LIBOR and other scandals	Process
Information Exchange	Regulatory and tax information exchange agreements and compliance thereon	Process
International Islamic Financial Market	IIFM Master Agreement for Wakala (agency contracts)	Process
Know Your Customer	Seal of approval for know your customers processes	Process
Legal Entity Identifiers	Being done through ISO (in part)	Process
Peer-to-Peer Insurance	Standard on insurance practices	Product, process
Peer-to-Peer Lending	Standard on lending practices [note the UK Financial Conduct Authority has stated its intention to work with the industry to develop regulation]	Product, process
Prime Collateralised Securities Initiative	Standard to reinforce asset-backed securities as sustainable investment and funding tools	Product, process
Professional Bodies Management Standards	Meta-standards for examinations, membership, communications, continuing professional development, ethics, complaints, sanctions, expulsion – perhaps of particular use in helping to open up trade in professional services	People, process
Prudential modelling	Technical standards for the development, maintenance and testing of models	People, product, process
Qualifying Recognised Overseas Pension Schemes (QROPS)	Voluntary code of conduct in early stages, could move to voluntary standards market	People, product, process
Responsible Investment	Responsible Investment Stewardship Standards	Process
Secure International Financial Centre	Approved financial centre regulation standard covering regulation, anti-money laundering, surveillance, reporting, and compliance with international norms	System
Single Euro Payments Area (SEPA)	Self-regulation moved to mandatory regulation could be done as voluntary standards market	Product, process
Sustainability Accounting	Sustainability Accounting Standards Board	Process, product
Testing	Test suite standards for financial products software on pricing, volume testing, security, and hand-shaking for sets of market products	Process, product

## Hedge Fund Standards Board – process standards in wholesale investment

Established in 2008 in response to criticism of the industry by policy leaders, the Hedge Fund Standards Board (HFSB) is a standard setting body for the hedge fund industry. It is custodian of the Hedge Fund Standards, which provide a powerful mechanism for creating a framework of transparency, integrity and good governance that complements public policy, thus serving the interests of all market participants and of the economy at large.

The HFSB brings together managers, investors and regulators from around the world to help determine how the hedge fund industry should operate. It has over 160 stakeholders, including major sovereign wealth funds and endowments as members of the Investor Chapter, as well as leading hedge fund managers as signatories to the Standards, accounting

for USD 500 billion in assets under management. The investors play a key role in the HFSB process driving adoption of the Standards by managers. The organisation is governed by a board of trustees consisting of managers and investors from the US, Europe, the Middle East, Asia and Australia.

Its mission includes fostering collaboration between managers and investors, supervisory engagement and improving the Hedge Fund Standards over time. Since its inception, the HFSB has held public consultations to strengthen the Standards in areas such as handling of redemptions, independent administration, and governance.

For more information – <http://www.hfsb.org>

## The Fairbanking Mark – certification for financial products

The Fairbanking Foundation is a not-for-profit, research-based charity established to encourage and assist providers of banking products to improve the financial well-being of their customers by enabling these customers to manage their money better. The Foundation does this through a combination of thorough consumer research to better understand what drives financial well-being, assessment of existing core banking products against this understanding, and the operation of the Fairbanking Mark certification scheme, accredited by UKAS since July 2013.

The Fairbanking Mark initiative has been designed to encourage and facilitate the wider availability and higher public profile of core banking products that can make a significant improvement to the financial well-being of the customer. The Fairbanking Mark can be granted in 3, 4 or 5 star versions for four product categories: current account with and without overdraft, regular savings and credit cards. Five products have already been through the Fairbanking Mark scheme and have succeeded in gaining a Fairbanking Mark since the scheme was first established in 2011, including two current accounts without an overdraft, a current account with an overdraft and two savings accounts. The related financial institutions use the Fairbanking Mark on

their websites and in marketing materials. The recipients are varied, which emphasises that it does not require the largest budget and most sophisticated product in order to help people. Although Marks have been granted at 3 and 4 stars, a 5 star mark has not been granted as yet. The specifications include such features as alerts and messages, goal-setting, expenditure management and planning. The detailed survey of customers is an important part of the process for certification.

The Fairbanking Foundation is seeking to identify that the product features are positively influencing the behaviour of customers in a way that helps them to meet their financial needs or objectives. It is intended that over time the requirements will be changed as evidence is obtained for better approaches to financial management. Changing financial products is a slow process and the charity recognises that it may be some time before the certification activity is financially viable. Fairbanking is pleased with the level of engagement and is aware of influencing products used by more than 350,000 persons in the UK.

For more information – <http://www.fairbanking.org.uk>

## Climate Bonds Initiative – validating fixed income climate investment

The “Climate Bond Standard and Certification Scheme” has been developed by the Climate Bonds Initiative as a screening tool for fixed income investors concerned about climate change risks. The Initiative is an investor-focused, international not-for-profit organisation, working to mobilise debt capital markets to accelerate a global transition to a low-carbon and climate resilient economy.

The Scheme is a voluntary industry initiative designed with the cooperation of major investor groups, environmental NGOs and various financial sector corporations. It aims to bring greater transparency to climate-related bond markets, visibly defining climate change related investments in a manner that helps concerned investors to easily prioritise

them, subject to their risk/yield requirements.

Organisations involved range from CalSTRS, the Investor Network on Climate Risk and Aviva Investors, to Standard & Poor’s, KPMG and the International Energy Agency. The Scheme uses third part verifiers to provide assurance reports about prospective bonds. It relies on the work of expert committees developing certification eligibility; an industry working group looking at practical delivery issues; and a Board made up of institutional investor representatives and NGOs.

For further information – <http://www.climatebonds.net/standards/>

## Sustainability Accounting Standards Board – reporting standards

The Sustainability Accounting Standards Board (SASB) is a non-profit organisation that provides standards for use by publicly-listed corporations in the USA in disclosing material sustainability issues for the benefit of investors and the public. SASB standards are designed for disclosure in mandatory filings to the Securities and Exchange Commission (SEC). Through the first quarter of 2015 SASB is developing standards for more than 80 industries in 10 sectors suitable for use in providing decision-useful information in the SEC Forms 10-K and 20-F.

SASB is accomplishing this through intensive evidence-based

research of material issues within industry; convening industry working groups to establish accounting metrics; partnering with the accounting profession to develop auditing protocols; and providing education with regard to recognition and accounting of material non-financial issues.

SASB is accredited to establish sustainability accounting standards by the American National Standards Institute (ANSI). SASB is not affiliated with FASB, GASB, IASB or any other accounting standards boards.

For more information – <http://www.sasb.org/>

While it is difficult to be definitive about where voluntary standards markets do and don’t work, it might be helpful to put forward a taxonomy categorising potential standards by application area and actors. There are a number of different ways to provide a taxonomy for financial services standards. The FSB attempts to classify standards by their *scope*:

- **Sectoral** – These cover the economic and institutional sectors such as the government and central bank, banking, securities, and insurance industries, and the corporate sector.
- **Functional** – Within each sector, standards cover areas such as governance, accounting, disclosure and transparency, capital adequacy, regulation and supervision, information sharing, risk management, payment and settlement, business ethics, etc.

From an implementation perspective, standards also differ in their *specificity*:

- **Principles** – These are fundamental tenets pertaining to a broad policy area. Principles are usually set out in a general way and therefore offer a degree of flexibility in implementation to suit country circumstances, e.g. the Basel Committee’s *Core Principles for Effective Banking Supervision*, IOSCO’s *Objectives and Principles of Securities Regulation*, IAIS’s *Insurance Supervisory Principles*, and CPSS’s *Core Principles for Systemically Important Payment Systems*.
- **Practices** – These are more specific and spell out the practical application of the principles within a more narrowly-defined context, e.g. the Basel Committee’s *Sound Practices for Loan Accounting*, IOSCO’s *Operational and Financial Risk Management Control Mechanisms for Over-the Counter Derivatives Activities of Regulated Securities Firms*, and IAIS’s *Supervisory Standards on Licensing*.
- **Methodologies/Guidelines** – These provide detailed guidance on steps to be taken or requirements to be met



IRSG has four classifications for purpose contrasted with five broad stages of progress, emerging, intent, consultation, proposal, agreed standard. The four classifications of purpose are worth specific attention:

- Financial Stability and Reducing Systemic Risk – regulation promoting stabilising effects, and reducing systemic risk;
- Transparent, Safe and Competitive Single Market Promoting Economic Growth – Regulation promoting Single Market for financial services as a driver of economic growth across EU;
- Financial Supervision, Corporate Governance, Audit and Accounting – New structures to improve supervision of financial institutions, corporate governance arrangement supporting this;
- Consumer Protection – Regulation promoting and protecting consumer interest.

During this research, respondents were able to suggest numerous areas where voluntary standards markets could relieve regulatory burdens. When asked about the suitability of standards around people, products and processes in the financial services sector, the majority of respondents to the survey indicated that they would welcome more standards created by the financial services sector itself (between 42 % and 54 % for each category). However, for Financial Stability and Reducing Systemic Risk there were relatively few suggestions. Respondents seemed to believe that prudential regulation, e.g. setting capital adequacy ratios, was best left to regulators. Respondents did believe that standards might play a large role in supporting functions for Financial Stability and Reducing Systemic Risk, e.g. financial modelling standards for risk or solvency calculation and validation, but not aimed at system stability directly.

In order to move towards an understanding of which areas in financial services might benefit most from voluntary standards markets, we suggest the following taxonomy contrasting the primary risk issue – people, products,

processes, and system – against the actors in financial services, which we might classify as those who are involved versus those who are committed. An outline structure is in Figure 18.

We suggest classifying the actors in six broad categories. For wholesale financial services, the first three categories are those committed to the financial markets:

- investors – who commit funds to direct or indirect investments with the expectation of financial returns – e.g. corporate investors, asset managers, lenders, banks;
- traders – who buy, sell and make markets in securities – e.g. brokers, inter-dealer brokers, exchanges;
- guarantors – who insure or re-insure projects or corporate operations – e.g. insurers, reinsurers, trade finance.

The next three categories are those involved in the financial markets:

- advisors – the professions and quasi professions and related firms – e.g. accountants, lawyers, actuaries, rating agencies, investment advisors;
- suppliers – a host of general businesses who tailor specific products or services for financial services – e.g. custodians, information providers, ICT firms, administrators;
- customers and public – those who purchase financial markets services – e.g. governments, corporations, and each other in the wholesale markets, while affecting public confidence.

**Figure 18 – Outline structure**

Committed or involved	People	Products	Processes	Systems (Competition and Macro-Prudential)

**Figure 19 – Wholesale financial services and financial markets: suitable areas for voluntary standards market approaches**

Committed or involved	People	Products	Processes	Systems (Competition and Macro-Prudential)
Investors	L	L	L	
Traders	L		L	
Guarantors	H	H	H	
Advisors	H	H	M	
Suppliers	L	M	M	
Customers and Public	L		L	

In Figure 19 we have attempted to indicate which areas seem most likely to be suitable for voluntary standards markets approaches, indicated as H – high, M – medium, L – low. ‘Suitability’ is a combination of need, applicability and desire.

It may seem unusual that Customers:People and Customers:Processes might have been indicated as potential areas for voluntary standards markets, but in wholesale financial services some of the clients need to be qualified to trade with wholesale players, e.g. the operational performance of hedge funds as clients to their prime broker.

For retail and corporate financial services, see figure 20, the first three categories are, again, those committed to retail markets, but slightly more defined and regulated:

- banks – retail and corporate banks, along with money

transmission services;

- insurers – retail and corporate insurers;
- funds – investment and pension funds.

Again, it may seem unusual that CustomersandPublic:People is mooted, but initiatives in this space include calls for identification of qualified investors as well as general public education in financial services, e.g. financial services ‘driving licences’. That said, the biggest area for new standards is in helping direct advisors prove their value. This is already a big theme, for example the CISI has been working hard to get relevant members prepared for implementation of the UK Retail Distribution Review (the review targets the quality and standard of advice available to consumers in the financial services sector).

**Figure 20 – Retail and corporate financial services: suitable areas for voluntary standards market approaches**

Committed or involved	People	Products	Processes	Systems (Competition and Macro-Prudential)
Banks	L	M	M	
Insurers	L	H	M	
Funds	L	L	M	Systematic Guarantees
Advisors	H	H	H	
Suppliers	L	M	M	
Customers & Public	?			

## 7. How to Make Voluntary Standards Markets Work for Financial Services Regulation

**“We looked at voluntary standards markets for UK peer-to-peer lending, but welcomed formal regulatory oversight when it was offered instead.”** *Giles Andrews, CEO Zopa and Founder Member of the Peer-to-Peer Finance Association*

Voluntary standards markets exist already in financial services, and there are numerous discussions and proposals for more. However, financial services appears to be a relatively low user of voluntary standards markets and a high user of regulation. Given the strong global activities aimed at financial services regulatory reform, this situation is odd. Voluntary standards markets should be able to provide faster, more flexible, evolutionary reform, and have a great impact on three large risk areas – people, products and processes – but they are unlikely to be of much use in systemic stability, e.g. competition policy and macro-prudential regulation.

There are three generic benefits to standards for financial services firms:

- risk avoidance – standards should result in few crises and problems through the appropriate design, implementation and enforcement of controls, thus increasing survivability through the achievement of at least basic competence. Regulators should consider using flexible, evolutionary voluntary standards markets to spread best practice rapidly, while being alert to the adverse potential of herd behaviour or single points of failure, which are also a characteristic of direct regulation;
- reward enhancement – standards should result in greater rewards by generating increasing returns from management time and effort. Standards can also lead to added competitive advantage through differentiation or greater visibility. There may be temporary benefits of gaining business through differentiated marketing, as was the case for one commodity-trading firm that was an early adopter of ISO 9001 in the early 1990’s. Regulators should consider the trade-offs between direct regulation and voluntary standards markets, with particular attention to ‘backing off’ thereby giving firms regulatory compliance

cost reductions if they comply with audited voluntary standards markets;

- increased certainty – by increasing consistency and reducing volatility of performance, costs are reduced and client satisfaction is increased. Basically, an investment in quality systems is the equivalent of reducing the price of the put option on the organisation. Further, volatility reduction should over time provide strong evidence that the operational risk capital required under Basel II or Solvency II could be reduced compared to firms without an externally verified standard certificate. In addition, the evolutionary and wide-stakeholder involvement of voluntary standards markets gives firms more certainty than the often crisis-driven change programme of regulation.

Financial services professionals seek a long-term market where good people are doing the right thing consistently. Voluntary standards markets could help achieve that long-term market. Voluntary standards markets tend to be more proportionate, more reactive to changing conditions. Figure 21 summarises the core problems against primary purpose.

The burden of regulation and compliance is increasing rapidly in all industries, and clearly very rapidly in financial services. Managing regulation and compliance is becoming a core business skill for many. “What should our response to regulation be?” is not just a compliance question, but a strategic one. JP Morgan, for example, already spends around \$5 billion on litigation annually and has publicly committed to spend an extra \$4 billion on compliance and assign 5,000 extra employees to fix risk and compliance issues [Reuters 12 September 2013].

**Figure 21 – Financial services standards: risks and opportunities**

Purpose	Problem	Mitigation
Risk – risk management	<ul style="list-style-type: none"> <li>• overzealous application</li> </ul>	<ul style="list-style-type: none"> <li>• market forces provide implicit risk-reward impact assessment</li> </ul>
Quality – reward enhancement	<ul style="list-style-type: none"> <li>• indiscriminate application</li> </ul>	<ul style="list-style-type: none"> <li>• evolution of standards</li> </ul>
Trust – increased certainty	<ul style="list-style-type: none"> <li>• unenforceable</li> </ul>	<ul style="list-style-type: none"> <li>• regulators working with voluntary standards markets, or using voluntary standards markets where market access is restricted</li> </ul>

## 7.1 Financial Services Regulation, A 'New Combined Approach'?

**"If regulators were to back off it would be a different story; regulation is a dirtier word than ever in banking because we see so many examples of bad rules, laws and processes."** *Global Head of Risk, US Global Bank*

Policy makers are generally unfamiliar with voluntary standards markets. UK academics pointed out that much existing research ignores or misses voluntary standards markets. Equally, export and other economic statistics fail to provide a fair account of voluntary standards markets in terms of type, volume, scale and value. Moreover, we are at an early stage of developing methodologies to assess the costs and benefits of 'diffuse systems' such as standards, where process costs are ubiquitous and individually small, yet have benefits that are also widely distributed and individually small. Another example of a diffuse system might be the statutory collection of these types of economic data. Gaps in understanding are partly explained by the lack of definition, the variety of forms of voluntary standards markets and the difficulties of acquiring statistical data.

Financial services firms need more strategic thinking on regulation, compliance and litigation. Regulatory reform suggestions are numerous, such as including both sunset clauses (time limited or expiry dates for all regulations), as well as sunrise clauses (longer consultation periods before implementation) for regulation. Financial services regulatory debate could benefit from an analogue to the EU's 'New Approach'. A financial services 'New Combined Approach' should be one where moves towards regulation are preceded by serious consideration of the use of voluntary standards markets.

'Prior options' studies are required periodically from all UK government agencies, typically every three years. These originally began as a way of ensuring that agencies were subjected to scrutiny about their existence, rather than just continuing to exist from year to year. The terms of a prior options study are not rigorously set out; rather they exist partially in internal government memos and partially by convention. The basic objectives of a prior options study are to determine whether the activities of a government agency need to be performed at all; if they do need to be performed, do they need to be performed within government; and if they do need to be performed within government, do they need to be wholly performed within government? This suggests an analogue with financial services regulation and a 'New Combined Approach':

1. Do we need anything other than a 'free' market?
2. If we do, can we use a voluntary standards market?
3. If we can't, can we structure appropriate regulation that uses voluntary standards markets for part of the solution?
4. If a voluntary standards market can be used (alone or in

conjunction with regulation), what is needed to make it work most effectively?

For regulators, there may be good reasons for promoting externally verifiable standards as a 'third way' between complete anarchy and intrusive regulation. The third way might be for regulators to encourage outsourced compliance checking of flexible standards. Benefits might be several. First, the industry has to participate, and perhaps rapidly. Second, a standard can be minimal and then evolve. Third, if a voluntary standard market does not work, then regulators should have learned much about why not. If a voluntary standard market does work, then regulators could reduce their role, due to reduced risk, and focus on areas where they can make a positive difference. Developing standards can be a way to educate regulators and good standards should give regulators confidence where they do not have control. Further, voluntary standards markets may help to lower the regulatory cost and increase confidence in components of the financial system, thus contributing to macro-prudential stability. This in turn could enable regulators to focus their efforts at the systemic level including competition policy, macro-prudential measures, and systemic stability.

## 7.2 Recommendations

Five main areas are identified where industry stakeholders, standard-setting bodies as well as policy-makers and regulators could foster voluntary standards markets' development for the financial services sector.

**Figure 22 – Recommendations**

Recommendation	Options	Desired outcomes
<p><b>1. Promote 'New Combined Approach' for financial services regulation featuring voluntary standards markets</b></p> <p><b>HIGH importance</b></p>	<p><b>Found Accreditation and Certification Bodies Financial Services Regulation 'Task Force'</b></p> <p><b>Establish EU publicity programme</b></p> <ul style="list-style-type: none"> <li>EU Bodies – appropriate sections on competition and financial markets, especially European Supervisory Authorities (ESAs): European Banking Authority (EBA), European Insurance and Occupational Pensions Authority (EIOPA), European Securities and Markets Authority (ESMA), European Systemic Risk Board (ESRB), under the responsibility of the European Central Bank (ECB)</li> </ul> <p><b>Establish trade bodies and professional bodies publicity programmes – at least 47 trade bodies in the UK and numerous throughout EU</b></p> <p><b>Establish relevant national publicity programmes</b></p> <ul style="list-style-type: none"> <li>HM Treasury, FCA and Bank of England (PRA)</li> </ul>	<ul style="list-style-type: none"> <li>heightened awareness</li> <li>'getting in on the ground floor' of new regulatory initiatives</li> <li>possible formal extension of 'New Approach' to financial services</li> </ul>
<p><b>2. Better coordination of existing standards development efforts in financial services</b></p> <p><b>HIGH importance</b></p>	<p><b>Encourage collaboration between the Financial Stability Board, standard bodies active in financial services, the ISO community including national standard bodies, and industry and consumer bodies.</b></p>	<ul style="list-style-type: none"> <li>improve efficiency</li> <li>enable better communication and promotion of existing standards</li> <li>identify new opportunities for voluntary standards markets development</li> </ul>
<p><b>3. Produce more evidence of voluntary standards markets benefits and costs</b></p> <p><b>MEDIUM importance</b></p>	<p><b>Commission more research into government financial services regulation contrasted with voluntary standards markets, especially more international studies and tight case studies</b></p> <p><b>Build resource library for policy-makers, regulators, accreditation bodies, certification bodies and academics</b></p>	<ul style="list-style-type: none"> <li>further understanding of voluntary standards markets, related risks and opportunities</li> <li>improve data monitoring, consistency and confidence</li> <li>monitor evolution of voluntary standards markets</li> <li>research impact on wider economy</li> </ul>

Figure 22 – continued

Recommendation	Options	Desired outcomes
<p><b>4. Establish a financial services ‘community’ around voluntary standards markets</b></p> <p><b>MEDIUM importance</b></p>	<p><b>Develop a relevant online ‘forum’ and series of events and provide support by:</b></p> <ul style="list-style-type: none"> <li>• establishing a financial services network for voluntary standards markets</li> <li>• promoting dialogue with relevant government bodies and officials</li> <li>• promoting dialogue and collaboration between standard setting bodies and professional institutions and trade association bodies (e.g. accountants, actuaries, brokers, financial analysts)</li> <li>• promoting related cooperative vehicles at early stages, e.g. ‘light’ training or experience sharing sessions for those considering codes of conduct, standards, etc.</li> <li>• promoting research connections into voluntary standards markets</li> <li>• developing adequate education programmes for financial services policy representatives, policy makers, regulators, and professionals</li> </ul>	<ul style="list-style-type: none"> <li>• build confidence in voluntary standards markets</li> <li>• encourage participation</li> <li>• provide reassurance to current and prospective participants</li> <li>• improve visibility and credibility of the industry</li> </ul>
<p><b>5. Integrate voluntary standards markets for financial services with wider policies of governments</b></p> <p><b>MEDIUM importance</b></p>	<p><b>Integration with:</b></p> <ul style="list-style-type: none"> <li>• promotion – UK Trade &amp; Investment</li> <li>• innovation and research – BIS, Technology Strategy Board, EU R&amp;D framework</li> <li>• competition – Office of Fair Trading, EU</li> </ul>	<ul style="list-style-type: none"> <li>• increase attractiveness of voluntary standards markets for organisations with international operations</li> <li>• find ways for more effective surveillance and cost reduction of accreditation and certification, e.g. peer-to-peer certifications</li> <li>• increase dialogue on the promotion of competition and development of the Open Market</li> </ul>

**“The biggest single factor for success of a standard is a regulator who respects voluntary standard systems.”**

*Head of Standards Body*

Using voluntary standards markets to regulate financial services where and when possible could lead to added benefits including industry participation, evolution, and flexibility prospect of regulation, notwithstanding easing the regulatory cost burden. The first recommendation – **“promote ‘New Combined Approach’ for financial services regulation featuring voluntary standards markets”** – recognises the need for publicity programmes at industry, national and regional (EU) level to increase awareness of voluntary standards markets and seize opportunities for the use of voluntary standards as part of new regulatory initiatives or reforms. Included in this might be a ‘task force’, with regulatory participation, to promote the ‘New Combined Approach’.

The second recommendation – **“better coordination of existing voluntary standards development efforts relevant to the financial services sector”** – recognises that many organisations at national, regional, and international level (ISO, BSI, Financial Stability Board and others) are involved in voluntary standards development for financial services, including ISO, national standards bodies (e.g. BSI) as well as the Financial Stability Board and other regulatory bodies in the sector. Coordinating efforts and consultations could bring additional benefits in terms of efficiency, but also increase the use of future voluntary standards markets in the future.

The third recommendation – **“produce more evidence of voluntary standards markets benefits and costs”** – acknowledges that while there is awareness of voluntary standards markets, further understanding of voluntary standards markets, and of related costs, benefits, risks and opportunities, is needed. Such evidence would also be useful

to monitor the evolution of voluntary standards markets, and better document their impact on the wider economy.

Voluntary standards markets cannot emerge without a community of stakeholders. The fourth recommendation – **“establish a financial services community around voluntary standards markets”** – is deemed necessary to build confidence in voluntary standards markets, encourage participation, and to improve the visibility and credibility of the industry. The community should seek to promote dialogue among regulators, standard-setting bodies, trade associations, professional institutes and industry stakeholders.

Finally, efforts should also be devoted to **“integrating voluntary standards markets for financial services with wider government policies”** in order to increase the attractiveness of standards, improve surveillance and cost reduction of accreditation and certification processes, and to increase dialogue on the promotion of competition and development of markets. This requires regulators to ‘back off’ when voluntary standards markets are working, which in turn should provide a benefit of reduced compliance costs.

### 7.3 Conclusion and Areas for Further Research

Many societal goals for markets can be achieved with innovative, quasi-regulation that bridges the market-government gap using markets themselves, i.e. standards markets. Financial services need to realise that standards markets offer a way out of Screaming Lord Sutch’s (a satirical leader of a UK protest party) conundrum, “Why is there only one Monopolies Commission?” Perhaps people should try to encourage and learn from voluntary standards markets before they start regulating financial services.

Different stakeholders should work to develop voluntary standards markets further for financial services:

- Financial services firms should consider how voluntary standards markets may be a better medium or long term approach than resisting regulation, and incorporate voluntary standards markets ideas into their strategic thinking on compliance and regulation.
- Trade and industry associations should consider working voluntary standards markets into their frameworks and rhetoric.
- Standards-setting institutions should become more familiar with financial services, perhaps using the taxonomy provided, and focus on the areas where voluntary standards markets can make a positive difference, while avoiding those where it is unlikely to have a direct effect, e.g. financial systems stability, as well as encouraging publicity programmes on the role of voluntary standards markets.
- Regulators, and other bodies interested in financial reform, should encourage voluntary standards markets at an early

stage, and if they appear to be working, encourage their development by reducing regulatory burdens for participating firms, thereby improving the cost/benefit equation of joining the voluntary standards market approach for firms on the boundary.

- Certification and accreditation bodies should improve the case for the use of voluntary standards markets and for the benefits of external verification and certification.
- Education, research and training organisations should re-evaluate the role of voluntary standards markets in their course and training catalogue.

Voluntary standards markets exhibit diversity in approaches, participants, industries and scale. This makes them hard to categorise, and certainly not as simplistically ‘good’ or ‘bad’, but they can provide significant economic and social benefits. It is clear that their potential is tied to the commitment participants and regulators place in the voluntary standards markets model. If voluntary standards markets were more formally recognised as a ‘New Combined Approach’ in financial services, a more solid regulatory relationship might encourage more, and more effective, deployment.

Some useful further research might cover:

- the evidence of costs and benefits of voluntary standards at national and global level;
- the role of standards as norms or as guarantees;
- potential incentives and frameworks to promote regulatory developments that use voluntary standards markets.

## Appendix 1: Events Held

### **“The Role of Standards Markets in Finance”**

**Wednesday 10 July 2013, 08:30 to 10:00, Z/Yen Group offices, London**

After a short presentation by Michael Mainelli on the research project “How to Make Voluntary Standards Markets work for Financial Services (Regulation)”, Dan Palmer spoke about the role of standards in the financial services sector, including the voluntary nature of standards, the range of purposes standards can serve and the different levels at which they can be set. The presentations were followed by an engaged discussion with the audience which covered aspects of standards relating to their effectiveness; how standards can work in combination with government regulation; how standards are driven by the industry; and, areas of Financial Services where standards are emerging.

For online information about this event see:

<http://www.longfinance.net/component/content/article.html?id=822>

### **“How to Make Voluntary Standards Markets Work for Financial Services (Regulation)? Preliminary Research Findings”**

**Tuesday 10 September 2013, 08:30 to 10:00, Z/Yen Group offices, London**

After a short introduction by George Littlejohn of the Chartered Institute for Securities & Investment, Michael Mainelli presented the preliminary research findings regarding the research project “How to Make Voluntary Standards Markets Work For Financial Services (Regulation)”. Preliminary findings included the results of an awareness survey conducted during the summer and recommendations to better integrate with the ISO community; to identify more clearly the voluntary standards market approach and to further awareness of standards among the regulatory community. The presentation was followed by an engaged discussion with the audience, which covered aspects of standards relating to their credibility; the benefits they bring including more transparency and better practices and the enforcement of standards.

For online information about this event see:

<http://www.longfinance.net/component/content/article.html?id=830>

## Appendix 2: Interviewees

The positions and organisation included the following (where noted by separate numbers this indicates different firms):

Leader, Security Risk, Global Bank  
Head of Research, Specialist Insurer  
Board Member, European Trade Association  
Technical Member, International Standards Body  
Trade Body Representative, International Standards Body  
Director, US Mutual Fund and Investment Management Company  
Chairman, ISO Technical Committee  
Director, Corporate Responsibility, US Investment Management Company  
Chief Adviser, UK Consumer Organisation  
Security Expert (retired), UK Government  
Security Expert (active), UK Government  
Director, Corporate Responsibility, UK Pension Fund  
Director, Australian Superannuation Fund  
Chief Investment Officer, UK Pension Fund  
Chief Investment Officer, US Public Pension Fund  
Chief Economist, UK Fund Manager  
Director, Risk, UK Fund Manager  
CEO, Trade Accreditation Body  
CEO, National Accreditation Body  
CEO, European Think Tank  
Computing and Social Change commentator  
COO, French Investment Management Firm  
Professor, Chinese University  
Professor, UK University (1)  
Professor, UK University (2)  
Director, UK Government Department (1)  
Director, UK Government Department (2)  
Director, UK Government Department (3)  
UK-based Financial Services Trade Body (1)  
UK-based Financial Services Trade Body (2)  
UK-based Financial Services Trade Body (3)  
Director, UK Financial Services Think Tank (1)  
Team Leader, UK Financial Services Think Tank (2)  
Deputy Chairman, Global Investment Bank (1)  
COO, Global Investment Bank (2)  
Commodities Trader, Eastern European Exchange  
Bond Trader, US Investment Management Firm  
Chief Analyst, Central Bank  
Chairman, Professional Body  
Head of Research, Professional Body (1)  
Head of Research, Professional Body (2)  
Head of Research, Professional Body (3)  
Head of Research, Trade Association  
Technical Director, IT Standards, International Exchange  
Head of Treasury, Multinational Corporation  
Head of Risk, Global Investment Bank  
Head of Risk, US Global Bank  
Head of Risk, UK Bank (1)  
Head of Risk, UK Bank (2)  
Director, Financial Services Regulation, Global Accountancy Firm (1)  
Director, Financial Services Regulation, Global Accountancy Firm (2)  
Director, Financial Services Regulation, Global Law Firm (1)  
Director, Financial Services Regulation, Global Law Firm (2)  
Head of Research, Swiss Insurance Association  
CEO, European Financial Services Regulator  
European Taxation Expert  
Director, Global Insurance Broker  
Chairman, Private Bank  
Director, Global Asset Manager  
Finance Minister, Small Nation  
Consultant, Multi-nation Regional Trade Association  
COO, Financial Services Public Relations Company (1)  
CEO, Financial Services Public Relations Company (2)  
Proprietor, Financial Services Publications (1)  
Editor, Financial Services Publications (2)  
Journalist, Financial Services (1)  
Journalist, Financial Services (2)  
CEO, Index Services (European and US)  
Director (former), Global Reinsurer, now Insurance Industry Researcher  
Salesman, Financial Services IT Supplier  
US Government Regulator  
CEO, North American Trade Association  
CEO (former), Compliance Consultancy  
Finance Director, International Bank  
Head of Research, Australian Insurance Group  
CEO, Global Payments Firm  
CEO, Investment Research Firm  
CEO, Professional Services Regulator  
Assistant Professor of Law, University

## Appendix 3: Awareness Survey

The project team compiled a short awareness questionnaire, which was sent by email to interviewees and members of the Long Finance community in late July 2013. The questionnaire was designed to inform the research on the level of awareness of voluntary standards markets for the financial services sector. By late August 2013, 112 individuals had answered the questionnaire.

As shown in Figure 23 below, the majority of respondents works in either financial services or professional services with the remaining respondents working in various sectors including academia and research, government and regulation as well as industry or trade associations.

**Figure 23 – Respondents by sector**

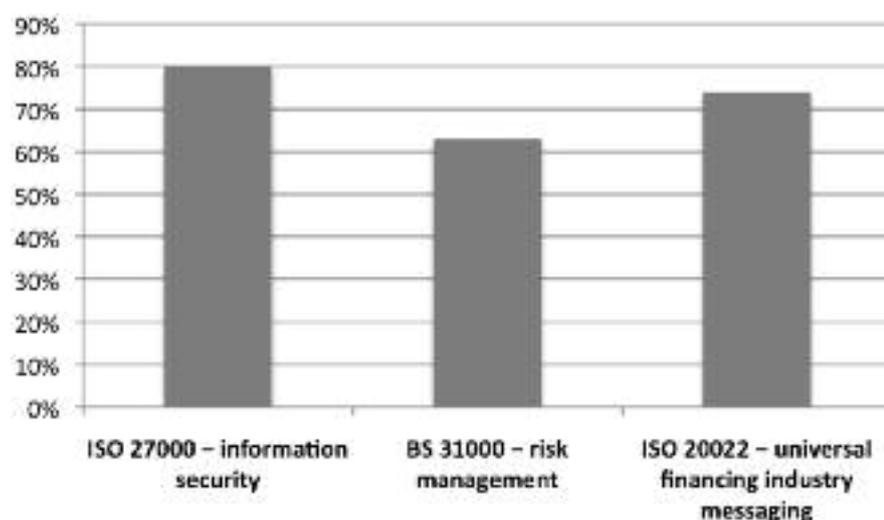
Sector	Percentage of respondents
Financial services	47 %
Professional services	25 %
Government and regulation	5 %
Academia and research	11 %
Industry or trade associations	3 %
Not-for-profit sector	2 %
Media	2 %
Consumer protection	1 %
Other	4 %

Nearly 70 % of the respondents indicated that they had some level of familiarity with voluntary standards markets, leaving around 30 % of respondents stating they were not familiar with voluntary standards markets.

Respondents were first asked to answer to what specific standards referred to including for ISO 27001, ISO 20022, AS 3806, ISO 6166 and BS 31000. Between 30 % and 40 % of the respondents did not answer these more specific questions, which seems reasonable given the proportion of respondents who indicated they were not familiar with voluntary standards markets. Of those who responded to these specific questions, the level of awareness was fairly elevated with a correct response rate between 60 % and 80 % as shown in figure 24.

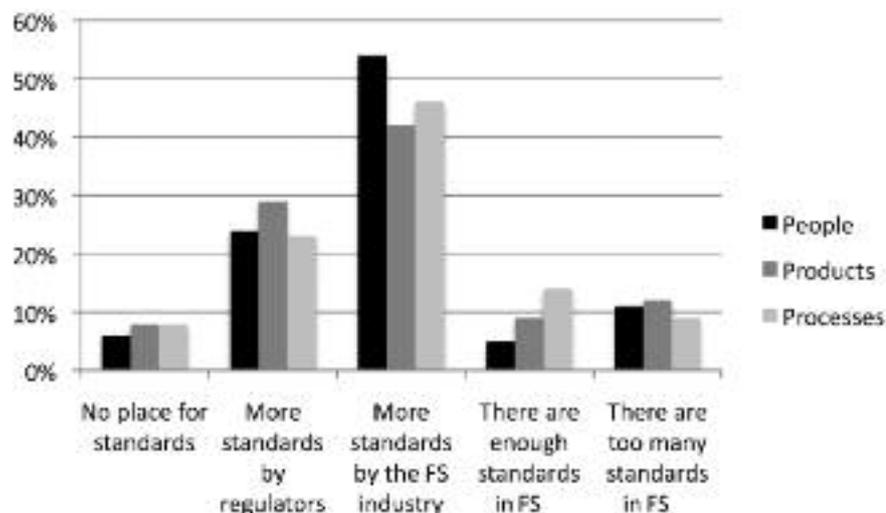
Respondents were then asked to differentiate institutions according to whether they were accreditation institutions or certification bodies or neither. Sample institutions included BSI, UKAS, FCA, Lloyd's Register and DNV. Again between 20 % and 28 % did not answer these more specific questions probably due to a lack of familiarity with voluntary standards markets. Among those who answered, the level of awareness was again relatively high (with a correct answer rate between 65 % and 75 %) except for Lloyd's Register where the relatively low level of awareness of Lloyd's Register's certification work (39 %) could be attributed to the fact that Lloyd's Register has a more broadly based business with other services.

**Figure 24 – Level of awareness for selected financial services standards**



Finally, respondents were asked to express their opinion regarding the suitability of standards around people (professionals and clients), products, and processes in the financial services (FS) sector. Interestingly, the majority indicated that they would welcome more standards created by either the financial sector itself (between 42 % and 54 % for each category) or the regulator (between 23 % and 29 % for each category) see figure 25.

**Figure 25 – Suitability of voluntary standards around people, products and processes in financial services (FS)**



When comparing scores across categories, it is worth noting a relatively higher score for more standards to be introduced by the industry around people and professionals compared to the other two categories, echoing some of the respondents' comments on the potential for professional standards around behaviour, ethics and responsibility. Similarly, a slightly higher number of respondents indicated they felt there were enough of these standards in place compared to the other two categories, which may be in part due to some of the frequent objections heard in interviews to the efficacy of ISO 9001, ISO 14001, ISO 27001, and other process standards.

## Appendix 4: ISO TC68 and Financial Stability Board

ISO Technical Committee 68 (TC68) has 51 standards and projects under the direct responsibility of its secretariat and its sub-committees:

ISO 1004-1:2013, *Information processing – Magnetic ink character recognition – Part 1: Print specifications for E13B*

ISO 1004-2:2013, *Information processing – Magnetic ink character recognition – Part 2: Print specifications for CMC7*

ISO 4217:2008/Cor 1:2008, *technical corrigendum*

ISO 6166:2013, *Securities and related financial instruments – International securities identification numbering system (ISIN)*

ISO 9564-1:2011, *Financial services – Personal Identification Number (PIN) management and security – Part 1: Basic principles and requirements for PINs in card-based systems*

ISO 10383:2012, *Securities and related financial instruments – Codes for exchanges and market identification (MIC)*

ISO 11568-2:2012, *Financial services – Key management (retail) – Part 2: Symmetric ciphers, their key management and life cycle*

ISO 11649:2009, *Financial services – Core banking – Structured creditor reference to remittance information*

ISO 15022-1:1999/Cor 1:1999, *technical corrigendum*

ISO 15022-2:1999/Cor 1:1999, *technical corrigendum*

ISO 16609:2012, *Financial services – Requirements for message authentication using symmetric techniques*

ISO 17442:2012, *Financial services – Legal Entity Identifier (LEI)*

ISO 20022-1:2013, *Financial services – Universal financial industry message scheme – Part 1: Metamodel*

ISO 20022-2:2013, *Financial services – Universal financial industry message scheme – Part 2: UML profile*

ISO 20022-3:2013, *Financial services – Universal financial industry message scheme – Part 3: Modelling*

ISO 20022-4:2013, *Financial services – Universal financial industry message scheme – Part 4: XML Schema generation*

ISO 20022-5:2013, *Financial services – Universal financial industry message scheme – Part 5: Reverse engineering*

ISO 20022-6:2013, *Financial services – Universal financial industry message scheme – Part 6: Message transport characteristics*

ISO 20022-7:2013, *Financial services – Universal financial industry message scheme – Part 7: Registration*

ISO 20022-8:2013, *Financial services – Universal financial industry message scheme – Part 8: ASN.1 generation*

ISO 11568-1:2005, *Banking – Key management (retail) – Part 1: Principles*

ISO 9992-1:1990, *Financial transaction cards – Messages between the integrated circuit card and the card accepting device – Part 1: Concepts and structures*

ISO 13616-1:2007, *Financial services – International bank account number (IBAN) – Part 1: Structure of the IBAN*

ISO 13616-2:2007, *Financial services – International bank account number (IBAN) – Part 2: Role and responsibilities of the Registration Authority*

ISO 15782-1:2009, *Certificate management for financial services – Part 1: Public key certificates*

ISO 4217:2008, *Codes for the representation of currencies and funds*

ISO 9362:2009, *Banking – Banking telecommunication messages – Business identifier code (BIC)*

ISO 9564-2:2005, *Banking – Personal Identification Number management and security – Part 2: Approved algorithms for PIN encipherment*

ISO/TR 9564-4:2004, *Banking – Personal Identification Number (PIN) management and security – Part 4: Guidelines for PIN handling in open networks*

ISO 10962:2001, *Securities and related financial instruments, Classification of Financial Instruments (CFI code)*

ISO 13491-1:2007, *Banking – Secure cryptographic devices (retail) – Part 1: Concepts, requirements and evaluation methods*

ISO 13491-2:2005, *Banking – Secure cryptographic devices (retail) – Part 2: Security compliance checklists for devices used in financial transactions*

ISO 15782-2:2001, *Banking – Certificate management – Part 2: Certificate extensions*

ISO/TR 19038:2005, *Banking and related financial services – Triple DEA – Modes of operation – Implementation guidelines*

ISO 21188:2006, *Public key infrastructure for financial services – Practices and policy framework*

ISO 8109:1990, *Banking and related financial services – Securities – Format of Eurobonds*

ISO 8532:1995, *Securities – Format for transmission of certificate numbers*

ISO 8583-1:2003, *Financial transaction card originated messages – Interchange message specifications – Part 1: Messages, data elements and code values*

ISO 8583-2:1998, *Financial transaction card originated messages – Interchange message specifications – Part 2: Application and registration procedures for Institution Identification Codes (IIC)*

ISO 8583-3:2003, *Financial transaction card originated messages – Interchange message specifications – Part 3: Maintenance procedures for messages, data elements and code values*

ISO 9019:1995, *Securities, Numbering of certificates*

ISO 9144:1991, *Securities – Optical character recognition line – Position and structure*

ISO 11568-4:2007, *Banking – Key management (retail) – Part 4: Asymmetric cryptosystems – Key management and life cycle*

ISO 13492:2007, *Financial services – Key management*

*related data element – Application and usage of ISO 8583 data elements 53 and 96*

ISO/TR 13569:2005, *Financial services – Information security guidelines*

ISO/TR 14742:2010, *Financial services – Recommendations on cryptographic algorithms and their use*

ISO 15022-1:1999, *Securities – Scheme for messages (Data Field Dictionary) – Part 1: Data field and message design rules and guidelines*

ISO 15022-2:1999, *Securities – Scheme for messages (Data Field Dictionary) – Part 2: Maintenance of the Data Field Dictionary and Catalogue of Messages*

ISO 18245:2003, *Retail financial services – Merchant category codes*

ISO 19092:2008, *Financial services – Biometrics – Security framework*

ISO 22307:2008, *Financial services – Privacy impact assessment*

[Source: ISO]

The Financial Stability Board (FSB) provides a wealth of information on standards initiatives. They compile a list of standards bodies in financial services, 13 at the time of this report, though interestingly not ISO or ISO TC68 [from the FSB website]:

## Who are the Standard-Setting Bodies?

Basel Committee on Banking Supervision (BCBS): The BCBS, established by the G10 Central Banks in 1974, provides a forum for regular cooperation among its member countries on banking supervisory matters. Its objective is to enhance understanding of key supervisory issues and improve the quality of banking supervision worldwide. The BCBS formulates supervisory standards and guidelines and recommends statements of best practice in banking. In this regard, the BCBS is best known for its international standards on capital adequacy and the Core Principles for Effective Banking Supervision.

<http://www.bis.org/bcbs/index.htm>

Committee on the Global Financial System (CGFS): The CGFS, a committee of major advanced and emerging economy central banks, undertakes systematic short-term monitoring of global financial system conditions, longer-term analysis of the functioning of financial markets, and the articulation of policy recommendations aimed at improving market functioning and promoting stability.

<http://www.bis.org/cgfs/index.htm>

Committee on Payment and Settlement Systems (CPSS): The CPSS provides a forum for cooperation among its member central banks on issues related to payment, clearing and settlement systems. It monitors and analyses developments in such systems as well as in cross-border and multi-currency arrangements and it formulates broad oversight standards in these areas.

<http://www.bis.org/cpss/index.htm>

Financial Action Task Force on Money Laundering (FATF): The Financial Action Task Force (FATF) was established by the G7 in 1989, and is an inter-governmental body with 36 members whose purpose is the development and promotion of policies, both at national and international levels, to combat money laundering and terrorist financing. The FATF is responsible for setting the international standards for combating money laundering and terrorist financing, and works to generate the necessary political will to bring about the required national legislative and regulatory reforms. It also monitors members' progress in implementing necessary measures, reviews money laundering and terrorist financing techniques and counter-measures, and promotes the adoption and implementation of appropriate measures globally.

<http://www.fatf-gafi.org/>

Financial Stability Board (FSB): The FSB was established in April 2009 as the successor to the Financial Stability Forum (FSF). Its mandate is to coordinate at the international level the work of national financial authorities and international standard setting bodies and to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies. It brings together national authorities responsible for financial stability in significant international financial centres, international financial institutions, sector-specific international groupings of regulators and supervisors, and committees of central bank experts.

<http://www.fsb.org/>

International Association of Deposit Insurers (IADI): The IADI, founded in 2002 with members and associates representing over 70 jurisdictions, is a non-profit organisation domiciled at the Bank for International Settlements in Basel, Switzerland. IADI provides a forum for international cooperation among deposit insurers, central banks, and international organisations on issues related to financial stability, deposit insurance, and resolution activities. As part of its objective to enhance the effectiveness of deposit insurance systems, IADI, together with the BCBS, published the Core Principles for Effective Deposit Insurance Systems and issued a methodology for the assessment of compliance with the Core Principles.

<http://www.iadi.org/>

International Association of Insurance Supervisors (IAIS): Established in 1994, the IAIS represents insurance regulators and supervisors of some 190 jurisdictions in nearly 140 countries and has also more than 120 insurance professionals, insurers, reinsurers and trade associations as observers. The IAIS mission is to promote effective and globally consistent regulation and supervision of the insurance industry in order to develop and maintain fair, safe and stable insurance markets for the benefit and protection of policyholders; and to contribute to global financial stability. The IAIS issues global insurance core principles, standards and guidance material, develops a common framework for the supervision of internationally active insurance groups, provides training and support on issues related to insurance supervision, fosters supervisory cooperation and information

exchange, develops assessment mechanisms that help assess and enhance observance of IAIS core principles and standards, works closely with other international institutions to promote financial stability, and organises meetings and seminars for insurance supervisors.  
<http://www.iaisweb.org>

International Accounting Standards Board (IASB): The IASB is an independent, privately-funded accounting standard setter based in London, UK. Board members come from nine countries and have a variety of functional backgrounds. The Board is committed to developing, in the public interest, a single set of high quality, understandable and enforceable global accounting standards that require transparent and comparable information in general purpose financial statements. In addition, the Board cooperates with national accounting standard setters to achieve convergence in accounting standards around the world. The IASB is responsible for developing and approving International Accounting Standards (IAS). To-date, a total of 40 IAS have been promulgated by the IASB and its predecessor, the International Accounting Standards Committee (IASC).  
<http://www.iasc.org.uk>

International Auditing and Assurance Standards Board (IAASB): The IAASB is an independent standard-setting body that develops auditing and assurance standards and guidance for use by all professional accountants under a shared standard-setting process involving the Public Interest Oversight Board (PIOB), which oversees the activities of the IAASB, and the IAASB's Consultative Advisory Group, which provides public interest input into the development of the standards and guidance. The structures and processes that support the operations of the IAASB are facilitated by the International Federation of Accountants (IFAC).  
<http://www.ifac.org>

International Monetary Fund (IMF): The IMF's mandate is the surveillance of its members' macroeconomic and financial policies, as well as of the international monetary system. The IMF develops and monitors international standards in areas relevant to this mandate. In collaboration with other standard-setting bodies, it has developed international standards for data dissemination and transparency practices in fiscal, monetary and financial policies, and has contributed to the development of international standards for banking, insurance and securities supervision. In addition, the IMF (in cooperation with the World Bank in developing and emerging market countries) is assessing compliance with all the core international financial sector standards through its FSAP and ROSC programs. The IMF periodically publishes reports to its Board summarising country experiences with the implementation of the standards and codes that it monitors.  
<http://www.imf.org>

International Organisation of Securities Commissions (IOSCO): IOSCO is the international policy forum for national regulators of securities and futures markets. IOSCO develops and promotes standards of securities regulation in order to maintain efficient and sound markets. It draws on its

international membership to establish standards for effective surveillance of international securities markets and provides mutual assistance to promote the integrity of markets by a rigorous application of the standards and effective enforcement against offences.  
<http://www.iosco.org>

Organisation for Economic Cooperation and Development (OECD): The OECD aims to promote policies designed to achieve sustained economic growth and employment in its member countries. In the area of promoting efficient functioning of markets, the OECD encourages the convergence of policies, laws and regulations covering financial markets and enterprises.  
<http://www.oecd.org>

The World Bank (WB): The WB develops international standards in areas of direct operational relevance to its mandate of promoting financial sector development. In collaboration with other standard-setting bodies, it has developed international standards for insolvency and creditors rights, financial infrastructure (e.g. international remittances services, credit reporting systems), and public debt management. The WB has also contributed to the development of international standards and assessment methodologies for financial sector supervision, AML/CFT, payment and settlement systems, accounting and auditing, and corporate governance standards. The WB, in cooperation with the IMF, is assessing compliance with all the core international financial sector standards through its FSAP and ROSC programs.  
<http://www.worldbank.org>

*[Source FSB n.d]*

FSB summarises Key Standards in the following text and table:

“The standards under the 12 policy areas highlighted here have been designated by the FSB as key for sound financial systems and deserving of priority implementation depending on country circumstances. These standards are broadly accepted as representing minimum requirements for good practice that countries are encouraged to meet or exceed.” See figure 26.

**Figure 26 – Financial services standards: risks and opportunities**

Area	Standard	Issuing Body
Macroeconomic Policy and Data Transparency		
Monetary and financial policy transparency	Code of Good Practices on Transparency in Monetary and Financial Policies	IMF
Fiscal policy transparency	Code of Good Practices on Fiscal Transparency	IMF
Data dissemination	Special Data Dissemination Standard General Data Dissemination System	IMF
Financial Regulation and Supervision		
Banking supervision	Core Principles for Effective Banking Supervision	BCBS
Securities regulation	Objectives and Principles of Securities Regulation	IOSCO
Insurance supervision	Insurance Core Principles	IAIS
Institutional and Market Infrastructure		
Crisis resolution and deposit insurance 2	Core Principles for Effective Deposit Insurance Systems	BCBS/IADI
Insolvency	Insolvency and Creditor Rights	World Bank
Corporate governance	Principles of Corporate Governance	OECD
Accounting and Auditing	International Financial Reporting Standards (IFRS) International Standards on Auditing (ISA) IASB	IAASB
Payment, clearing and settlement	Principles for Financial Market Infrastructures	CPSS/IOSCO
Market integrity	FATF Recommendations on Combating Money Laundering and the Financing of Terrorism and Proliferation	FATF

[Source: FSB website]

**An extract of standards issued over the five years from 2008 to 2012 provides a good overview of the breadth of financial services regulation:**

November 2012 – Recommendations for securitisation regulation

November 2012 – Principles for the ongoing disclosure of asset-backed securities

October 2012 – A framework for dealing with domestic systemically important banks

October 2012 – Principles for oil price reporting agencies

October 2012 – Policy recommendations for money market funds

September 2012 – Core principles for effective banking supervision

August 2012 – High-level principles on national strategies for financial education

July 2012 – Capitalisation for bank exposures to central counterparties

June 2012 – Composition of capital disclosure requirements – Rules text

June 2012 – Regulation of institutional investors in emerging markets

June 2012 – International standards for derivatives market intermediary regulation

April 2012 – Principles for financial market infrastructures

April 2012 – FSB Principles for sound residential mortgage underwriting practices

February 2012 – Requirements for mandatory clearing

February 2012 – FATF recommendations on combating money laundering and the financing of terrorism and proliferation

January 2012 – Suspension of redemptions in collective investment schemes

January 2012 – Report on OTC derivatives data reporting and aggregation requirements

December 2011 – OECD/IOPS Good practices on pension funds' use of alternative investments and derivatives

November 2011 – High-level principles on financial consumer protection

November 2011 – Global systemically important banks: Assessment methodology and the additional loss absorbency requirement

October 2011 – Regulatory issues raised by the impact of technological changes on market integrity and efficiency

October 2011 – Regulation of nominee accounts in emerging markets

October 2011 – Key attributes of effective resolution regimes for financial institutions

October 2011 – General guidance for developing differential premium systems

October 2011 – Insurance core principles, standards, guidance and assessment methodology

September 2011 – General principles for credit reporting

September 2011 – Principles for the regulation and supervision of commodity derivatives markets

July 2011 – Pillar 3 disclosure requirements for remuneration

June 2011 – Operational risk – supervisory guidelines for the advanced measurement approaches

June 2011 – Principles for the sound management of operational risk

June 2011 – Basel III: A global regulatory framework for more resilient banks and banking systems (revised version)

May 2011 – OECD Guidelines on insurer governance

May 2011 – Principles to Address Dark Liquidity

February 2011 – Revisions to the Basel II market risk framework – updated as of 31 December 2010

February 2011 – Principles on Point of Sale Disclosure

January 2011 – Final elements of the reforms to raise the quality of regulatory capital issued by the Basel Committee

January 2011 – OECD/IOPS Good Practices for Pension Funds' Risk Management Systems

December 2010 – Basel III: International framework for liquidity risk measurement, standards and monitoring

December 2010 – Guidance for national authorities operating the countercyclical capital buffer

December 2010 – Sound practices for backtesting counterparty credit risk models – final document

November 2010 – IOPS Principles of private pension supervision

October 2010 – Recognising the risk-mitigating impact of insurance in operational risk modelling

October 2010 – Good practice principles on supervisory colleges

October 2010 – Principles for enhancing corporate governance

October 2010 – Principles for reducing reliance on CRA ratings

September 2010 – Guiding principles for managing sovereign risk and high levels of public debt (“Stockholm Principles”)

August 2010 – Principles for direct electronic access to markets

July 2010 – Handbook on securities statistics

July 2010 – Transparency of structured finance products

June 2010 – Objectives and principles of securities regulation

May 2010 – Principles regarding cross-border supervisory cooperation

April 2010 – Guidance paper on the treatment of non-regulated entities in group-wide supervision

April 2010 – Disclosure principles for public offerings and listings of asset-backed securities

March 2010 – Report and recommendations of the Cross-border Bank Resolution Group

March 2010 – The role of margin requirements and haircuts in procyclicality

February 2010 – Guidance for the establishment of a legal protection scheme for deposit insurance systems

February 2010 – Principles for periodic disclosure by listed entities

November 2009 – Policy framework for effective and efficient financial regulation

November 2009 – IOPS Guidelines for supervisory intervention, enforcement and sanctions

September 2009 – Report on special purpose entities

September 2009 – Unregulated financial markets and products

September 2009 – Principles and implementation standards for sound compensation practices – principles issued April 2009; implementation standards issued September 2009; and assessment methodology issued by the BCBS in January 2010.

July 2009 – Guidelines for computing capital for incremental risk in the trading book

July 2009 – Enhancements to the Basel II framework

June 2009 – International best practices – freezing of terrorist assets

June 2009 – Core principles for effective deposit insurance systems

June 2009 – OECD Guidelines for the protection of rights of members in occupational pension plans

June 2009 – OECD Guidelines for pension fund governance

June 2009 – OECD Core principles on occupational pension regulation

June 2009 – Report on good practices in relation to investment managers' due diligence when investing in structured finance instruments

June 2009 – Hedge funds oversight

June 2009 – Principles on outsourcing by markets

June 2009 – Regulation of short selling

May 2009 – OECD Good practices on financial education and awareness relating to credit

May 2009 – Principles for sound stress testing practices and supervision

May 2009 – Due diligence and transparency regarding cover payment messages related to cross-border wire transfers

May 2009 – Funding of deposit insurance systems

May 2009 – Public awareness of deposit insurance systems

May 2009 – Guidance on governance of deposit insurance systems

April 2009 – Supervisory guidance for assessing banks' financial instrument fair value practices

April 2009 – Principles for cross-border cooperation in crisis management

January 2009 – Balance of payments and international investment position manual

December 2008 – IOPS Guidelines for the supervisory assessment of pension funds

October 2008 – Generally accepted principles and practices for sovereign wealth funds ("Santiago Principles")

September 2008 – Principles for sound liquidity risk management and supervision

July 2008 – Central bank operations in response to the financial turmoil

July 2008 – Credit risk transfer -report issued March 2005 and updated July 2008.

May 2008 – Progress in reducing foreign exchange settlement risk

May 2008 – Code of conduct fundamentals for credit ratings agencies

April 2008 – System of national accounts

March 2008 – Good practices for enhanced risk awareness and education on insurance issues

March 2008 – Recommendation on good practices for financial education relating to private pensions

March 2008 – OECD/ IOPS Guidelines on the licensing of pension entities

*[Source: FSB website]*

## Appendix 5: Acknowledgements

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Assurity Consulting  
Aviva Investors  
Bahamas Financial Services Board  
Bank of America Merrill Lynch  
Bank of England  
Barclays  
BEST Capital UK  
Birkbeck, University of London  
BISS Research Ltd  
Bitcoin  
Black Swan Plc  
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Chishiki Ltd  
Church of England  
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Equity Development  
Erudine Financial Ltd  
Estates Investment Exchange  
EY  
FairBanking Foundation  
Fidelity Investments  
FidRisk  
Financial Reporting Council  
FTSE  
Fund Building Limited  
Futures & Options Association  
FV Associates  
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Global Garden Ltd  
Goodacre UK  
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Independent Audit Ltd  
Information Security Forum  
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International Center for Green Energy Information  
Insurance Institute of London  
Investment Management Association  
Isaac Newton Institute for Mathematical Sciences  
ISO  
Jersey Finance Ltd  
JTC (Guernsey) Ltd  
Lalcap Ltd  
Lavoisier Conseil  
LCH Clearnet  
Legal Services Board

Lewis Nedas Law Ltd  
Lloyds Banking Group  
London School of Economics & Political Science  
Maritime London  
MarketPrizm  
Markit  
McLagan  
Media Tenor International AG  
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MFP Wealth Management  
Mike St John-Green Consulting Ltd  
Natural Environment Research Council (NERC)  
New Economics Foundation  
NW Brown  
OICU-IOSCO  
Oxford Energy Associates  
Penna PLC  
Peterson Institute for International Economics  
Plaza Holdings  
PricewaterhouseCoopers  
Qatar Financial Services Authority  
Quebec University  
RBS  
Renaissance Gold  
Rivertrade Ltd  
Robert Browne and Partners Limited  
Russell Investments  
Sarasin & Partners LLP  
Satori Consulting  
Scipio SA  
Scottish Widows  
Sheffield Business School  
Shires Partnership  
SIX Financial Information Ltd  
Spada Ltd  
Speechly Bircham  
Standard & Poor's  
Standard Chartered Bank  
Sustainable Capital  
Sustensis  
SWIFT  
The New Security Foundation  
The Open University  
The Robertsbridge Group  
The Winterbotham Trust Company Ltd  
Thomson Reuters  
UbiCap  
UBS  
UCL

UK Payments Council  
UKAS  
University of Ottawa  
University of Roehampton  
Variable Pitch Partners LLP  
Volterra  
VTB Capital, Inc.  
Which?  
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## Appendix 6: Bibliography

- Ackroyd, Peter. *London: The Biography*. 822 pages. London: Random House, 2000.
- Ali Goul, Wafica. "The Standardization Debate in Islamic Finance: A Case Study". Paper presented at the International Conference on Islamic Economics and Finance. Doha, Qatar. December 19-21, 2011. Accessed September, 2013. 14 pages. <http://conference.qfis.edu.qa/app/media/277>
- Anderson, Alistair R, and Ellina O. Russell. "Self-regulation: A Strategic Alternative For Small Firms?". *Journal of Business Strategy*. Volume 32 Number 4. 2011. 42-47.
- Bannister, David. "The Future of Standards." *Banking Technology*. July/August 2013. 26-29.
- Bartle, Ian, and Peter Vass. "Self-Regulation and the Regulatory State: A Survey of Policy and Practice.", *CRI Research Report 17*. October 2005. 76 pages.
- Black, Julia, and Karen Anderson. *Creating an Ethical Framework for the Financial Services Industry*. LSE & Herbert Smith Freehills LLP. London: LSE, January 2013. Accessed September, 2013. 12 pages. [http://www.lse.ac.uk/collections/law/projects/lfm/LSE%20HSF%20discussion%20paper\\_d3%20ethics%20in%20financial%20institutions.pdf](http://www.lse.ac.uk/collections/law/projects/lfm/LSE%20HSF%20discussion%20paper_d3%20ethics%20in%20financial%20institutions.pdf)
- Black, Julia. "Critical Reflections On Regulation", *CARR Discussion Papers*, DP 4, (2002). Centre for Analysis of Risk and Regulation, London School of Economics and Political Science, London, LSE 2002. Accessed October 4, 2013. 27 pages. <http://eprints.lse.ac.uk/35985/1/Disspaper4-1.pdf>
- Blind, Knut, Andre Jungmittag, and Axel Mangelsdorf. *The Economic Benefits of Standardization: An update of the study carried out by DIN in 2000.*, Berlin: DIN – German Institute for Standardization, June 2011. Accessed September, 2013. 24 pages. [http://www.din.de/sixcms\\_upload/media/2896/DIN\\_GNN\\_2011\\_engl\\_akt\\_neu.pdf](http://www.din.de/sixcms_upload/media/2896/DIN_GNN_2011_engl_akt_neu.pdf)
- BSI. "The Top Ten Standards that matter to consumers". BSI Consumer & Public Interest Network. Accessed September, 2013. 16 pages. <http://www.slideshare.net/BSIStandards/bsi-top-10-standards-that-matter-to-consumers>
- BSI and UKAS. "Standards and Accreditation: Tools for Delivering Better Regulation". Accessed September, 2013. 12 pages. <http://www.ukas.com/Library/Media-Centre/Promotional-Materials/Brochures/Ministers%20Handbook.pdf>
- BSI and Z/Yen Group. "The Role of Standards in Finance". Slideshow presented at The Role of Standards Markets In Finance workshop, London, 10 July 2013. Accessed September, 2013. 26 pages. [http://www.longfinance.net/index.php?option=com\\_content&view=article&layout=edit&id=822](http://www.longfinance.net/index.php?option=com_content&view=article&layout=edit&id=822)
- BusinessWire. "SASB Earns Accreditation by American National Standards Institute." *BusinessWire*, March 2013. Accessed September, 2013. <http://www.sasb.org/wp-content/uploads/2013/03/ANSI-Accreditation.pdf>
- Clarke, William M. *How the City of London Works*. 7th Edition. London: Sweet & Maxwell, 2008. 154 pages.
- Cochrane, John H. "Is Finance Too Big?". 7 January 2013. Accessed October, 2013. 28 pages. [http://faculty.chicagobooth.edu/john.cochrane/research/papers/size\\_of\\_finance.pdf](http://faculty.chicagobooth.edu/john.cochrane/research/papers/size_of_finance.pdf)
- Conway, Paul, Donato de Rosa, Giuseppe Nicoletti, and Faye Steiner. "Regulation, Competition and Productivity Convergence." *Economics Department Working Papers* no. 509, OECD, 2006. Accessed September, 2013. 52 pages. [http://search.oecd.org/officialdocuments/displaydocumentpdf/?doclanguage=en&cote=ECO/WKP\(2006\)37](http://search.oecd.org/officialdocuments/displaydocumentpdf/?doclanguage=en&cote=ECO/WKP(2006)37)
- Cosgrove-Sacks, Carol, and Paul H. Dembinski (eds.). *Trust and Ethics in Finance: Innovative ideas from the Robin Cosgrove Prize*. Geneva: Globethics, 2012. Accessed September, 2013. 400 pages. [http://www.globethics.net/documents/4289936/13403236/GlobalSeries\\_6\\_TrustAndEthicsInFinance\\_text.pdf/2ae8b194-cd34-4bef-8288-4f1765ac132c](http://www.globethics.net/documents/4289936/13403236/GlobalSeries_6_TrustAndEthicsInFinance_text.pdf/2ae8b194-cd34-4bef-8288-4f1765ac132c)
- Crain, N V and W. Mark Crain. "The Impact Of Regulatory Costs On Small Firms". Report prepared for the Small Business Administration, Office of Advocacy, September 2010. Contract Number SBHQ-03-M-0522. Accessed September, 2013. 83 pages. [http://www.sba.gov/sites/default/files/The%20Impact%20of%20Regulatory%20Costs%20on%20Small%20Firms%20\(Full\).pdf](http://www.sba.gov/sites/default/files/The%20Impact%20of%20Regulatory%20Costs%20on%20Small%20Firms%20(Full).pdf)
- CSFI Working Group on Effective Regulation. "Principles in Practice". CSFI. ISBN 978-0-9551811-2-2. June 2007.
- Davis, Kevin. *Regulatory Reform Post the Global Financial Crisis: An Overview*. Australian Centre for Financial Studies, Melbourne APEC Study Centre, 2011. Accessed September, 2013. 45 pages. [http://www.apec.org.au/docs/11\\_CON\\_GFC/Regulatory%20Reform%20Post%20GFC-%20Overview%20Paper.pdf](http://www.apec.org.au/docs/11_CON_GFC/Regulatory%20Reform%20Post%20GFC-%20Overview%20Paper.pdf)

- de Vries, Henk J. "Standards for business – How companies benefit from participation in international standards setting." *International Standardization As A Strategic Tool*. Geneva: IEC, 2006. Accessed September, 2013. 141 pages. <http://www.iec.ch/about/globalreach/academia/pdf/vries-1.pdf>
- DIN. "German Standardization Strategy". Berlin, 2004. Accessed September, 2013. 19 pages. [http://www.din.de/sixcms\\_upload/media/2896/DNS\\_english%5B1%5D.pdf](http://www.din.de/sixcms_upload/media/2896/DNS_english%5B1%5D.pdf)
- Dunkley, Jamie. "City 'scourge' warns UK over resisting cap on bankers' bonuses". *The Independent*. 17 October 2013. Accessed 17 October 2013. <http://www.independent.co.uk/news/business/news/city-scourge-warns-uk-over-resisting-cap-on-bankers-bonuses-8886837.html>
- DTI. "The Empirical Economics of Standards." *DTI Economic Papers*. no. 12. (June, 2005): Accessed September, 2013. 135 pages. <http://www.bis.gov.uk/files/file9655.pdf>
- Ernst, Dieter. "America's Voluntary Standards System: A 'Best Practice' Model For Asian Innovation?". *East West Center, Policy Studies* 66, (2013): Accessed September, 2013. 86 pages. <http://www.eastwestcenter.org/sites/default/files/private/ps066.pdf>
- Ernst & Young. "Compliance Management for Asset Management: 2012 Survey". (2013): Accessed September, 2013. 48 pages. [http://www.ey.com/Publication/vwLUAssets/Compliance\\_management\\_for\\_asset\\_management\\_survey\\_2012/\\$FILE/EY\\_Compliance\\_management\\_for\\_asset\\_management\\_survey\\_2012.pdf](http://www.ey.com/Publication/vwLUAssets/Compliance_management_for_asset_management_survey_2012/$FILE/EY_Compliance_management_for_asset_management_survey_2012.pdf)
- European Commission. "European Interoperability Framework for Pan-European eGovernment Services – version 1.0." *European Communities*. (2004): Accessed September, 2013. 24 pages. <http://ec.europa.eu/idabc/servlets/Doccd552.pdf?id=19529>
- European Commission. "A Horizontal Approach To The Harmonization Of Legislation On Industrial Products: Draft Instrument". N560-1 EN. 6 September 2006.
- European Commission. "Proposal for a Regulation of the European Parliament and of the Council on European Standardisation." *COM(2011) 315 final*. 2011/0150 (COD). European Commission, June 2011. Accessed September, 2013. 52 pages. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0315:FIN:EN:PDF>
- European Commission. "Amendments by the European Parliament to the Commission Proposal Regulation (EU) of the European Parliament and of the Council on European Standardisation." *Amendment 114*. no. A7-0069/114. European Parliament, September 2012. 99 pages.
- Financial Stability Board (FSB). *FSB Framework for Strengthening Adherence to International Standards*. Financial Stability Board, (January, 2010): Accessed September, 2013. 8 pages. [http://www.financialstabilityboard.org/publications/r\\_100109a.pdf](http://www.financialstabilityboard.org/publications/r_100109a.pdf)
- Financial Stability Board (FSB). "Compendium of Standards". Accessed October, 2013. <http://www.financialstabilityboard.org/cos/>
- Financial Stability Board (FSB). "Key Standards for Sound Financial Systems". Accessed October, 2013. [http://www.financialstabilityboard.org/cos/key\\_standards.htm](http://www.financialstabilityboard.org/cos/key_standards.htm)
- Financial Times. "'Twin Peaks' Regulation To Cost £646m." *Financial Times*. 9 August 2013. Accessed September, 2013. <http://www.ft.com/intl/cms/s/0/b8f47360-a103-11e2-990c-00144feabdc0.html>
- Fink, Donald G. "The Forces At Work Behind The NTSC Standards." *NTSC-TV*. June, 1981. Accessed September, 2013. <http://www.ntsc-tv.com/ntsc-main-01.htm>
- First Research. "Finance & Insurance Sector Profile". September 2013. Accessed October 2013. <http://www.firstresearch.com/Industry-Research/Finance-and-Insurance-Sector.html>
- Frenz, Marion, and Ray Lambert. *The Economics of Accreditation*. Birbeck, University of London, UK Department for Business Innovation and Skills, (2013): Accessed September, 2013. 73 pages. <http://www.ukas.com/Library/Media-Centre/News/News-Archive/2013/Economics%20of%20Accreditation%20Final%20Report.pdf>
- Gerster, Richard. "Sustainable Finance: Achievements, Challenges, Outlook." (February 2011): Accessed September 2013. 19 pages. [http://www.gersterconsulting.ch/docs/sustainable\\_finance\\_final\\_11.02.10.pdf](http://www.gersterconsulting.ch/docs/sustainable_finance_final_11.02.10.pdf)
- Gibbons, Michael, Better Regulation Task Force Member. "Regulation – Less is More: Reducing Burdens, Improving Outcomes." Better Regulation Task Force, 2005. Accessed September, 2013. 69 pages. <http://www.bis.gov.uk/files/file22967.pdf>

- Giffords, Bob, and Michael Mainelli. *The Road to Long Finance: A System's View of the Credit Crunch*. London: CSFI, 2009. Accessed September, 2013. 64 pages. <http://www.zyen.com/PDF/Road%20to%20Long%20Finance.pdf>
- Griffith, Rachel, Rupert Harrison, and Helen Simpson. "DP5849 Product Market Reform and Innovation in the EU." CEPR Discussion Paper, Centre for Economic Policy Research, 2006.
- Herring, Richard J., and Anthony M. Santomero "The Role of the Financial Sector in Economic Performance". *Centre for Financial Institutions Working Paper* 95-08. University of Pennsylvania. 1991. Accessed September, 2013. 90 pages. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.2.02.8997&rep=rep1&type=pdf>
- HM Government. "Reducing Regulation: Less Regulation, Better Regulation and Regulation as a Last Resort." 2010. Accessed September, 2013. 20 pages. [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/31626/10-1155-reducing-regulation-made-simple.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/31626/10-1155-reducing-regulation-made-simple.pdf)
- Hopper, Martyn and Black, Julia. "Breaking Up Is Hard To Do: The Future Of UK Financial Regulation?" Herbert Smith LLP and LSE. December 2010. Accessed October, 2013. 20 pages. [http://eprints.lse.ac.uk/31091/1/Breaking\\_up\\_is\\_hard\\_to\\_do\\_%28discussion\\_paper%29.pdf](http://eprints.lse.ac.uk/31091/1/Breaking_up_is_hard_to_do_%28discussion_paper%29.pdf)
- HSFB. "The Role of Standards in Public Policy: the contribution of the Hedge Fund Standards Board (HFSB)". HSFB. September 2009.
- Hunt, Robert M., Samuli Simojoki, and Tuomas Takalo. "Intellectual property rights and standard setting in financial services: the case of the Single European Payments Area". Working Papers 07-20. Federal Reserve Bank of Philadelphia. 2007. Accessed September, 2013. 43 pages. <http://www.phil.frb.org/research-and-data/publications/working-papers/2007/wp07-20.pdf>
- Institute of International Finance. "Reform in the financial services industry: strengthening practices for a more stable system." December 2009. Accessed September, 2013. 201 pages. [http://www.apec.org/docs/11\\_CON\\_GFC/IIF%20SCI%20Final%20Report%20Reform%20of%20Financial%20Services%20Industry%209%20December%202009.pdf](http://www.apec.org/docs/11_CON_GFC/IIF%20SCI%20Final%20Report%20Reform%20of%20Financial%20Services%20Industry%209%20December%202009.pdf)
- International Accreditation Forum. "IAF Members & Signatories". IAF website. Accessed October 2013. N.d. [http://www.iaf.nu/articles/IAF\\_Members\\_\\_Signatories/4](http://www.iaf.nu/articles/IAF_Members__Signatories/4)
- International Trade Center. "Voluntary Standards." *International Trade Center*. Accessed September 30, 2013. <http://www.intracen.org/exporters/voluntary-standards/>
- ISO. "Business Plan ISO/TC 68: Financial Services." Business Plan, ISO, Geneva, January 2012. Accessed September, 2013. 13 pages. [http://isotc.iso.org/livelink/livelink/fetch/2000/2122/687806/ISO\\_TC\\_068\\_\\_Banking%2C\\_securities\\_and\\_other\\_financial\\_services\\_.pdf?nodeid=982909&vernum=-2](http://isotc.iso.org/livelink/livelink/fetch/2000/2122/687806/ISO_TC_068__Banking%2C_securities_and_other_financial_services_.pdf?nodeid=982909&vernum=-2)
- ISO. "ISO Standards – What's the Bottom Line?" ISO, Geneva, May 2012. Accessed September, 2013. 12 pages. [http://www.iso.org/iso/bottom\\_line.pdf](http://www.iso.org/iso/bottom_line.pdf)
- ISO. "Principles for Developing ISO Standards Related to or Supporting Public Policy." ISO, Geneva, September 2007. Accessed September 30, 2013. 2 pages. [http://www.iso.org/iso/principles\\_for\\_developing\\_iso\\_and\\_iec\\_standards\\_related\\_to\\_or\\_supporting\\_public\\_policy\\_initiatives.pdf](http://www.iso.org/iso/principles_for_developing_iso_and_iec_standards_related_to_or_supporting_public_policy_initiatives.pdf)
- ISO. "ISO financial services standard wins industry support six months ahead of publication". ISO News, 25 July 2011. Accessed October 4, 2013. [http://www.iso.org/iso/home/news\\_index/news\\_archive/news.htm?refid=Ref1449](http://www.iso.org/iso/home/news_index/news_archive/news.htm?refid=Ref1449)
- ISO and UNIDO. "Fast Forward: National Standards Bodies in Developing Countries". Second edition. January 2013. Accessed September, 2013. 103 pages. [http://www.iso.org/iso/fast\\_forward.pdf](http://www.iso.org/iso/fast_forward.pdf)
- Knight, Christopher, and Alan Butler. *Civilization One: The World Is Not As You Thought It Was*. London. Watkins Publishing. 2004.
- Knight, Christopher, and Robert Lomas. *Uriel's Machine*. British Columbia: Fair Winds Press. 2001. 480 pages.
- KPMG. "Twin Peaks Regulation: Key Changes and Challenges." KPMG. November 2012. Accessed September, 2013. 12 pages. <http://hb.betterregulation.com/external/Twin%20Peaks%20Regulation%20Key%20Changes%20and%20Challenges%20-%202019%20Oct%202012.pdf>
- Kirby, Dr Anthony. "Regulatory Reform and G20". Ernst & Young.
- LaCapra, Lauren Tara, and David Henry. "JPMorgan to spend \$4 billion on compliance and risk controls", ed. Jean Yoon. Reuters. 12 September 2013. Accessed September, 2013. <http://www.reuters.com/article/2013/09/13/us-usa-jpmorgan-risk-idUSBRE98C00720130913>
- Lee, Ruben, *Running The World's Markets: The Governance Of Financial Infrastructure*. Princeton: Princeton University Press, 2011. 450 pages.
- Mainelli, Michael. "Standard Differences: Differentiation Through Standardisation?" *Journal of Risk Finance, the Michael Mainelli Column*. Vol. 6, no. 1. Bingley. Emerald Group Publishing Limited. January 2005. 71-78.

- Mainelli, Michael. "The Rules of Practical Principles." *Journal of Risk Finance, The Michael Mainelli Column*. Vol. 8, no. 5. Bingley. Emerald Group Publishing Limited. October 2007. 508-510.
- Mariniello, Mario. "Standard-Setting Abuse: The Case For Antitrust Control." *Bruegel Policy Brief*. no. 2013/01. 6 February 2013. Accessed September, 2013. 8 pages. <http://www.bruegel.org/publications/publication-detail/publication/769-standard-setting-abuse-the-case-for-antitrust-control/>
- Mather, Graham, and Frank Vibert. "Evaluating Better Regulation: Building The System", European Policy Forum. *City of London Corporation Research Series* Number 9. (September 2006). Accessed September, 2013. 50 pages. [http://www.cityoflondon.gov.uk/business/economic-research-and-information/research-publications/Documents/2007-2000/Evaluating%20Better%20Regulation\\_Building%20the%20System.pdf](http://www.cityoflondon.gov.uk/business/economic-research-and-information/research-publications/Documents/2007-2000/Evaluating%20Better%20Regulation_Building%20the%20System.pdf)
- McElwee, Martin and Andrew Tyrie, "Leviathan at Large: The New Regulator for the Financial Markets." London. Centre for Policy Studies. 2000. Accessed October 4, 2013. 90 pages. [https://andrewtyrie-admin.conservativewebsites.org.uk/sites/www.andrewtyrie.com/files/leviathan\\_at\\_large.pdf](https://andrewtyrie-admin.conservativewebsites.org.uk/sites/www.andrewtyrie.com/files/leviathan_at_large.pdf)
- Morrison, Alan D and William J. Wilhelm, Jr. "Trust, Reputation And Law: The Evolution Of Commitment In Investment Banking". Preliminary and incomplete draft paper. (February 2013). Accessed October 4, 2013. 36 pages. <http://web.law.columbia.edu/sites/default/files/microsites/law-economics-studies/Morrison,%20A%20-%20Spring%20%202013%20BS.pdf>
- Morrison, Alan D and William J. Wilhelm, Jr. *Investment Banking: Institutions, Politics, and Law*. Oxford. Oxford University Press. 2007. 362 pages.
- Musa Kamal, Rahayu. "Standardization the Password to Progress." *Islamic Finance Asia*. August/September 2008. Accessed September, 2013. 28-30. [http://www.islamicfinanceasia.com/pdf/\\_feature2.pdf](http://www.islamicfinanceasia.com/pdf/_feature2.pdf)
- National Consumer Council. "Models of Self-Regulation: An Overview of Models in Business and the Professions." National Consumer Council. November 2000. Accessed September, 2013. 64 pages. [http://www.talkingcure.co.uk/articles/ncc\\_models\\_self\\_regulation.pdf](http://www.talkingcure.co.uk/articles/ncc_models_self_regulation.pdf)
- NATO. "Standardization". Accessed September, 2013. [http://www.nato.int/cps/en/natolive/topics\\_69269.htm](http://www.nato.int/cps/en/natolive/topics_69269.htm)
- O'Donnell, John, and Barbara Lewis. "Europe Sets Out Plans To Stop Benchmark Rigging." *Reuters*, . 18 September 2013. Accessed September, 2013. <http://www.reuters.com/article/2013/09/18/eu-benchmarks-idUSL5NOHE1FR20130918>
- O'Neil, William. "Raising World Standards in the Maritime Industry – The IMO Perspective". Speech delivered at the International Maritime Policy Conference, London, 14 May, 2013. Accessed September 20, 2013. [http://www.imo.org/blast/mainframe.asp?topic\\_id=762&doc\\_id=2953](http://www.imo.org/blast/mainframe.asp?topic_id=762&doc_id=2953)
- Oxera. "Competition and Choice in the UK Audit Market." Prepared for DTI and FRC. Oxford. Oxera. April 2006. Accessed September, 2013. 167 pages. <http://www.frc.org.uk/FRC-Documents/FRC/Competition-and-Choice-in-the-UK-Audit-Market.aspx>
- Patel, Keyur. "Batting for the City: Do the Trade Do the Trade Associations get it right?" London. CSFI. 2013. Accessed September, 2013. 50 pages. [http://www.csfi.org/files/Batting\\_for\\_the\\_City\\_by\\_Keyur\\_Patel\\_WEB.pdf](http://www.csfi.org/files/Batting_for_the_City_by_Keyur_Patel_WEB.pdf)
- Power, Michael. "The Audit Explosion". *Demos 7*. 1996. Accessed September, 2013. 53 pages. [www.demos.co.uk/files/theauditexplosion.pdf](http://www.demos.co.uk/files/theauditexplosion.pdf)
- Rayner, Jenny. "Understanding Reputation Risk and Its Importance". *QFinance*. Accessed September, 2013. 6 pages. <http://www.qfinance.com/contentFiles/QF02/g26fs3i7/11/0/understanding-reputation-risk-and-its-importance.pdf>
- Rottier, Stéphane, and Nicolas Veron. "Not All Financial Regulation Is Global." *PIIE Policy Brief*. PB10-22. September 2010. 9 pages. Accessed September, 2013. <http://www.piie.com/publications/pb/pb10-22.pdf>
- Standards.org. "Certification Directory". N.d. Accessed October 2013. [http://www.standards.org/certification\\_bodies/](http://www.standards.org/certification_bodies/)
- Swann, Peter G.M. *The Economics of Standardization*. Paper prepared by Manchester Business School for the Department of Trade and Industry. December 2000. Accessed September, 2013. 65 pages. [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/16506/The\\_Economics\\_of\\_Standardization\\_-\\_in\\_English.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/16506/The_Economics_of_Standardization_-_in_English.pdf)
- Swann, Peter G.M. *The Economics of Standardization: An Update*. UK Department of Business, Innovation and Skills. London: Innovative Economics Limited, 2010.
- Swarup, Amarendra. "A Well-Intentioned Folly: The Macroeconomic Implications of Solvency II." *IEA Economic Affairs, Vol. 32, Issue 3*. Oxford: Blackwell Publishing. October 2012. 17-23.

SWIFT. "Facing The Unknown: Building A Strategy For Regulatory Compliance In An Uncertain Landscape". *SWIFT White Paper*. March 2012. Accessed September, 2013. [http://www.swift.com/assets/swift\\_com/documents/about\\_swift/SWIFT\\_facing\\_the\\_unknown.pdf](http://www.swift.com/assets/swift_com/documents/about_swift/SWIFT_facing_the_unknown.pdf) 1-13.

The Banker Database. "Top 5 Banks – Top 1000 Banks 2013". 2013. Accessed October 2013. <http://www.thebankerdatabase.com>

TheCityUK. "The UK In The EU And The EU In The World: What Future For Financial Services?". TheCityUK. 24 May, 2013. Accessed September, 2013. <http://www.thecityuk.com/blog/the-uk-in-the-eu-and-the-eu-in-the-world-what-future-for-financial-services/>

TheCityUK. "Key Facts about EU Financial and Related Professional Services". August 2012. TheCityUK. Accessed September, 2013. 24 pages. <http://www.thecityuk.com/research/our-work/reports-list/key-facts-about-uk-financial-and-professional-services/>

TheCityUK. "Key Facts about the UK as an International Financial Centre". October 2013. 20 pages.

The Economist. "The Humble Hero". *The Economist*. 18 May 2013. Accessed October, 2013. <http://www.economist.com/news/finance-and-economics/21578041-containers-have-been-more-important-globalisation-freer-trade-humble>

The Economist. "Deleting Regulations: Of Sunstein And Sunsets". *The Economist*. 18 February 2012. pages 38-39. Accessed October 2013. <http://www.economist.com/node/21547799>

UNECE/FAO. "Forest Products Annual Market Review 2011-2012." no. ECE/TIM/SP/30. (United Nations, 2012). Accessed September, 2013. 178 pages. [http://www.unece.org/fileadmin/DAM/timber/publications/FAMR\\_2012.pdf](http://www.unece.org/fileadmin/DAM/timber/publications/FAMR_2012.pdf)

WTO. "Agreement on Technical Barriers to Trade." WTO. 1995. Accessed September, 2013. [http://www.wto.org/english/docs\\_e/legal\\_e/17-tbt\\_e.htm](http://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm)

WTO. "Second Triennial Review of the Operation and Implementation of the Agreement on Technical Barriers to Trade." no. G/TBT/9. WTO. 13 November 2000. Accessed September, 2013. 31 pages. [http://www.jisc.go.jp/newstopics/2000/tbt-rev\\_e.pdf](http://www.jisc.go.jp/newstopics/2000/tbt-rev_e.pdf)

WTO. "World Trade Report 2005: Exploring the Links Between Trade, Standards and the WTO". WTO. June 2005. Accessed September, 2013. 377 pages. [http://www.wto.org/english/res\\_e/booksp\\_e/anrep\\_e/world\\_trade\\_report05\\_e.pdf](http://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report05_e.pdf)





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